

# Studying the Ground of Play: Towards Ludological Semiotics of Playful Traces

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## ABSTRACT

This paper discusses the challenge of studying play and gaming activities in situations where participants are reluctant to disclose their participation, or in which researchers face limitations that prevent direct observations. To answer this question, we have focused on the material traces and clues of play left by the participants, terming this approach 'ludological semiotics': the study and interpretation of traces, clues and remnants of game and play activities. We base our methodology on historical and archaeological studies of traces, notably drawing from Carlo Ginzburg's method of clues. We will scrutinize the traces and clues of play we have identified and documented, presenting their categorization and our interpretation model. We will contemplate what assumptions about play can be made based on these clues. Finally, our approach addresses some methodological challenges in contemporary game and play studies.

## Keywords

ludological semiotics; method of clues; observation; public urban spaces; traces of play

## INTRODUCTION

Even then, when we cannot observe people playing in public spaces, we may still encounter traces or clues of play. We might see deserted playthings on the ground, the markings, play-related waste, or the remains of playful performances. For game scholars, such traces can be essential in situations where observing or participating in play activities is challenging for one reason or another, or when people are unwilling to discuss their play. This paper examines how play can be studied in situations where direct observation is challenging or impossible; participants may not be forthcoming about their activities; or there is simply nothing to be observed.

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Our research material comprises the documentation of play-related public traces, clues and remnants in the city of Turku, Finland between 2022 and 2024. The material has been gathered within the Pelikaupunki Turku project (Game City Turku 2022–2024), which was undertaken to study the historical, current and future trajectories of gaming and play activities within three areas of the city areas: Kupittaa Park, the historic centre and market square. One primary objective was to discover the various types of play and gaming activities the residents and visitors currently engage in with in the public urban environment of the city. The research material is a compilation of observations conducted within these three areas, and documentation (notes and photographs) carried out during the observations.

Play has broad and ambiguous definitions. Both Richard Schechner (2013) and Matt Omasta and Drew Chappell (2015) concur that reaching exhaustive definitions of play is challenging. Play is studied within various disciplines, each field offering both diverse and occasionally incompatible definitions. Even attempts to categorize and analyse play are difficult, as play evades them. (Schechner 2013, 166–202; Omasta & Chappell 2015.) For instance, play researcher Miguel Sicart defines play as a mode of being a human in the world, describing it as a portable tool for being, something that people bring to the complex interrelations with and between things. We experience the world through play by both constructing and destroying it. For Sicart, play is a struggle between both order and chaos, possessing dark, hurtful, dangerous and antisocial sides, too; not necessarily fun yet pleasurable. (Sicart 2014, 1–18.)

Instead of definitions, several studies have turned the focus on the purpose of play. Evolutionary psychologist Peter Gray (2018) has, for instance, studied how play can serve as means for individuals to *'(1) practice skills that are essential to their survival and reproduction; (2) learn to cope physically and emotionally with unexpected, potentially harmful events; (3) generate new, sometimes useful creations; and (4) reduce hostility and enable cooperation'* (Gray 2018, 84). Gray defines play as an activity with five characteristics. Play is self-chosen and self-directed, intrinsically motivated, guided by mental rules that leave space for creativity, imaginative, and conducted in an alert, active but unstressed frame of mind. Play occurs in matters of degree, that is, the playfulness of an activity depends on the degree of each characteristic. (Gray 2018, 84–87.) Based on Gray's definition, play is beneficial for human development.

In the beginning of this research project, we decided to approach play in the urban space by acknowledging its ambiguity, complexity, its diverse forms ranging from private to public nature, from spontaneously emerging activities to organized ones, different types of players from children to adults, different behaviours, variety of play equipment and play scenarios. Play is an activity either inside a player's mind or outside, using the player's body. It is voluntary, not separate from reality, although as its source, play often uses imagination and contains rules, which can be broken or modified. (Caillois 2001, 3–10; Gray 2018; Hartt et al. 2024; Heljakka 2013; Henricks 2016; Huizinga 2016, 1–45; Johnson & Dong 2018; Omasta & Chappell 2014; Schechner 2013, 166–202; Sicart 2014, 1–18; Sutton-Smith 1997). Games, on the other hand, are often seen as more rule-bound interaction between the player and game (Juul 2013; Salen & Zimmerman 2004, 49–51). For Sicart (2014, 4–5) games are 'a form of and for play', a part of ecology of playthings and contexts.

'Urban play' can also be loosely and broadly defined as play. Urban design researcher Quentin Stevens emphasizes that play itself is contingent, existing among the tensions

and contractions of urban social life. Its nature is creative, unpredictable and hard to qualify as people are all different and play in different ways. Play can reveal the potentialities of public spaces, and more importantly, according to Stevens, urban play does not limit itself to playgrounds but is also distributed off them, depending on people's perceptions of the city where they play. (Stevens 2007.) Lammes and Leorke similarly relate that in urban environments, play comes into being through players engaging with the different city structures, buildings and spaces. This engagement produces the ludic spaces and the moment these actions stop, urban play disappears and becomes unproduced. Urban environments contain networks that enable different manifestations of play that can include artifacts, senses and both human and non-human actors. A city offers the potentials that play uses. (Lammes and Leorke 2020.)

This paper deals with the qualitative research methods we employed during the research project. We conducted a series of observations in the three areas of the city. Observation is a method whereby the researcher makes systematic comments about the ongoing activities in a certain environment; documents, describes and analyses them in relation to the research questions. In participant observation, the researcher in one way or another takes part in the life and activities of the object of study and is more involved with the research participants than in pure observation. (Hämeenaho et al. 2022; DeWalt & DeWalt 2010.)

Many researchers in game and player studies have embraced ethnographic settings for their research, confronting common challenges inherent in these methodological approaches. Ethnographic methods, such as observation and its different forms, are often acknowledged both as common, useful and challenging in studies of game and play. In the early 2000s, anthropologist Tom Boellstorff proposed that game studies would benefit from anthropological approaches, particularly observation. This method's strength lies in its ability to delve into cultural domains, blurring the line between the researcher and researched, therefore enabling the examination of disparity between what is being said and what is done. Boellstorff also noted that participant observation is based on failure and learning from mistakes develops a theory of how a culture is experienced. (Boellstorff 2006.) Game researcher Espen Aarseth, on the other hand, has noted that observation can only partly represent and capture the player's experiences. A non-player researcher cannot fathom the mental interpretation of the player nor fully understand the game. Aarseth has considered playing *the game ourselves* as the best method to study games, only using observation as a supportive method. (Aarseth 2003.)

As in any interdisciplinary field, it is common to combine and apply various approaches whilst developing new methodologies. Sybille Lammes, a researcher of new media and digital culture has argued for clear methodologies in game studies coupled with a reflexive attitude on the part of the researcher; being simultaneously an observer and a participant, intertwined with what is studied, and involved with the research material. Although Lammes refers to the relation of observing game play and playing the game, reflexivity accompanies our research in terms of acknowledging the researcher's presence having an impact on participants and adapting to the situation by applying new methods. (Lammes 2007.)

Several play theorists and researchers representing different disciplines, especially social and behavioural sciences, have also raised issues regarding the methodological challenges of studying play, such as observing play in natural or laboratory settings

and the possible impact the observer might have on the play (see e.g. Johnson & Dong 2018; Pellegrini 2001; Pellegrini et al. 2012).<sup>1</sup> The very complex nature of play also makes the array of methods varied and the research challenging, and observations can be conducted both in quantitative and qualitative ways (Johnson & Dong 2018; Pellegrini et al. 2012). Johnson and Dong note that play researchers using qualitative methods are more often personally and relationally involved with the participants. In qualitative research, the focus turns to play in natural settings, without pre-knowledge of the important variables. Play is studied over longer durations with the goal of producing in-depth analysis and rich descriptions of the play activities in different contexts. Negative evidence that disconfirms themes is also something qualitative researchers should be aware of. (Johnson & Dong 2018.)

Our project acknowledges the type of qualitative research setting that applies the reflexive attitude of the researchers and takes the complex nature of play into consideration. As we initially anticipated encountering a variety of play and gaming activities e.g., urban play, through the three areas, we hoped to gain a meaningful understanding of what types of play activities occur in the city of Turku. However, during our observations, we ran into methodological issues: we rarely observed any individuals engaging in play, and when we did, the researcher's presence somehow disturbed the ongoing play. It became evident that people were reluctant to share information about their playful activities – or the researcher perhaps entered the area at the wrong hour.<sup>2</sup>

In the light of this problem, we decided to turn our focus to the material traces of play and gaming activities in Turku's urban environment – the clues and remnants players would leave behind. This became one of the key focuses along with the initial observation plan. Players would still be observed from a safe distance, but during quiet observation hours the researcher would turn their gaze towards surroundings and the ground instead of people. We term this approach 'ludological semiotics', drawing inspiration from microhistorian Carlo Ginzburg's reference to the concept of medical semiotics, as discussed in his essay on clue method. According to Ginzburg, medical semiotics was a 19th Century medical subdiscipline that 'makes it possible to diagnose diseases not recognisable through a direct observation and is based on superficial symptoms sometimes irrelevant to the layman'. (Ginzburg 1979, 280). Thus, semiotics do not refer here, as they typically do, to the study of texts (or e.g. audiovisual materials from the textual point of view), signs and significations based on for example theories of Ferdinand Saussure and Charles S. Peirce (Fiske 2010, 38–50. See also Eco 2014). Ludological semiotics instead focuses on the study and interpretation of the traces, clues and remnants of game and play activities.

Based on these issues and previous definitions of play, we documented various types of traces and clues during our field observations, including some that pose uncertainty as to whether they even qualify as play. Our research questions are as follows: 1) What kind of arguments and assumptions can be made about play in public urban spaces based on these traces, clues and remnants and their categorizations? 2) How does ludological semiotics contribute to the methodology of game studies and game history, especially in terms of undisclosed aspects of gaming and play culture?

The structure of this paper is as follows: We will first briefly discuss how games and play have previously been studied in the fields of history and archaeology and discuss the basis of our own methodological approach regarding traces and remnants. We then scrutinize the traces, clues and remnants of play we have identified and

documented, and present their categorization and our interpretation model, defining whether they are consciously or unconsciously left and who is interpreting them. Finally, we will answer our research questions, such as what can be assumed about play based on these clues and contemplate the future of ludological semiotics.

## METHODOLOGY

Playing, gaming and games have long been studied through a historical and archaeological focus. Games and the historical context related to them can be the object of study (see e.g. Donovan 2010 and 2017; Švelch 2018; Swalwell 2020), or they can be seen as a source for the study of history, and something that shapes the understanding of history (see e.g. Chapman 2016; Spanos 2021). The history of digital games can also be approached as reconstructed and recontextualized events in the history of individual games, as was the case with *Promille*, a Finnish PC game that was found in the city park, reflecting the challenges in preserving and restoring digital games. These types of games also begin to carry historical meanings, accumulating cultural value and becoming heritage objects. (Garda et al. 2023.)

Archaeology is the study of humans' material past and follows the assumption that something permanent has been left behind from Anthropocene activities. (Fagian & Durrani 2021; Frieman 2023; Reinhard 2018.) While board games are quite a common archaeological research subject (see e.g. Crist & Soemers 2023; Paleothodoros 2022), video games have also surprisingly fallen under archaeological research, and the term *archaeogaming*, coined by archaeologist Andrew Reinhard, refers to the archaeology in and of digital games. Reinhard's broader assertion is that video games, although it is possible to find them buried underground<sup>3</sup>, are objects that can be studied using archaeological methods and principles. They can be studied both on a synthetic level (in-game) and the natural world (extra-game). Archaeogaming<sup>4</sup> defines digital games as archaeological sites containing their own material culture. The study is not limited to the video games of the past, 'historical games' nor to ruins or environments that appear in the game's world. (Reinhard 2018, 2–4.)<sup>5</sup>

Politopoulos and others (2023, 1) have suggested that play should be 'one of the pillars of archaeological practice', as play has the potential place for studying both past and present material and immaterial cultures. They argue that play is not as much a subject of the study of the past, mainly because of the ambivalent attitudes regarding play and fun within the field of archaeology. They further regard play as an attitude to be adopted in the field, understanding archaeology as play. (Politopoulos et al. 2023.) Several archaeologists have noted that interpreting any material formations or artifacts as human-made is neither unambiguous nor self-evident. Artifacts can be defined as entities produced by human labour, possessing a task and an intention set by humans. (Siipi 2008; Enqvist 2016, 349.) Regarding the traces of play, an archaeologist of play would ask, e.g., under what conditions this trace, clue or remnant can be defined as human-made and play related.

Another potential way to study the traces and remnants of play and game activities is the method of clues. Historian and culture heritage researcher Anna Sivula presents this method in an approachable manner: 'A historian approaches the study of the past in a manner similar to that of a detective investigating a crime scene. They meticulously search for traces and clues from historical records and artifacts, putting together the puzzle pieces of the past. Ultimately, they construct interpretations of events and present them with a body of evidence. All aspects of the past, whether

intentionally revealed or concealed by the actors involved, can be considered as evidence'. (Sivula 2010, 21–22. Translation by authors.)

According to microhistorian Carlo Ginzburg's method of clues can be collected from a research practice where even insignificant details and findings matter and can serve as the basis for sketching the chain of the events. Microhistory often bases its study of historical events on scattered, fragmented and indirect evidence. Ginzburg states that in situations where one is unable to collect direct evidence from past reality, it is possible to utilize clues, which are used to make assumptions of the past – predictions that go back in time. From a single clue or a group of clues an observer can create a continuing narrative that describes the events. Ginzburg traces the birth of the method of clues to certain researchers and agents from diverse scientific backgrounds at the turn of the 19th and 20th centuries: art historian Giovanni Morelli, detective novelist Sir Arthur Conan Doyle and psychoanalyst Sigmund Freud. (Ginzburg 1979; Ginzburg 1996, 46–65.) It requires skills, abilities to observe details and pre-knowledge to conduct this kind of an investigation.

Inspired by this, we call the study of traces and material clues of play and gaming activities and their interpretation as 'ludological semiotics'. Ludological semiotics is focused on play and games, but like medical semiotics, it contains the search of often irrelevant clues that might refer to playing. In our research, we have first tried to observe the ongoing play in the city, but as noted by Stevens (2007) it has been challenging to predict when play occurs in the city because of its unpragmatic nature. We have then turned our gaze onto spaces and landscapes. Our assumptions and arguments are based on the evidence found from the grounds of play; the traces and clues of play that people have left behind.

## **TRACES AND CLUES OF PLAY IN THE PUBLIC URBAN SPACES**

### **Public Urban Environments**

The playgrounds studied here are public urban spaces such as parks, streets and marketplaces that offer either explicit or implicit spaces, objects and possibilities for play. Some of the parks contain ready-built playgrounds often meant for children. Most of the areas contain benches and stone pavement suitable for sitting. The riverbank of *Aura river* (Aurajoki) is a common and popular space for the residents of Turku to spend time in the city centre. Outside the summer season, many bypass the area on their way to work or school. The river is surrounded by historical buildings, the *Turku Cathedral*, restaurants, cafés and river boats. The area is often referred to as the *historical centre*, and every year several fairs are organised throughout the area. The historical centre counts parts of the campus area of the *University of Turku* and the *Tuomaanpuisto* park.

*The Turku market square* and its surroundings, situated about one kilometre from the Cathedral and on the opposite side of the river, was under construction work for several years, which was completed in September 2022. Although it was opened for public use, some of the construction works have continued. The renewed market square contains a fountain and several game tables such as a ping-pong table, a foosball and chess table. The market square is daily full of pedestrians and often serves as a meeting place, hosting events throughout the year. It is surrounded by shopping centres and several bus stops.

*Kupittaa Park*, situated about 1.1 kilometres from the Cathedral at the same side of the river, and its surroundings form the oldest park in Finland. The park has several play parks such as *Adventure Park* (Seikkailupuisto) and *Traffic City* (Liikennekaupunki) designed specifically for children. Visitors can engage in a giant game of chess or take part in minigolf competitions. The park contains large picnic areas, several footpaths, a gym, sports fields and a lido. During winter, there is an ice rink and (unofficial, citizen-made) routes for skiing. It is a very family- and sports-oriented park surrounded by the *Sports Centre*, Ball Game Hall, *Veritas Stadion* for soccer and the *Rajupaja Arena* for ice hockey.

## **Documented Signs of Play and Their Categorization**

Sicart reiterates that play is contextual and the context itself comprises a network of the people, things, environment and technologies we need for play to take place. Incidentally, Sicart asks how we recognise when a particular context is meant for play? There are cues and signals that indicate that play is possible in the context. (Sicart 2014, 6–7.)

As we have regarded the urban areas as contexts for play, we have documented various types of clues and remnants that could imply that play has happened here. To understand these clues more profoundly, we have developed a categorization that demonstrates their very nature, differences, and similarities (similar to a doctor trying to diagnose a patient who presents several symptoms suited for various diseases) based on the origin and current presence of each trace. The categorization has been formed by asking detailed questions, such as: What has it been made of (natural or artificial materials)? How was it made (human-made, animal-made)? Does it have a purpose, if yes, what? Is there anything else surrounding it? Does it represent something? Does it contain text? Could it still be used? Is it considered trash? By analysing each trace as such, we are able to construct a – often short and vague – narrative of the possible play events the trace is connected to.

We have categorized the following public traces, clues and remnants of play as representational, linguistic, artificially-born, naturally-modified object and trash. Representational traces and remnants are deliberately made and signs of skills and talent. They can also be statements that are supposed to raise attention and tend to serve some type of purpose. Linguistic traces and clues are any non-official inscriptions, messages and written symbols that either directly refer to or subtly imply engagement in any play and gaming activities within the area. Artificially-born traces and remnants are non-natural<sup>6</sup>, human-made objects and others, while naturally-modified object refers to any natural elements that have been altered or modified by human actions. Trash encompasses discarded items and debris left in the urban environment found outside designated garbage bins. As the categorization stems from the origin and current presence of each trace, it is clear that these categorizations also overlap, as, for instance, linguistic signs can also be representational attempts to demonstrate one's talent or to make a statement, while artificially-born traces and remnants can be interpreted as trash.

Representational traces and remnants are frequently found during the winter as snow covers the city's parks and streets and the wet snow serves as craft material. A distinctive and observable sign of representational human-play, most likely left on purpose to display some form of talent, is the snow figure (see Figure 1). Smiling human-like figures frequently rise from the snow and are decorated with sticks and

small rocks, sometimes even with top hats and scarfs used by their human-makers – this one’s top hat was made from snow. As stated by Gray, one of play’s purposes could be to generate new and sometimes useful creations. As play is also imaginative, representational signs of play could point to how the player’s imagination turns into reality. (Gray 2018, 84–87.)



Figure 1. A snow figure in the park as a remnant of representational play.  
Place: Tuomaanpuisto, Historical centre. Credits: Lilli Sihvonen.

Another representational trace of play and skills was a glass bottle placed on top a 3.5 metres-tall (11.5 foot) sculpture. As the sculpture is not easy to climb, the bottle’s location implies that whoever placed it there might be a talented boulderer<sup>7</sup>. Of course, there is the possibility that some type of a lifter was also used but there were no signs of it on the surrounding ground of the sculpture. A bottle on a sculpture could be a sign of some type of daring game, a performance or an attempt to show off (see Schechner 2013, 166–202).

Linguistic landscape is a relatively new field of study and the term refers to the (visible) presence of languages as texts and symbols in our environments. These signs can be categorized in multiple ways, for instance, as official signs placed by the government or non-official signs placed by commercial enterprises, private organizations or persons. (Gorter 2006, 1-4). In our case, we have focused on non-official linguistic signs and clues of play that spontaneously both emerge and disappear, while we do acknowledge the existence of both official and non-official permanent signs of play such as playground markings.



An example of a linguistic clue of play activities was found one weekend, when the observer saw markings on the pavement next to the park: ❤️ Tallbike Jousting (see Figure 2). This time the meaning and origin of the trace is evident, as the observer witnessed a tournament in the park the previous Sunday. Several people attended the park area with microphones, loudspeakers, two tall bicycles, helmet, and padded spears. The activity resembled a medieval tournament only with cyclists trying to push one another off bicycles instead of horses. Padding and helmets made the tournament much safer, nor did participating seem to require years of training according to the order of knighthood from medieval times. After a year, the marking has faded and can be detected only by those who know where it is. Without witnessing the actual event, the observer or a researcher would most likely ignore the marking – or at least would have to familiarize themselves with tall bike jousting by googling it.



Figure 2: A linguistic sign on the pavement reveals what kind of activities take place in the park. Place: Tuomaanpuisto, historical centre. Credits: Lilli Sihvonen.

Debates about something being unnatural or natural have been taking place, for instance, within environmental ethics. Philosophical ethics researcher Helena Siipi has stated that the terms are being used in a variety of ways and have different forms. For instance, history-based forms of (un)naturalness according to Siipi refer to the history and origin of an entity, how something came into being and what modifications it went through that are relevant to its form of (un)naturalness. Siipi demonstrates how many things can be natural in one sense and unnatural in another and calls for elucidation when applying these terms (especially within bioethics). (Siipi 2008.)

In our context, human-made objects, artifacts and traces have been defined as unnatural origin clues of play. Artificially-born traces and remnants alter in terms of the human body and the object, which is either absent or present. For instance, a small hill reveals traces of winter fun; someone has been sliding down the hill (see Figure 3). These traces are most likely born from conscious and intentional behaviour, yet unintentionally left behind. Leaving traces has not been the primary focus of the player, nor has the player necessarily even considered that this activity leaves traces – nor does it matter. Traces of sledding have very little impact on the environment

and will melt away by the spring latest. Although the sliding device is no longer in the area, it is easy for the observer to suspect sledding as the source of these traces because the observer has some experience in sledding down hills. This trace was born from an active human body that used an object, which is no longer present.



Figure 3. Artificially-born traces of play, although not deliberately created. The object used to make these tracks is absent. Place: Tuomaanpuisto, historical centre. Credits: Lilli Sihvonen.

Sicart (2014, 36) defines a toy as ‘both a cultural object that performs a function in the ecology of play and a device created to perform that function’. Through toys, we become aware that we can play and the activity of play is justified (Sicart 2014, 36). Play theorist Brian Sutton-Smith has noted that basically anything can become an agency for some kind of play. There is a broad variety of play equipment, some of which are easily recognised. (Sutton-Smith 1997, 6.) Play researcher Katriina Heljakka has also emphasized the role of (contemporary) playthings in the study of play. Heljakka discusses object play, which recognizes playthings, the material artifacts holding a deep significance for the players. (Heljakka 2013, 18–23.)

A frequently found artificially-born plaything is the ball, which is left either on purpose or accidentally forgotten – unlike the sled, balls are immanent (see Figures 4–6.). We have come across several balls in the urban environment of Turku such as children’s beach balls, tennis balls, ping-pong balls and snowballs. The city seems full of them throughout the year. Apart from the snowball, a ball can be recognised as artificial based on its round shape and the materials that are produced by humans, e.g. plastics;

however, who has played with the ball remains uncertain. Humans are not the only ones known for playing with these items (see e.g. Schechner 2013, 177–180).



Figures 4, 5 & 6: Different types of balls found from the public urban spaces in Turku. Place: historical centre, campus area and Tuomaanpuisto. Credits: Lilli Sihvonon.

Some toys can extrinsically invoke play and make us modify the space that will be used for play (Sicart 2014, 38). A hockey puck was found from a planting box in the park, implying that the activity might have been using large areas of the park (See Figures 7 & 8). The observer knows the general purpose of a hockey puck but the surroundings remain puzzling as there are no ice rinks nearby. However, it is common knowledge and information found on the Internet informs us that a students' ice hockey club keeps a checkpoint during the students' initiation ceremony.



Figures 7 & 8: An ice hockey puck, along with plastic cups, was found in a planting box. Place: Tuomaanpuisto, historical centre. Credits: Jaakko Suominen.



In the early winter, a blue glider is found leaning on a tree by a bench (see Figure 9). Kupittaa Park has a small hill on one side where it has most likely been used but there is no evidence to support this assumption. Perhaps the user dropped it when going back home and someone placed it on a bench so that it would not be trampled. The glider, like the ball, is once again, an artificially-born toy for winter play with one clear purpose – if it had another one, it remains unknown. Unlike the glider, the ball can serve several purposes that are not revealed by its location: sports, children’s yard game, table game, drinking game and so forth.



Figure 9. A blue glider found on a bench in the park. Place: Kupittaa Park.  
Credits: Lilli Sihvonen.

When the summer finally reaches Finland, people spend more and more time outside. Parks are full of picnic blankets, many bring their own yard games, once we even witnessed a game of Uno being played on the riverbank of Aura river (Aurajoki) in the city centre. Summer covers traces winter would otherwise reveal. However, traces and remnants of play during the summer can be to some extent of natural origin, modified by humans or something else: Someone has left ripped pieces of a red cabbage in the park (Tuomaanpuisto). There are no bite marks, which implies that it has been ripped by hand. The cabbage is surrounded by other items such as a broken plastic cup and a small ball. Unfortunately, its purpose will not reveal itself, but it is common knowledge that the park is often used for student parties, and the observers have witnessed them play, e.g., beer pong, in the park, which guides suspicions towards student events. However, it is difficult to draw any reliable conclusions of the origin and purpose of the red cabbage <sup>8</sup>.

As summer gradually turns into autumn, leaves cover the grass areas in the parks and cold weather creeps in. On quiet days, an observer comes across a whittled stick leaning on a bench (see Figure 10). It is of natural origin and clearly modified by someone, but the stick does not reveal its purposes nor does the environment, as it is hardly a stick for grilling sausages by the fire since there are no campfires in the Kupittaa Park nor does the stick display any charred signs on it. The observer has not witnessed the use of the stick nor seen anyone leaving it there, but it does not seem

to be there by a coincidence either. As stated in the introduction, there is no certainty whether some traces and remnants can even count as play. But as play is ambiguous (Sutton-Smith 1997), it is another possible explanation for the stick.



Figure 10: A whittled stick of natural origin leaning on a bench in Kupittaa Park. Hardly a coincidence, yet the purpose of it remains unclear. Place: Kupittaa Park. Credits. Lilli Sihvonen.

Snow reveals that people do not always use the footpaths but walk through the park; a fact that cannot be detected during the summer unless witnessed in action. When the snow melts, the still-frozen ground reveals trash scattered all around the park. Some items glitter in shades of silver, pointing to winter festivities: a lively New Year's Eve's celebration took place here with people shooting fireworks into the night sky. The trash was left uncollected. (See Figures 11–12.)



Figures 11 & 12: Silver or metallic pieces of paper in the muddy ground. Place: Tuomaanpuisto, historical centre. Credits: Jaakko Suominen.

Waste, like play, has controversial and ambiguous definitions. It can be defined, e.g., as something that the holder discards, intends to discard or is required to discard, or as something that has a negative price compared to a good whose price is positive. (Shinkuma & Managi 2011, 1.)<sup>9</sup> Sometimes, the line between play and trash is subtle, and often the traces of play turn explicitly into trash, as the silver pieces of paper described above. But a more subtle line can be found, for instance, from a drawing, which was most likely accidentally dropped and then found on the street (see Figure 13). A drawing is a sign of creativity and fun taking place, most likely somewhere indoors on a cold day. Drawings are also used as research tools in play studies (Duncan 2015; see also Johnson & Dong 2018). It is also a representational sign of play, but when found on the street, how soon does it become something else?



Figure 13: A drawing found on the street of Turku on a very cold day in October 2023. Place: Market square and its surroundings. Credits: Lilli Sihvonon.

It is obvious that these categorizations overlap, as we have demonstrated in Table 1. Many traces, clues and remnants of play can have several different purposes and meanings. Interpreting some of them becomes challenging. The naturally-modified objects can be interpreted to belong in only one category as they decompose over time; however, when they do not naturally belong to their environment, as is the case with red cabbage, they can be regarded as organic waste. The same difficulty also applies to balls, gliders and hockey pucks that still can be used but are left in the environment without anyone acknowledging them or putting them into recycling bins.

Trace, clue or remnant of play	Representational	Linguistic	Artificially born	Naturally-modified object	Trash
Snow figure	x			x	
Glass bottle on a sculpture	x		x		x
Tall bike jousting	x	x	x		
Sledding			x	x	
Ball			x		x
Hockey puck			x		x
Glider			x		x
Pieces of red cabbage				x	x
Stick				x	
Silver pieces of paper			x		x
Drawing	x		x		x

Table 1: Categorization of the traces and remnants of play. Note: categorizations can overlap.

These traces, clues and remnants of play align with the diverse and complex nature of play. They well characterize play as very unpredictable, having a life of its own and the ability to go different directions, starting and stopping, being whimsical (see e.g. Johnson and Dong 2018). They also illustrate that even though observing play in the present gives the impression of a very sensitive activity, players want to keep it private and do not hesitate to leave behind traces of these activities. Next, we will elaborate on these traces and clues from the perspectives of the trail maker and observer.

## Interpreting Traces and Remnants: Trail Maker and Observer Perspectives

While we have previously categorized the traces and remnants by their origin and current form of existence, they can also be analysed from the perspectives of the trail maker (the player) and the observer (the researcher) as well as their relationship to the traces and clues (see Figure 14). The trail maker leaves traces either on purpose and consciously or by accident and unintentionally. Their relationship with their traces can reflect, for instance, desires to create and present their work (e.g., snow figure), indifference (e.g., sledding), concealment or ignorance (e.g., silver pieces of paper).

	<u>Trail maker (the player)</u>	<u>Observer (the researcher)</u>
<u>Intentional, purposeful</u>	<u>Manifestation, work/piece concealment, covering up, hiding</u>	<u>Easily decoded: eyewitness, own previous experiences, information available</u>
<u>Unintentional, unplanned</u>	<u>Indifference Ignorance</u>	<u>Difficult to decode: guessing, suspicion</u>
<u>Unrecognized or uncategorized</u>	<u>Trash, scribble</u>	

Figure 14: Traces and remnants from the perspective of the trail makers and the observers.

This affects the observer's relationship with the trails, as the intentions of the trail makers influence the ease or difficulty of deciphering the sign or trail. Sometimes, the observer can quickly establish the connection between the activity and its trace – particularly if one has previously participated in a similar activity or witnessed a comparable event. If not, even an experienced researcher or an observer struggles to draw conclusions based on traces no matter how playful the trail is. Even with clear clues such as balls and gliders that serve a playful purpose, it easily turns into a guessing game of who, when, why and how. The conclusions turn into speculative guesses, prompting the observer to search for other clues in the environment that might support the suspicions the trace evokes.

There is also always the possibility of misinterpretation of some traces, assuming they stem from play when they do not, or even miss and ignore the actual traces play has left behind. For instance, a clothespin found on the street in the middle of Turku can be a sign of any other activity than play (see Figure 15). The observer can only assume that someone has accidentally dropped it.





Figure 15: A clothespin found on the street in the middle of Turku. Is this a trace of play? Most likely not but it caught the observer's attention. Place: Market square and its surroundings. Credits: Lilli Sihvonen.

Decoding traces and remnants of play becomes more challenging the faster they begin disappearing. Some traces and remnants also better resemble trash or scribbles rather than actual signs of play, which makes them difficult to recognize or categorize. Play theorists have maintained that differentiating toys from other artifacts can be difficult, as many objects can have several meanings and purposes (see e.g. Heljakka 2013). As anthropologists Arjun Appadurai (1986) and Igor Kopytoff (1986) have noted, objects may have several identities and biographies throughout their lives; they do not serve only one purpose.

## CONCLUSION

In the beginning of this paper, we asked: 1) What kind of arguments and assumptions can be made about play in public urban spaces based on these traces, clues and remnants and their categorizations? 2) How does ludological semiotics contribute to the methodology of game studies and game history, especially in terms of undisclosed aspects of gaming and play culture?

For this paper, we have analysed several different types of traces and remnants found in Turku's public urban environment. We have presented one categorization based on the origin and current presence of the trace and another based on the perspectives of the trail maker and the observer. The first categorization from representational to trash offers insights to different types of play behaviours and their interconnection to the use and value of play equipment. Some objects are valued during and after the play activity, as they are brought back home with their users, while others are valued during the play, but ignored after the activity ceases or left for others to examine. The use of natural origin equipment implies human-nature interaction and the view of nature as a resource for play, as is the case with, e.g., the snow figure, sledding, and the stick, while trash implies indifference towards nature.

The second categorization implies and confirms that there is a sensitive side to play as well as a more public one – ready for public exposure in some terms. Making a snow

figure in the park can hardly be concealed and the figure itself serves as a temporal proof of skill. Others are not ready to be observed in their public urban play, at least not by the researcher. Overall, what this categorization does not access are the players, their affections and the meanings they give their activities. Although the snow figures are smiling and textual sidewalk writings declare love towards tall bike jousting, we cannot be certain whether all this play happened in happy circumstances.

In general terms we argue that it is obvious that the diversity of traces and remnants of play acknowledge the broader definition of play as a more useful tool for research rather than the narrow one. We can also argue that play does occur in various forms, hours and spaces in the city, not limited to playgrounds and other spaces meant for play. The whole public urban environment has a tendency to turn into a ground of play, enabling various types of play. This is useful information for urban planning, as play and game activities can be supported in various areas without changing the shapes of the city. A third general argument is that play is a complex and somewhat sensitive issue to study in public urban spaces. In urban planning, the two sides of the same coin either support the sensitive nature of play by protecting it or encourage public play activities, but this largely depends on those who engage in play.

Politopoulos and others suggest that playthings and playgrounds should be studied on their own terms, not only circumstantially. They advocate for playful methods to find play in archaeological records. (Politopoulos et al. 2023.) Ludological semiotics serves not only as a possible new method or approach in future game and play studies, but also as an inspiration and example in situations, where the research project faces problems when gathering research data. As noted by Johnson and Dong (2018), the study of play has recently been turning its focus to players, their feelings, perceptions and experiences, which in turn changes and develops the methods being used. Our ludological semiotics is a reflexive approach and contribution to these methods and solutions that researchers must occasionally make.

Ludological semiotics plays a role in the continuum of historical and archaeological studies of games and play. This paper has been only an introductory and exploratory starting point to ludological semiotics, and we need to further test the method and its categories in other contexts. For instance, ludological semiotics could be applied to digital games to track player-related activities within and outside digital games. Additionally, we must connect the approach to all the work done in the field of cultural semiotics that understands culture as a system of symbols or meaningful signs.

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## ENDNOTES

<sup>1</sup> These studies frequently concern observing children’s play. (See e.g. Amholt et al. 2022.)

<sup>2</sup> This is not uncommon in the field of play and game studies. For instance, Politopoulos et al. (2023) mention having faced the same types of attitudes among students and other scholars.

<sup>3</sup> Reinhard refers to the case of Atari Video Game Burial, which was a mass burial of video game cartridges and boxes in New Mexico in 1983. Excavation of the site began in 2014. (Reinhard 2018; see also Garda et al. 2023.)

<sup>4</sup> Politopoulos et al. (2023, 9) have argued that archaeogaming “encapsulates and illustrates how research can be done through and as play”.

<sup>5</sup> It is also possible to apply media archaeological perspectives to digital games. Media archaeology is the study of weird, quirky, and forgotten media and recurring cyclical phenomena that alternately both reappear and disappear in media history. It focuses on alternatives of media history; what could have been but was not. (Huhtamo 1997; Parikka 2012; Parikka & Suominen 2006.) It can be used, for instance, to challenge conventional game histories (Parikka & Suominen 2006).

<sup>6</sup> Things that do not originate from nature although the raw material can be of natural origin.

<sup>7</sup> Bouldering is a form of rock climbing, usually climbing on short walls or boulders without ropes. The climbers place a mattress or a crash pad to ensure a safe falling.

<sup>8</sup> Neither can we state that student events are automatically always playful.

<sup>9</sup> The former definition has been defined by the EU, the latter has been used in Japan. (Shinkuma & Managi 2011.)