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Ludic architecture: An agency beyond ready-made narratives

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Abstract
Unlike static and predetermined narratives, games offer dynamic and immersive structures that influence all actors involved. An interesting contradiction exists between static narratives that prefer consistency and unchanging foundations when creating designs and ludic agencies that value relationships and connections to maximise potential. This contradiction suggests the need for a paradigm shift, which involves abandoning the predetermined narrative-driven design approach that justifies design acts and decisions by overvaluing one transcendental foundation or solution in representations and design briefs. This study proposes using "ludic architecture" to playfully understand the built environment beyond its linear aim of reaching an idealised conception. Rather than using mottos, canons, and grand conceptions, this study argues that the non-hierarchal medium of ludic architecture provides possibilities for multi-layered acts.
The actions of playful beings, such as intensified tensions, and collectivity, extend architecture beyond mere user participation. The chosen approach involves comparing the literature on architecture and game studies, focusing on specific examples demonstrating the game's ability to create conflict, events, temporality, and distance. This comparison will be made from both an ontological and structural perspective. Games are not inherited with qualities; nevertheless, they are differential events leading to intensifying relationships between disparate play-beings. Ludic architecture emphasises that multiple agency creators named play-beings individuate continuously evolving and changing operations, understanding games and architecture via an inclusive agency where every entity creates their voluntary meanings. Therefore, the actors of architecture add to the playful experience where the structure, movement, and rules are defined solely to produce architecture.

Keywords
Architectural agencies, Games, Productive environments, Playfulness, Generativity.

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1. Introduction

Throughout history, play has been an engaging part of socialisation for species, including humans. Playing helps individuals interact, establish relationships, and create a sense of solidarity. Many scholars from different academic fields, such as historians, anthropologists (Caillois, 1961; Huizinga, 1949), sociologists (Han, 2015; Han, 2017), philosophers (Fink, 2016; Nguyen, 2020; Suits, 1978), and psychologists (Cole et al., 2015; Cole & Gillies, 2021), have made attempts to understand how games operate as an agency. They have also tried explaining why people must interrupt their daily routines and engage in gaming activities. According to anthropologist Johan Huizinga (1949), who is considered one of the leading researchers in the field of game studies, games cannot be reduced to either a solely human aspect, as a conscious act, or an animal aspect, as an expression of inner instincts such as hunting or releasing surplus energy. He argues that the game is a complex notion requiring a more nuanced understanding. In this context, he suggests that the emergence of culture could be based on games, so games are older than the culture of human beings (Huizinga, 1949). Games both have a playful, arbitrary nature and a contextually serious structure with rules. Games contradict the result-oriented, idealised, and linearly structured forms of life. Unlike grand narratives of life, based on mottos, static canons, mandatory principles, and meta-concepts, games cannot be understood through an articulated analysis of fundamental aspects, such as other acts in life that aim to reach predefined goals. While playfulness can be described as arbitrary and joyful movements of beings, including humans and more-than-humans, games define a more structured and constrained system where emergent features and governing features exist to sustain a consistent form with productive functions. In other words, games are playful acts with goals, rules, constraints and systems where tools and technology are vital elements that create generativity and consistency. Playful acts of cats do not consist of any toys and tools that would push the boundaries of their play to create novel assemblages, as one can see in the games of humans, such as ice skating, dodgeball, soccer, and all video games.

The relationships and interactions in games are derived from themselves. They do not affect other acts of life efficiently or morally, which means that the act of play has no exterior restrictions and impositions. Thus, games cannot be positioned at a point beyond itself. In this sense, ludic acts are generated through playful beings, game rules, and the interplay of players interacting with these elements. Philosopher Eugen Fink (2016) argues that in an emancipated situation with no concept of true or false, humans can reach a point where they are free from the irreversible choices dictated by life. In this rift known as the game, players interact with the play without fear of failure or other concerns caused by goals. With an agency where neither social oppression nor idealised narratives about life have priority over one another, play-beings can freely produce their individuation and go one step further to unfold novel individuals.

Definitions of a game have always been debated since their eventful characteristics are irreducible to essences. Thus, according to Jensen (2013), precise delimitations or thorough definitions of games are demanding issues because of their changing operations and concrete and rational rules. In that sense, philosopher Ludwig Wittgenstein (1986) states that defining games thoroughly and satisfactorily is impossible since human conceptualisation only defines games according to their restricted and linear aspects and perceptions of the world. The philosopher illustrates this impasse with an analogical example of "family resemblances". Although there are some similarities among family members regarding appearances, attitudes or gestures, the only shared aspect of one person that addresses all the shared qualities of a family cannot be determined. No all-inclusive trait or one-applies-for-all rule does not exist to define the entire family. In this context, games are members of the "game family", whose

similarities are too complex to be determined by any definition.

Regarding games, how play operates can be examined through constantly changing dynamic structures that alter. These alternations are based on interactions between players and the game's flow, including all actors contributing to the ongoing movement, including humans, animals, technologies, architecture, and rules. Games give opportunities for becoming and act as an agency where the solidarity between individuals is valued in themselves. Having a non-linear, dynamic, flexible, arbitrary, but also strictly ruled structure and following Wittgenstein's line of thinking, games are ambiguous phenomena, so the rules of this phenomenon are established during the playing process (1986). In that sense, the rules are subject to continuous change and transformation. Therefore, the philosopher places a communication-oriented structure at the centre of games. Games have a dynamic structure of continual change in the interaction between the actors, constraints, rules, values, and tools that share a milieu. In that sense, philosopher Bernard Suits (1978) argues that the rules of games differ from other real-life acts. While the rules of ethics or rational works, such as production lines or hierarchical orders, define the truth or indicate and determine an efficient way of working, the rules of play only encourage various types of interactions and movement, described by the concept of being auto-telic[1]. The rules of a game do not have to imply any moral truth or efficient way to reach the goal of adequately sustaining the temporal world of the game and its system. Due to its rules, the play has an alterable and interactive structure where the interaction of players may occur in various ways to contribute to the game's flow.

Games from a social perspective, what Huizinga (1949) profoundly investigates in his work "Homo Ludens," have numerous vital points to provoke and sustain the culture. When playing games, play-beings act voluntarily within a limited time and space. In other words, all the assemblages and interactions that are part of games are reflected playfully rather than seriously. The main difference between these terms is their approach to creating rules and constraints. While serious rules are created with a tendency to reach efficiency or to have a representation approximating ideals, playful rules only focus on the ludic process and the interactions that are taking place in it. Games occur in an isolated environment called the "magical circle" (Huizinga, 1949), where ordinary life does not function appropriately due to deviations from finalised aims. These deviations exist in virtual worlds of games where interactions occur solely within the delimitations of games. In this way, all social play assigns new roles and values to play-beings, such as being a footballer, which limits the use of hands. This interruption and provocation to act differently allude to players' common aspirations and intentions. The architectural context of the play, which is the subject of this study, has a different meaning in the plaything context of postmodern architecture, which employs playfulness as a tool to justify representational or efficient foundations. Nevertheless, diverse architectural reflections carry similar traces of design discussion in their roots, and therefore, these two approaches create a fruitful spectrum.

In that sense, the study aims to argue the potential of a collective agency called games between architecture and play beings, including not only designers, users, and more-than-human, but also rules, constraints, and values that share a milieu. Within this context, Bridge Sprout at the west bank of the Isar River in Munich, designed by Japanese architecture firm Atelier Bow-Wow in 2020 and the High Line project in Manhattan, New York, designed by DS+R and constructed between 2009 and 2019, are discussed using the theoretical background of the act of play (Figure 3). The reason behind choosing this example is its tendency to have playfulness in a non-reducible and relational way that may stem from its philosophical background based on Japanese thinking of in-betweenness and appreciation of performativity and processes rather than materiality, as this paper will later exemplify with Metabolists. The aim is to understand

how architecture, through playfulness, operates and creates novel meanings during the interplay. The rejection of a permanent make, which operates the system of games, is questioned by comparing contemporary projects, which explicitly show temporality, contingency, and an integral understanding of time and space.

2. Literary review

"What is the ideal architectural design that can ever be made, and how could it be done?" concern has been a challenging question since the first theories about what architecture is. This question bothered architectural theorist Marc-Antoine Laugier (1755), one of the first modern architectural theorists to propose fundamentals through the first materialised image of a house, the "primitive hut". According to Laugier, Western architects and thinkers have used different methods to create coherent and harmonious designs, and they all tried to materialise the idea of a flawlessly built environment. He argues that all architectural decisions are justified based on imperishable and perfect foundations, which is essential, so he suggested an ontological base for righteous architectural decisions. The basic architectural principles of Vitruvius (1914), used to create an orderly and harmonious building, are also based and constructed upon a similar motivation of making architecture. Renaissance architect Leon Battista Alberti (1991) invented human-centric architectural design, which separates design and building and values the ability to retrieve perfect forms and angles from the human mind (Carpo, 2011). Alberti defined and separated the practice of architect and constructor through this effort. As in modernism, science, truth, and aims are valued over other terms and concepts in the discourse (Adorno, 1991; Lefebvre, 1971), and culture, history, and the future in postmodernism (Foster, 2013; Harvey, 1989).

In the East, Kisho Kurokawa (1993) summarises the theoretical approach of Japanese architecture based not on the matter but its meaning. This approach opposes heavy reliance on the materialistic aspect of reality in Western thought, such as linear result systems, which define reality through action, reaction, and static snapshots of the present. Opposed to this end-product-oriented understanding, Japanese Metabolists adopt a different design approach, replacing these material concepts with process-oriented approaches in Eastern thought, such as cause, motivation, and effect (Engel, 1964). This design approach emphasises the interaction of users with each other and with the built environment, as well as the importance of activity and the process, rather than any static and predefined form-based architectural design approach. As an architectural example, the temple of Ise Sengu is an ancient temple built more than 2000 years ago, according to the Japanese but not UNESCO. The disputable point between these two is caused by the very same issue about the valued aspect of reality. As a tradition, this temple is rebuilt every 20 years with state-of-the-art technological tools and materials that would still carry the sound of the temple by attuning to its flow. Similar to the Ship of Theseus conundrum of Plutarch, whether this building stays as it was after completely replacing all of its parts differs from one perspective to another (Britannica, n.d.). The Japanese thought it was the same temple built 2000 years ago, but according to UNESCO, or for Western understanding, it is only a building with a maximum lifespan of 20 years (Lopes, 2007). One of the most notorious Metabolist architects, Kenzo Tange, shows an impeccable example of process and event-driven understanding in architecture, defying the will of producing monumental and static objects which will endure for eternity. After winning a competition for the design of the Tokyo City Hall and building it in 1957, Tange re-attended another competition that opened due to the lack of functionality of the very same city hall, and he won and built it again in 1991 (Lopes, 2007). Another famous Japanese architect, Toyo Ito, designed the Nomad Restaurant, which would have a three-year lifespan and be removed as it was (Keleher, 1992). These examples emphasise the importance of meaning

and performativity of architecture in both Metabolists and Japanese thinking.

According to philosopher Kojin Karatani (1997), architecture with a capital *A* denotes the act of making and imposing grand concepts of the human subject on the environment and other beings. "Architecture", which stands against the so-called disorder of nature and its chaos, must express its desire for permanence and monumentality with a grand narrative. In this sense, "Architecture", which tries to determine and prove that every unpredictability is under its control, ought to make organisations, orientations, transformations, and motivations for a predetermined final that will lead everyone to the accurate way. The unshakeable faith in the human subject brings with it the exclusion and instrumentalisation of the non-human. With the increased moral responsibility toward humans, the concern of reaching the ideal becomes inevitable. At this point, all that exists is approximated to ideal concepts by isolating them following a linear attitude that is preconceived as the efficient or right way.

On the other hand, games create a method that can be understood as an alternative to efficient and representative ways, as it creates a temporal world beyond the world of ideals and reverses the cause-effect relations (Huizinga, 1949; Suits, 1978). When creating playful movements, play-beings include sentient and moving entities such as designers, users, and more-than-human, constraining and orienting factors like rules and norms. In other words, games which interrupt the established systems by changing the rules of the world (Fink, 2016) create an agency that opens novel ways to relate and act. This playfulness encourages problem-creating and acting following it rather than relying on grand narratives that solve all problems. The aim of playing the piano, which delimits infinite potentials of creating sounds to a constrained set of tiles, is not to have an efficient result as soon as possible but to generate a rhythmic play that reflects and unravels novel meanings and relations with the world. The goal of playing a piece of music is only derived from the playful acts shaped by the act itself. Playfulness challenges the linear mindset in all acts, including architecture. By adopting a relation-oriented approach, evaluating modes of play-beings and their ongoing changing rules and values disrupt architecture's static and permanent attitude from the beginning (Karatani, 1997). The game's structure starts to break down human-centred, goal-oriented ideologies. It may be possible to expand the play, which can interrupt the isolated concepts by presenting indeterminate understandings of architecture. In that sense, the line of argument from Metabolists to various contemporary Japanese architects, such as Atelier Bow-Wow and games, have similarities regarding their highlight on the web of interactions, loose integrities between two poles, and the multiple exploration potential.

3. Understanding architecture as a ludic agency

Having a non-hierarchical structure where all play-beings are equally involved in the flow and are evaluated based on their effects on the flow of play, the ludic approach understands architecture from an alternative perspective where neither form nor function is praised over the actors. By focusing on interactive and continuously evolving relationships, the linear understanding of architecture to create a design to achieve a final purpose would be differentiated. The predetermined and anthropocentric functions would not be overvalued from a ludic perspective since the play's capability to reverse the ongoing and established system of the world as one knows it. Games generate a dynamic and organised agency where every actor becomes a kind of nomad, leaving fixed positions to unfold potentials to act in the world to create novel norms and values. The ludic process provokes that each play being involved in the play would have a vital role in shaping shared experiences. This playful understanding also denies a literal and static understanding of form, where the design is seen as a product's finalised and stabilised shape.

Form-oriented approaches to architecture tend to undervalue the events and potentials that could unfold during the act of architecture. Instead of understanding architecture as an agent vital to sensibility and meaning, this kind of approach sees architecture as an end-product that will be finished at some point, similar to Alberti's definition of the architecture profession, where the roles of designer and constructor are separated (Carpo, 2011). This definition of an ideal point of no return established what an architect is and delimited and alienated the architect from what would happen after the design. Due to their heavy focus on thoroughly predetermined aspects of architecture, approaches to ready-made narratives have become the foundation for architecture. Contrary to indeterminate and productive agencies of life, ready-made narratives can be understood as story-driven approaches to architectural design that justify design acts and decisions by sticking to one transcendental foundation or solution. These over-relied foundations and solutions limit its actors' capability and capacity to approximate sterilised and praised essences, notions, concepts or solutions. The mighty designer-driven understanding of architecture can be achieved by overemphasising that the architect's role starts here and ends there, so the act of architecture ceases at some point, as Alberti did. Alternatively, it can be in the form of having a foundation on a conceptual idea and basing it on the primary properties of such concepts, such as Laugier's Nature (1755).

What is Alberti's definition of the profession of architecture saying for today's praxis, and how does Mario Carpo stress it by showing the effects of separating what is material and non-material, as in the distinction between builder and designer, or Cartesian mind and body underlies the importance of indeterminacy in design thinking. Today, most discussions on overcoming problems and creating solutions that would make the world a more liveable and inhabitable place neglect the need for coherence and solidarity between every duality. Assigning responsibilities towards subjects creates a need to develop thoroughly planned and conceived, in other words, determined ways to foresee the future or rely on the past, which is dormant due to its mostly abstract nature. Nevertheless, philosopher and physicist Karen Barad coined a new notion called response-ability to show the importance of increasing capacities and capabilities of responding towards the environment without relying on biases or predetermined paths (Barad, 2010). This paper proposes that all the approaches based on assigning responsibilities to affirm the empowerment of the human subject would lead to a ready-made and non-productive understanding of the built environment, as it started with Alberti's separation, and its traces can be followed even today in the conventional understanding and representations of buildings through static plans and section that was invented in Renaissance (Latour & Yaneva, 2017) to show an ideal point of no return. Thus, architectural design is not an end-product of the brain, which translates thoughts into the material world or makes subjective matters materialised by the designer's tools, as Latour and Yaneva argue. They argue that one of the most difficult acts is to conceive buildings not as "desperately static" objects but as a movement within a flow where all the fibres of the environment entangle each other (2017).

Nonetheless, it is a complex system consisting of the compatibility of different actors and processes that is moulded into a non-statical and vital composition of forms and functions. This moulded assemblage of ideas and materials is more than what was conceived in the first place, which leaves a blank, named black box in design that cannot be filled out or analysed easily. Offering a non-anthropocentric perspective, philosopher Bruno Latour's "Actor-Network-Theory" focuses on what happens between actors and their intricate and continuously unfolding relations and dynamism rather than sticking to finding the essence of an object or yet-to-come optimised solutions to problems. This understanding of architecture through the continuous flow corresponds to the indeterminacy of generativity and the need to produce

an agency where actors can establish a network rather than a solution or foundation.

In contrast with ready-made stories about nature and the built environment and their assigned responsibilities over the environment and more-than-humans, ludic architecture unfolds its agencies by interrupting existing contextual structures and habits. Thus, architecture becomes an agent of interactions that change as they change. At this point, the most vital aspect is not the form, function, or pinpoint condition of a building but the multi-layered dialogues created based on novel meanings and information of play-beings. Play is focused on motivation and the act itself rather than overfocusing on grand goals or ideas that need to be achieved or approximated ideally without considering interwoven relationality between play-beings. As a provoking mechanism, games freely express the act without further imposition or orientation that would cause dynamism (Vella, 2021). Focusing on the free interactions in the play through the "agency," philosopher C. Thi Nguyen (2020) highlights the ludic capability of offering new solutions to unexpected situations in life. Coining the term "agential posture", Nguyen claims this characteristic of play makes it possible to experience situations never experienced before in real life. For example, the word game Scrabble provokes its players to find words rarely used by improvising according to existing words in the game and the players' letters. Delimiting players to think and act within the letters it has through an agential provoking mechanism, this game pushes the limit of the player's potential of continuing the flow of play further. Thus, Scrabble is not based on conceptual truth as a proper way to follow or a physical base to follow the most efficient way to reach the end of the game. Nevertheless, players of Scrabble as an agential structure tend to find novel ways to relate to the game by its rules. Having new strategies to gain more points through various combinations or reading other players' moves, Scrabble opens up new capacities to act with the world.

Making room for the emergence of new assemblages and the use of rules of play, the agential aspect could give a new perspective on the built environment as a non-hierarchical and productive actor. Ludic architecture creates a structure contingent upon dynamic play-beings when freed from external restrictions. Ludic architecture is situated between the imaginary and material worlds since it is not solely an abstract conception in the real world nor a serious and so-called rational action due to its eventful characteristics. In this way, it facilitates the capacity and capability of the world, its operations, and the potential that would occur in the play.

In brief, the emergent properties of play that could benefit understanding architecture from a new perspective could be considered in two aspects. This differential understanding should not be assumed as an isolated separation of two poles that are not affecting each other. Contrarily, this ambivalence and variety of emergent aspects of games causes novel ways to act playfully. The first aspect, the passive aspects of a play, could be defined as passive characteristics, such as in-between and orderly structures, highlighting its intensive aspects that affect every other aspect that occurs. On the other hand, active emergent properties of play denote operational aspects of the ludic approach, such as being an agent to provoke new connections or creating a point of crisis to interrupt the teleological phenomena of the natural world (Figure 1). These two sets of properties are not seen as essences inherited from games but as emergent dynamisms that unfold during relations between play-beings. These dynamic structures increase the capacities and capabilities of play-beings to be more playful. These aspects act and relate in a network that influences one another to increase playfulness. Figure 1 shows the intertwined agency between different aspects of the games and play-beings.

Some features and dynamisms of games have various interdependent actors, such as conflicting: being connected to the temporality of relationality, having occurred at a distance between disparate individuals, fictionality of events that assign roles to

sides and make them act according to assigned behaviours as we see in most of the rituals and games. Fictionality also creates distance towards physical and behavioural limitations of the ordinary world, as Huizinga highlights (1949). Fictional events must also have a contingent structure that makes space for indeterminacy and generativity, making a system open to productive speculation without relying on any essence, foundations, or archetypes. Nevertheless, there needs to be a form of productive repetition, allowing differences to be both consistent and destabilising as a line of flight from one domain to another, as Deleuze and Guattari propose in their book A Thousand Plateaus (Deleuze & Guattari, 1987). According to philosophers, the deterritorialising effect of the line of flight makes multiplicity vital and proliferating. All these dynamic features and aspects of games show the interwoven relationality, as illustrated in Figure 1. These intertwined connections also stress the need for and importance of a differential-based approach to understanding systems as agencies beyond predetermined structures.

Similar to the point of view of architectural theoretician Steen Eiler Rasmussen (1959), Ludic architecture implicitly unravels its potential to the players but to the designers with an open attitude. For designers, says Rasmussen, analysing and understanding various vertical capabilities of architecture show itself explicitly in a game. In terms of play-beings, they transform and change architecture with a sense of responsibility and appropriation. Rasmussen made this analysis through one of the rigorous observations on the interaction between architecture and games in his book "Experiencing Architecture". He underscores architecture's passive and active dynamism by watching the children playing a football-like game on the terrace of a historical church in Italy. In this architectural observation, he says that he realised something he had never seen before. Children were not experiencing the terrace like a tourist would. Typically, tourists experience historical places confined to the route that a tour guide shapes. After that, tourists leave the place to go and consume other historical experiences tailored for them before the experience takes place.

On the other hand, children playing games on the terrace were adapting their football games to that terrace by responding and adapting to both the physical constraints of architecture and the ludic constraints of football. By doing this, they were also transforming the spatial experience into a living one with the agency of ludic architecture. As a result of using the flexible and dy-

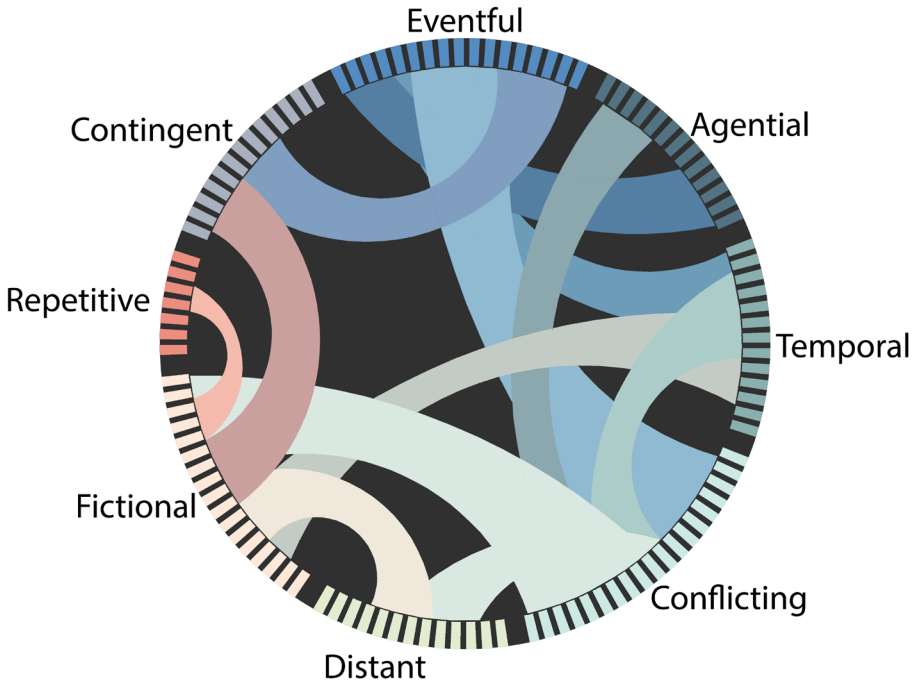

Figure 1. *Relationship between Different Aspects of Play.*

namic structure of the game, the stairs, the terrace, and the curved wall are all integrated into the built environment, creating a multi-levelled, reformable architecture in which a player could facilitate the play. After that, Rasmussen (1959) argued that children may not have understood that they were adding a layer to the architectural experience. However, a beholder with architectural knowledge, like Rasmussen, could realise that architecture could create multiple interactions and relations. The vital aspect of creating emergence and novelty is not a thorough understanding of extensions and possible influences of a game but the creation of new meanings through architecture itself. The collective ludic agency of children changes according to newly joined play-beings and their contributions to the place. Consequently, ludic architecture unravels an agency that satisfies the desires of solidarity and a feeling of responsibility towards the built environment.

Put succinctly, Huizinga's new perspective that understands games as playful and voluntary acts can be reflected in architecture by engaging and relating with them voluntarily and playfully through the inversion of reductionist approaches and acts. In his analysis of playful and social roles, it can be suggested that one designer can create social solidarity and appropriation of architecture through the interruption of existing contextual structures. On the other hand, Fink shows architects a way to discuss the built environment without restrictions of the routine world. In that way, having a relationship with architecture based on emergent rules without any outer imposition and restriction would create an emergent architectural state that embraces playfulness and, thus, relationality (Table 1).

Table 1. *Thinkers of Games, Their Approaches and Architectural Reflections.*

Ludic Thinkers	Methods	Architectural Reflections
Johan Huizinga 1872-1945	Playful and Voluntary Acts	Engaging with architecture voluntarily and playfully through inversion of reductionist approaches and acts
	Playful and Social Roles	Creating social solidarity and appropriation of architecture through interruption of existing structures
Eugen Fink 1905-1975	Overcoming restrictions of the routine world	Having a relationship with architecture based on emergent rules without any outer imposition or restriction
Ludwig Wittgenstein 1889-1951	Rules of games are set during the act	Setting design limitations and constraints to structure a system with alternation that is derived from act
	No possible definition of primary properties that would encompass all	Without any concern to sorting out all the properties of a building, showing the web of relations between play-beings operates
Bernard Suits 1925-2007	Autotelic rules	Setting constraints of architecture with a rule set just based on the act of architecture rather than being based on any teleological pinpoints and paths
	Voluntary attempts to overcome unnecessary obstacles	Relating with architecture voluntarily and playfully through inversion of serious approaches and acts
C. Thi Nguyen 1979-	Agential Posture	Understanding architecture as a provoking plane interrupting every established action to unfold novel and indeterminate approaches
Steen Eiler Rasmussen 1898-1990	Opening to novel capacities	Focusing on architecture's capability to unravel novel ways of relating with environment because of its manipulations

Reflecting Wittgentein's understanding of the rules of games (1986) created during the playful act of architecture, setting design limitations and constraints to structure a system with alternation derived from the act of architecture can facilitate more vital and productive architectural experiences. Also, his emphasis on the impossibility of defining primary properties encompassing the act itself will denote the importance of a shift in architecture to understand how the web of relations between play-beings operates rather than sorting out and listing all the properties and qualities. It must be noted that the playfulness of Postmodernism, where arbitrary manipulations and speculation of both architectural elements and discourse overfocus on what is playful instead of questioning how it could unfold between actors through the agency of play-beings. Following that, a replacement of a column with a colourful steel pole or a concrete wall with glossy glass panels can be seen as a playful architectural manipulation at first glance, but static and foreseeable changes cannot be a medium for productive and transformational relationships unless indeterminacy of games cannot be employed in architecture. Even if it contributes to the immersiveness and excitement of play, colourful balls in football or shiny textures of marbles are not provoking to put the play further if it only stays as a property of a being. Thus, games emphasise the agency and generativity of play rather than what is hidden in its essence.

Analysing Suit's autotelic aspect of the rules of games, setting architecture constraints with a rule set just based on the act of architecture would be more emergent rather than basing it on teleological pinpoints and paths (1978). His ludic definition of games also implies a new method of architecture regarding deconstructing the linear ways of seeing architecture. Nguyen's agential posture has the potential to offer designers a method to understanding architecture as a provoking plane interrupting every established action to unfold novel and indeterminate ways. Similarly, Rasmussen's observation of the church also underscores the vitality of focusing on architecture's capability to unravel novel ways of relating with the environment because of its manipulations.

4. A Ludo-architectural potential for solidarity

Before analysing the architectural aspects of ludic solidarity, it is vital to address philosopher Timothy Morton's descriptions of symbiotic relationships and solidarity to understand any action's social, inclusive, and productive aspects. According to Morton (2017), a symbiotic relationship is a loose integrity that contains the implosions of its actors, and these implosions are caused by joint problems that affect the ongoing life of humans or non-humans. In a symbiotic life, beings share a jagged and flawed environment to reconcile with their deficiency. In that sense, creating an environment that is neither chaotic nor orderly became a quintessential work for designers. In this context, ludic architecture creates moments of crisis and conflict through playful rules and systems, rejecting any ideal architectural concept or system which allows no room for flaws. Due to their relational, agential, and eventful characteristics, architectural agencies of play-beings that follow ludic rules could be based only on their own reality as opposed to mainstream canons that rely on abstract predetermined ideas. Besides, ludic architecture also creates auto-telic rules to make room that would create loose structures for potential solidarity. In Fink's words (2016), the primordial ground of life where any established rules are yet to be achieved overcomes the restrictions and boundaries of the routine human world and recalls that humans are part of nature. The architectural agency of play makes possible the transition from anthropocentric ideals that assign the most critical role to humans and understand the world as a tool to reach perfect ideals to a more-than-human way that produces dynamic architectural interactions and solidarity with non-humans. As an architect who focuses on the eventful aspect of architecture, Bernard Tschumi argues that his Folies complement the axiomatic structural logic of the

design and transformative copies of structure (1988). In other words, Folies balances the consistency of a structure, which creates a persistent form and meaningful repetitions of a design, which provoke yet-to-come methods of experiencing architecture through emergent and dynamic features. According to Hatipoğlu, who analyses "folies" in the context of their agency, the main element that integrates the structural dynamism of these entities with the park is their symbolic functions (Hatipoğlu, 2014). Referencing Deleuze, the researcher argues that the symbol of Folies belongs neither to the pre-existing reality of the material world nor to the imaginary elements of the conceptual world. The symbol, which lies in the in-between of these two realities and reconciles between the two opposites, creates a new situational as a third in-between-ness, similar to what Latour's Actor-Network Theory insists. Since there is an endless repetition between the objects in the real world and the images in the virtual world, the symbol itself never remains dormant since a definite resemblance is impossible.

Architectural design could consider the building's function within its context instead of just the end goal or any other reduced aspect of the built environment. Playful design elements can be incorporated to disrupt traditional linear approaches to functionality. By adding an ontological layer to the architectural experience, the ludic approach bifurcates the interactions as a web structure that cannot be interpreted based only on a single path (Crawford, 1997). A design that extends the experience of play-beings to the unintended aspects of design unravels the jagged and partial dimensions of the symbiotic relationship between humans and nature. Not relying on ready-made narratives structured at the influence of a higher concept or mottos, such as flexibility, inclusivity, immateriality, and ludic architecture of solidarity, means mediating the shared built environment of beings by only creating interaction potentials. The player whose movement is interrupted by the environment gets into a play on an agency where one could think about all the in-betweenness that architecture underscores. For example, the game "taboo" provokes players to find unexperienced ways to explain words in the context of following ludic rules, such as avoiding using forbidden words, explaining only within 15 words, using only the puppet, or drawing with a pencil. Similarly, the ludic architectural elements of the High Line project sheds light on undervalued aspects of the built environment and daily life (Foster, 2013). The project transforms the elevated train line abandoned since the 1980s into a more-than-human agency for humans and various species that promotes the natural biodiversity and ecosystems living in solidarity.

Even if this elevated train line has existed unused for years in New York, DS+R realised its significant potential for the neighbourhood (Figure 2). Architects rehabilitated the environment as a solidarity agent where the in-betweenness of the city and humans or nature and the built environment or flow of daily life and architectural experience is rediscovered and retraced in various aspects. In this design, where agencies of architecture are made upon the temporal appropriations of play-beings onto architecture, the architectural experience is shaped not so much by ready-made narratives of architects but by themselves with an auto-telic method that contains all aspects of it owing to its contingent and eventful nature. "High Line", as an architectural project, does not advocate for an ideal method to recreate and sustain the ecological balance or suggest rhetoric that it would create a unique public place that would unite New Yorkers. This contingent aspect of the project also comes with the contingent creation of fiction of play-beings. Rather than having a story that relies on ready-made conceptions and ideas, High Line only facilitates an agential approach that would provoke unnamed relations and assemblages between play-beings that would open new potentials between them. In that temporal collectivity of disparate beings located at an abandoned train line, intuitively conflictual backgrounds of beings instead proliferate yet-to-come ecologies.

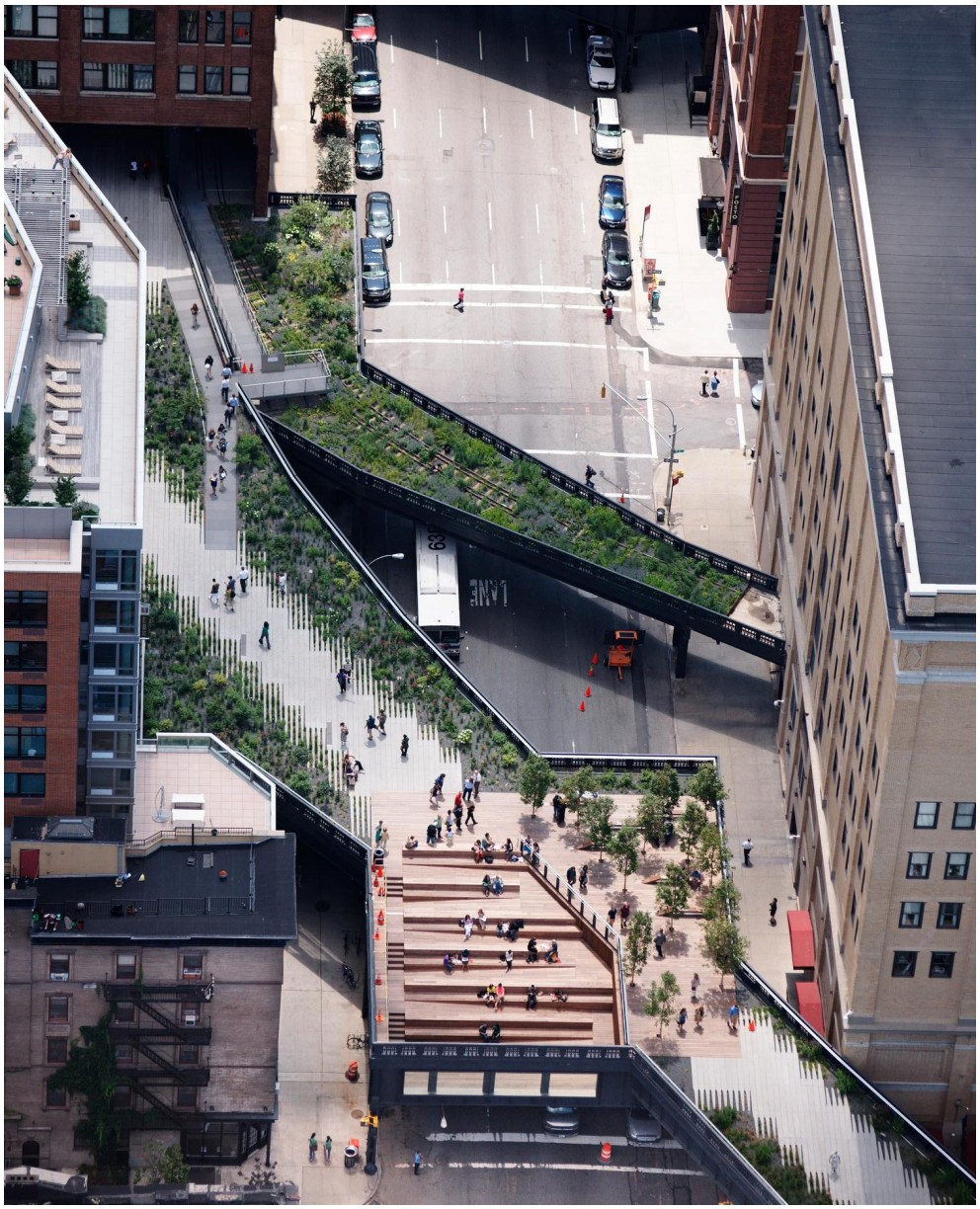

Figure 2. *High Line, New York (Diller Scofidio & Renfro, n.d.).*

Understanding architecture as an agent that makes the rules through the act of architecture, the design focuses on rifts between New York's chaos and the natural habitat's tranquillity of the project, similar to what is solidarity for Morton (2017). Thus, this design could be discussed as a vitalising agent that makes the zone suitable for appropriation by adding new horizontal and vertical planes, making room for creating new ecosystems in a non-anthropocentric way. So, play-beings respond to the built environment to sustain its playful flow according to their needs and desires. City-dwellers in New York define what is playful and solidary in a "magical circle" (Huizinga, 1949) between the chaos of the city and the peace of nature. By having an agential base in-between, High Line refuses any armchair critics' definition of chaos or nature that is wholly sterilised from the milieu. With its micro-environments that have the potential to create productive interactions, the project puts dwellers into a series of ludic provocations that would create unexpected events. High Line is unique not for its flexible architecture but for its ability to inspire vibrancy in humans and non-humans, free from imposed concepts or mottos. In this way, architectural experience strongly connects with the ludic experience through its agential posture, interrupting every

established action to unfold novel and indeterminate ways of experiencing the built environment.

Following Morton's (2017) solidarity, memory and expectations of a built environment could be vitalised and vibrated through a flawed and undone medium. This medium creates a milieu where any so-called deficiency or flaw is utilised as an initiator of unnamed interactions. In that sense, the Bridge Sprout project of Atelier Bow-Wow was designed as a half-done bridge trying to reach the Isar River of Munich. In this way, the project has gained more vibrancy and liveliness regarding the plural modes of movement it offers to play beings instead of promoting pure activity. In other words, Bridge Sprout does not favour activity over passivity or interrupted activity, including proactiveness and reactiveness. Similar to a football game, it limits play-beings from using their hands to score, and its creativity and novel strategies emerge based on this playful constraint; this bridge produces its meaning and emergent approach owing to its limitations. This limitation of being unable to reach across the river adds different layers to the architectural activity of a user. Like the children playing at the church in Rasmussen's example, play-beings of Bridge Sprout also adapt their acts and the capability and capacity of a built environment by adopting a playful manner. This playfulness shows itself when users can visually reach the other side of the river. The visual continuation of the project is interrupted by the material discontinuity of the bridge. There is loose integrity between physical embodiment and visual perception of the project, and this solidary in-betweenness produces disparate types of movements and, thus, creativity. According to philosopher Immanuel Kant (2003), imagination is closely linked to play and a playful environment, which should have a structure that allows for unpredictability and the freedom to try new attempts. Kant argues that imagination and play are rooted in breaking free from predetermined rules and restrictions. So, ludic architecture would also have rules that allow for breaking attempts and are consistent enough to structure and sustain a system.

In this context, ludic architecture necessitates multi-layered thinking and acting in time, including activity, passivity, or, in philosopher Edmund Husserl's (1991) words analysed by Maurice Merleau-Ponty (2005) later, retention (memory) and protention (expectation). These intentionalities, discussed by the philosopher, allow individuals to position themselves within their environment and derive meaning from a time that's not just self-centred or linearly progressive (Merleau-Ponty, 2005). Since we do not progress from a timeline that is constantly lived in the present, each moment experienced brings with it a change in the previous experience. What has just been experienced is with the present as it is; however, as the present gradually increases, the previous begins to remain at the bottom. This moment that was just here and is starting to fade away has to be reached to create a memory; it is not separated from the previous time and is still connected with the present. Nevertheless, this connection is still weakly related to the self's perception of time. When a third moment is experienced, separate from the present and the previous one, the second moment passes from being a retention, that is, the present moment living in memory, to being a retention of retention.

The reactive attitude of the dodgeball player, after dodging the first move and overcoming the second move, is considered by the second move that has passed and the first move that preceded it. As these retention processes advance, the present moment in memory begins to solidify and take on a structure called memory. In his analysis of Husserl, Merleau-Ponty (2005) argues that time has a structure closer to being defined as a network of intentionalities rather than linear. The point where the game differentiates itself from any action and separates movement and waiting over time into layers exists thanks to this network structure where interactions intersect. By containing all these active and passive states, both the game and architecture have the potential to create agencies that produce movement without imposition and provide a satisfying and sharing process. With this method, play-beings

can shift from experiencing architecture linearly with one type of movement to a shared and loose integrity, a network of intentionalities similar to Merleau-Ponty's analysis (2005), where dialogue is established between the actors and the built environment.

Regarding Bridge Sprout, the most vital experiential aspect for its play-beings is not to reach across the river directly but to intervene in the established act of crossing a bridge to unravel the unnamed potentials of architecture. As this intervention differentiates, relation potential increases regardless of the architect's intentions. Play-beings of Bridge Sprout have memories of crossing a bridge in a standard and predefined way. Even if the visual continuity of the bridge supports those established memories and imagining through the project in an established manner, the physical discontinuity disrupts the architectural experience and, consequently, offers a novel way to experience and understand architecture with a loose integrity between continuity and discontinuity (Figure 3). By interrupting existing ways of relating with the built environment, Bridge Sprout, with its playful agential posture, produces lively and evolving architecture through various solidarity between river, island, metropolitan city and play-beings that are there to sense it and create individual meanings with it. Consequently, memories and expectations are shaped within Bridge Sprout, not as a linear way of defining what is functional and what is not but as a web of interactions and intentionalities of users, designers, and all other actors in the environment.

In this way, by opposing ready-made narratives, the agential posture of Bridge Sprout makes room for open-ended agencies between its actors. This project uses a ludic method to sustain a non-hierarchical act of architecture, valuing every aspect of play and play-beings in its environment. The architect's mission is changing from designing a building that pretends to last forever to creating ludic agencies to generate multiple interactions and relations that would not exhaust linearly but unfold into various yet-to-be-experienced ways. With no concerns of realising the purpose of a building thoroughly, the playfulness of Bridge Sprout vividly reveals and questions the overlooked details and meanings of everyday life. The potential for inclusive relationships in a collective built environment has emerged due to the contingently defined fictional structure. Play-beings who voluntarily create and appropriate the milieu would also sustain and provoke architecture since every experience, meaning, and interpretation is individual. In this sense, ludic architecture can avoid static imagery-based, momentary reactions in its shared milieu.

Figure 3. *Bridge Sprout, Munich (Authors' Archive, 2022).*

Atelier Bow-Wow's architectural projects are not just a combination of form and story. Instead, they use playful design to connect humans and non-humans, blurring their boundaries. This approach allows for open-ended and collective agencies to emerge, where everyone is included and can contribute to the unfolding assemblages. Ludic architecture creates materiality with the potential of disparate agencies reflecting the relationship between all

play-beings and the importance of solidarity. In this context, the design does not include grand concepts or narratives, such as building a bridge between nature and humans or organising a public place to resolve the fixated division between nature and culture. With a playful approach respecting nature's existence and not seeing humans as a saviour, the architects show that architecture could highlight problems without imposing solutions or interfering and strictly defining acts upon them, similar to in-betweenness in Japanese thinking. Organising a cooperative and dynamic system that allows both activity and passivity, agents of architecture could be facilitated to unravel the capacities and capabilities of a collective relationship. Following that argument, the appreciation and value that is put at Bridge Sprout Project is not about efficiently accomplishing an architectural act or ideally achieving a state of society, which would be a perfect and well-thought remedy for sociological, ecological, economic problems. Contrarily, the focus is on the agential posture of an architectural project to experience situations never experienced before in real life that would unfold yet-to-come assemblages and indeterminate productivity between all play-beings. Such an approach to the built environment valuing processes, performativity, and yet-to-come events through action would contradict a method that reduces all the relations to one praised aspect, feature, or concept.

Suggesting a limited lifespan of the design to deconstruct the permanency of architecture, having a dynamic and open structure capable of producing multiple meanings and interpretations, Bridge Sprout aims to exist only partially. As an architectural installation, Atelier Bow-Wow plans this project to last only three years. The ludic architecture of Bridge Sprout suggests an alternative lens at what already exists and takes part in everyday life by making it ephemeral. Creating an open system without final images produces a dynamic built environment. The project maintains the flow of play and creates an evolving architectural system. This type of architecture, therefore, values the "displacement" of actors in the built environment as much as "emplacement", as philosopher Paul Ricoeur (2006) when underscoring the importance of inhabited space. According to him, architecture needs to be cooperative, where continuation and discontinuation are performed with a balance, similar to Morton's concept of loose integrity. An ideal, flawless and perfectly designed project that leaves no space for playfulness and various modes of architectural experiences would eventually favour a utopic and static image of the human mind.

Having a temporal lifespan that would only be a part of memory in

Table 2. *Ludic Architectural Projects, Ludic Methods and Effects on the Architectural Design Methods.*

Ludic Architectural Projects	Ludic Methods	Effects on the Architectural Design Methods
High Line (DS+R) 2009	Agential Posture	A more-than-human agency for not only humans but for various species that promotes the natural biodiversity and ecosystems living in a solidarity
	Overcoming restrictions of the routine world	Unique not for its flexible architecture but for its ability to inspire vibrancy in both humans and non-humans, free from imposed concepts or mottos
	Opening to Novel Capacities	Vitalising agent that makes the zone suitable for appropriation by adding new horizontal and vertical planes, making room for creating new ecosystems in a non-
Bridge Sprout (Atelier Bow-Wow) 2020-2022	Autotelic Rules	Play-beings can shift from experiencing architecture linearly with one type of movement to a shared and loose integrity, a network of intentionalities
	Opening to novel Capacities	Loose integrity between physical and visual perception of the project, and this solidary produces disparate types of movements, thus creativity
	Playful and Social Roles	A living being that is sensible to manipulation and responds with multiple feedbacks rather than a static object

three years, the playfulness of Bridge Sprout highlights a different mode of architectural experience, which would eventually end and be a part of memory. Consequently, ludic architecture provokes its play-beings to continuously manipulate the environment and shape different variants of the built environment in novel ways after the end of its life. Following that, architecture becomes a living being, just like any other being, that is sensible to manipulation and responds with multiple feedback rather than a static object established and finalised at some point (Table 2). Examples of ludic architecture are far from a completed and fully defined, ideally shaped functional system. In other words, they are not rigidly shaped and concrete, with the danger of not making room for creativity and solidarity. An agential built environment for productive relationships, ludic architecture is positioned at in-betweenness since it does not favour any aspect over another. In this way, conflict and contingent characteristics of these projects also differ from chaos and order.

5. Conclusion

Creating an architecture that allows individuals to produce their own meanings and values, rather than being subject to narratives imposed by a kind of authority, is vital in having an inclusive and non-anthropocentric approach. This type of architecture allows for the individual's agency and helps to maintain it in the memory of those who experience it. In such projects, play-beings express themselves at loose integrity where there is a need for individuation so that the novelty of architecture emerges. In this sense, facilitating a ludic perspective in architecture allows beings to have solidarity and interactive relationships. Through its disparate attitude that interrupts the established continuation of life, the ludic approach offers an alternative approach to architecture by reconsidering existing architectural designs and thoughts in dynamic contexts. Ludic architecture, which offers a departure from the status quo approach in architectural design, moves away from designs seen as end-products and static beings. Limitations of this approach are speculation based on predetermined narratives, disregarding the unnamed potential of play-beings.

On the other hand, adopting a playful approach, in which the fiction is constantly reshaped and transformed within the inclusion of the beings, ludic projects show that it is possible to understand individuals through in-betweenness, unlike an understanding that sees matter as an assigned final product. It presents an alternative perspective on approaches to solving current issues rather than changing the attitude pragmatically. Ludic architecture rejects the result-oriented hierarchical methods in architectural design, such as favouring one aspect. The ludic approach evaluates every play element in its own modes and context if it creates ludic movements.

The interaction of the play-beings with others in a setting where they create solidarity through their loose integrity provides a collective structure in which they sustain the architectural experience. The ludic architecture acts as an agency for many yet-to-come assemblages. By avoiding the pursuit of an unattainable ideal or being weighed down by grand concepts, this approach remains purposeful in its system. Architecture can develop without being realised for any purpose other than itself, free from imposed restrictions and ideals, which comes closer to an ecological and playful understanding of architecture, its actors, and its rules.

Endnotes

[1] The term auto-telic is derived from the Greek words "auto," which means "self," and "telos," which means "ultimate end or goal" (Merriam-Webster Dictionary, n.d.)—indicating that the structure of the game has an aim that is only operating within its system and has no exterior extension.

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