

# Gameplay as an effect of tuning in a ludic attunement: a phenomenological approach to *Ingress*<sup>a</sup>

## *A experiência de jogo como efeito da afinação do(a) jogador(a) na tonalidade afetiva (Stimmung) lúdica: uma abordagem fenomenológica do Ingress*

■ BRENO MACIEL SOUZA REIS<sup>b</sup>

Universidade Federal do Rio Grande do Sul, School of Library Sciences and Communication,  
Laboratory of Digital Artifacts. Porto Alegre – RS, Brazil

### ABSTRACT

This paper proposes a phenomenological approach to the gaming experience as an effect of what we call ludic attunement or ludic *Stimmung* to describe how players relate themselves to the ludic phenomenon and games as the potential relationship between being-in-the-world and experiencing the world. The theoretical approach was applied in a game called *Ingress*, which is played in mobile devices within an urban context. The results showed a strong presence of the game's cosmology as an effect of attunement in a ludic *Stimmung*, even during situations where players are not effectively playing, which indicates that *Ingress*' narrative and gameplay transform the users' urban and spatial experience.

**Keywords:** Gaming experience, ludic attunement, *Ingress*, game studies

### RESUMO

Este artigo propõe abordar a experiência de jogo como efeito do que chamamos de tonalidade afetiva lúdica para caracterizar, especificamente, o modo como nos relacionamos com o fenômeno lúdico e a sua manifestação na forma de jogo como uma possibilidade de relação do ser-no-mundo com o mundo vivido. A abordagem teórica foi aplicada empiricamente no jogo *Ingress*, jogo voltado a dispositivos móveis e que se desenvolve no contexto urbano. Os resultados encontrados permitem identificar, como efeito da afinação na tonalidade afetiva lúdica no *game* em questão, uma forte presença de sua cosmologia em situações nas quais os(as) jogadores(as) não estão efetivamente jogando. Isso indica que a narrativa e o *gameplay* do *Ingress* transformam a experiência espacial e urbana desses sujeitos.

**Palavras-chave:** Experiência de jogo, tonalidade afetiva lúdica, *Ingress*, *game studies*

<sup>a</sup>This paper was conducted with help of a doctorate scholarship by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (Capes) – Financing code 001. The author is thankful for the peer analysis and careful reading, as well as the thoughts and suggestions which provided important insight not only for improving this study, but also the several prospects provided by the discussion. Translated by the author.

<sup>b</sup> Doctorate degree in Communication and Information at the Universidade Federal do Rio Grande do Sul, master's degree in Social Communication at the Pontifícia Universidade Católica do Rio Grande do Sul, and advertiser at the Universidade Federal do Espírito Santo. Orcid: <https://orcid.org/0000-0003-1623-0399>. E-mail: [brenoreis@ufrgs.br](mailto:brenoreis@ufrgs.br)

DOI: <http://dx.doi.org/10.11606/issn.1982-8160.v13i3p229-253>

## INTRODUCTION

**I**N GAME STUDIES, the understanding of the player's experience is usually grounded in two main perspectives (Nacke & Lindley, 2009). The first is based on technical/technological aspects, such as the specification of the equipment used by players to play the game – console's and computer's hardware and software –, and matters concerning game design, playability, and software programming; which, combined, could provide usability and intelligibility parameters according to the purpose, specificities and regulatory prescriptions proposed by game developers.

The second approach concerns the player's cognitive aspects, such as their ability to understand and solve the problems that are presented by the game's system, as well as the recognition of commands, patterns, and aspects related to playing a digital game. These could be understood as a type of specific *literacy* that players develop as they acquire experience with digital games (Gee, 2003).

Still concerning the latter approach, aspects focused on psychological and cognitive issues related to the acquisition of new competencies demanded by these media could be understood, as Gee (2003) points out, that “when people learn to play videogames, they are learning a new *literacy*” (p. 13). Another very popular approach is the idea of a psychological “state of flow” (Csikszentmihalyi, 1991, 1996, 1997, 2014) – becoming quite popular in game studies despite the fact it was not originally conceived to analyze the gaming experience (or gameplay) (Nacke & Lindley, 2009).

There is a concentration of studies that prioritize certain aspects over others when it comes to understanding how the player experiences the game in a broader sense – namely situations, contexts, spaces, and the temporality involved in gaming (Fragoso, 2017). Regardless of whether they are digital or not, it is worth noting that these experiences go far beyond the moment when the game is played; but to understand that they become part of the players' repertoire even at times when they are not playing (Huizinga, 2001).

Although it is a concept commonly used in game studies (both in specialized literature as well as among digital game developers and players), the idea of gameplay still carries multiple meanings according to the context in which it is used. Thus, it can refer to the experience of playing a specific digital game in a game session, such as video tutorials and walkthroughs, available on sites such as YouTube and platforms such as Twitch and YouTube Gaming. On these sites, players register their game sessions and make them available to other players; or even broadcast live – some channels have millions of watchers, with a few of those being professional players.

Given this context, gameplay can be better understood if we consider that, in some cases, the perceptive and individual aspects that enable the game experience are stressed; in others, the player is put in a peripheral position, so that programming, logic and design elements of these games (such as their rules, mechanics, and supports) can be stressed, thus eliminating the interference of external factors such as spatial, social and temporal contexts.

It could be also useful to evoke Nitsche's (2008) idea that the gameplay experience is triggered by what the author calls "five game planes". For Nitsche, as the possibilities for engaging with the game increase – especially in the case of digital games made for computers, consoles and, more recently, mobile devices – also increases the number of "game spaces" (p. 2). These five planes described by Nitsche (2008, p. 6) are: a) the *plane of rules*, imposed by both the devices used to play and what is prescribed during game development; b) the *mediation plane*, referring to any interface that graphically translates the code made by programming, with which the player handles and performs actions in the game; c) the *fictional plane*, or the space that is imagined by the player to understand and deal with the images presented graphically in the digital device used to play; d) the *game plan*, or the act of playing itself, incorporating hardware and software, the player and all associations involved in this process; and, finally, e) the *social space*, which affects and is affected by the four previous planes, as well as the people with whom they play, whether they are physically present or virtually mediated in digital networks (Nitsche, 2008, p. 16).

It is interesting to note how the perspective provided by the author, rather than prioritizing certain planes over others, exposes the complexity of the gameplay experience as an intertwined network of material, symbolic, technological, individual and social relationships, in which multiple elements come into synergy – and that, especially in the case of digital games, can influence the experience of playing a game.

Therefore, the main objective of this paper is to suspend these assumptions about the gameplay experience, investigating its ontological background while considering it as rooted in the very essence of what makes us being-in-the-world, or *Dasein* (Heidegger, 1962). The claim here is to uncover and identify the existential structure that allows us to relate to the gaming phenomenon and its manifestations as an ontological disposition (*Befindlichkeit*) that allows for the experience (thus, perceiving and assigning meaning) of ourselves, of others and of the world, broadly speaking, in a ludic manner.

This ontological disposition is called ludic attunement or ludic *Stimmung*, that is, a process that occurs in the existential *in-between* in which the game occurs, through which the player becomes more *ontologically* open to the ludic experience. Both in its complexity and the multiple instances that are put into synergy, this perspective considers the numerous elements that are intertwined in the act of playing a game, such as the material, symbolical, physical, spatial, temporal, social and technological contexts in which this experience occurs.

In this paper, we present the concept of ludic attunement/*Stimmung*. Hence, this investigation is mainly theoretical, although it has been empirically applied in order to test its suitability in a specific game, *Ingress* (2012). The following is a brief overview of a larger 4-year study in a PhD dissertation, conducted with *Ingress* players in Porto Alegre, Brazil. In the following sessions, we present the theoretical paradigm that supports our attempt, while also showing how the available literature on game studies can sustain our argument.

## ATTUNEMENT IN A LUDIC AND GAMING EXPERIENCE

Since Huizinga's (2001) canonical study, still in 1938, about the importance and the relation between ludic manifestations and societies, much effort was spent in order to understand what characterizes the subject's experience with this unique phenomenon compared to other life activities. Since then, and long before the emergence of digital games themselves, in the second half of the twentieth century, this has been a subject of inquiry, especially in humanities and social sciences. This is the case of *Man, play and games*, written in 1958 by Caillois (1990), another canon of games studies in sociology.

Although in recent years the interest in the topic has expanded beyond the mentioned areas, they continue to host most studies in the country, as demonstrated by Fragoso et al. (2017). In addition to the expertise of these areas, however, adopting interdisciplinary perspectives was an improvement— and as such, in this paper, we relate Communication studies and Philosophy.

It must first be made clear the improvements that this transit through different fields of knowledge provides to game studies, since this intertwining is precisely what gave rise to the concept presented below and which will later serve as an analytic framework for the empirical object. This formulation was called ludic attunement or ludic *Stimmung* (Reis, 2018).

## HEIDEGGERIAN PHENOMENOLOGY AS A THEORETICAL FRAMEWORK

Prior to our analysis, we must clarify our theoretical framework, namely the concept of *Stimmung* presented in Heidegger's *Being and Time* (1996) and *The Fundamental Concepts of Metaphysics* (1995). The word originally used by Heidegger is *Stimmung* – a German expression that is virtually impossible to be translated to any other language without losing some of its semantic particularities. It must be noted that Heidegger analyzes the ways of being of humans in their daily existence, that is, the relation between the subject and the things they interact with, the people with whom they engage – including themselves – from the perspective of what Heidegger calls *Dasein*, that is, our mode of being-in-the-world, simultaneously and among the things (entities) that exist in the world and with which they interact with, daily and, oftentimes, unthinkingly (Heidegger, 1962).

An important characteristic of *Dasein* is the fact that it deals with and relates to its own existence, that of others and that of things in a committed and active way, assigning meanings to them – and, under the context of such commitment, a process of attunement or tuning between the subject and the world (*Welt*) occurs. This Lifeworld is not the world itself, but rather an Lived World (*Lebenswelt*), whose main characteristic is the reunion of any reference that could be made to something, to someone or to some object (be it material, physical, cultural, symbolic, etc.).

For this, we can argue that this Lifeworld is always related to a previous repertoire that we all, in our condition of *Dasein*, inherit from others in the form of a referential. That is, the being-in-the-world can only manifest itself before something that already and always exists within its reach, has uses and is related to other things. In other words, it is inserted in utilitarian and symbolical 'chains' of uses and meanings. This doesn't mean, however, that there's no actual production of new and different meanings about ourselves and things; this is because being-in-the-world assumes the task of actively engaging to build, (re) build, and (re)elaborate its existence and that of the world in which it lives in (Critchley & Schümann, 2016; Heidegger, 1962; Stein, 2004).

Hence, it must be noted what experience means in the context of this paper – a broader concept that is not even particular to game studies itself. According to Merleau-Ponty (2014), from a phenomenological point of view, experience implies considering the intelligibility of something – and therefore its relation – in a hermeneutic and existential framework.

That means that experience, as a hermeneutic process, is related to the perception that we have about ourselves, of others and of the things that exist in the world that is present to us, or our Lifeworld. For Merleau-Ponty (2014), perception "is not a science of the world, it is not even an act, a deliberate

taking up of a position; it is the background from which all acts stand out, and is presupposed by them” (p. XII).

For Tuan (1977), experience is the human ability to attribute meaning to things to which humans perceive and deal with. Thus, experience is only possible for us because we are moved both by emotions (sensible aspects) and by rationality (thought) – with no primacy of one over the other; that is, the things that happen to us, that we encounter, and the relationships we establish between us and them (Tuan, 1977). In this sense, Tuan argues that

experience thus implies the ability to learn from what one has undergone. To experience is to learn; it means acting on the given and creating out of the given. This given cannot be known in itself. What can be known is a reality that is a construct of experience, a creation of feeling and thought. (p. 9)

Hence, experience relates to the Lifeworld, which relates to *Dasein*; consequently, the Lifeworld “represents this that we could call the condition of possibility of all and every experience” (Stein, 2004, p. 31). Therefore, to speak of the concept of experience according to phenomenology framework implies to consider man in his ordinary and most banal daily life, from a perspective that puts him in an integrative and simultaneous position to that of his Lifeworld – thus, undoing the object-subject Cartesian scheme. Stein (2004) argues that the idea of the Lifeworld

is connected to the question of experience, because the Lifeworld is to be the original place of experience, but it is a non-place. The experience has to be from this place, from there without, however, making this Lifeworld an experience. (p. 25)

Further, Stein (2004) emphasizes that the Lifeworld “now represents all that we can call the possibility of all experiences” (p. 31)

To think phenomenologically of experience from the idea of the Lifeworld implies to think of the one for whom the experience occurs both in its cognitive aspect and in the dimension of presence, that is, bodily, sensitive – so that this experience can only be possible from an integrative understanding of perception, while being affected and affecting things and others with whom one interacts during their existence. For, as Merleau-Ponty (2014) also states, “the world is not what I think, but what I live; I am open to the world, I undoubtedly communicate with it, but I do not own it, it is inexhaustible” (p. 14). Therefore, the possibilities of experience regarding a phenomenon, which can never be fully and previously known, are also inexhaustible.

Consequently, this indicates, on the one hand, the phenomenological premise of man-world inseparability, and breaks away with the Cartesian subject-object, since it is impossible for the *Dasein* to disengage itself from the things it deals with – or even to deal with them in a straightforward or casual manner, including itself. On the other hand, this inseparability also indicates that this interpretation is possible due to the fact that the being-in-the-world has *modes* and *dispositions* with which it relates to this same referentiality, which can be previously accessed by the being-in-the-world.

It can be inferred that *modes* are constituted by affectations — that is, ways in which *Dasein* is produced existentially and simultaneously as it produces the things of the world and inserts them into these symbolic chains. That is, if we do not relate to the world directly and objectively, this set of references is always mediated by our ability to be attuned in different ways with our surroundings. Thus, we experience the world around us (*Umwelt*) grounded on this attunement, and produce, share, and deal with the experiences – and thus the meaning – that we have concerning this *Umwelt*.

At this point emerges the concept of *Stimmung* in Heideggerian phenomenology, a term whose literal translation is impossible to the Portuguese language, given its polysemy in the German language, due to which we prefer to use the expression *attunement* as exposed in *Fundamental Concepts of Metaphysics* (2011), rather than *humor* that appears in *Being and Time* (2015). In these writings, Heidegger takes as an example boredom and anguish respectively. In short, Oliveira (2006) argues that

Willingness, feeling or sense of situation, or even affectability, are different terminologies for the same existential phenomenon that was originally constitutive of *Dasein*, and this implies that disposition is not occasional, since *Dasein* is its disposition permanently. The disposition would then indicate an ontological structure (*Befindlichkeit*) that enables the attunement (*Stimmung*) as *Dasein*'s determined ways of feeling. (p. 61)

It is important to notice that when Heidegger introduces the term *Stimmung* (that has been translated at times by *mood*, *state-of-mind* or even *attunement*), he is trying to account that our Lifeworld is experienced not only by our rationality but also by a state of attunement that overcomes our tendency to rationalize this already mentioned world. In the following section, we will elaborate on this idea in Heidegger's meditations and present how it can be appropriated in a ludic attunement or ludic *Stimmung*, as argued.

**LUDIC ATTUNEMENT/LUDIC STIMMUNG**

Once the theoretical framework in which the concept of *Stimmung* in Heideggerian phenomenology is explicit, we can move forward in order to elaborate its occurrence in the being-in-the-world as a trigger that allows for the ludic experience during gameplay, or to engage in an activity in which we could identify the playfulness spirit (Sicart, 2014) – even though this activity could not be formally understood as free, voluntary and ruled-based, as pointed by Huizinga (2001), Caillois (1990) and, more recently, by Salen and Zimmerman (2004).

Considering that playing a digital game (and in a broader sense, any game or activity alike) involves not only cognitive properties, but also demands the player's physicality (motricity, respiration, heart rate, body senses, etc.) with the materiality and physicality of the environment in which the game is played, as well as with the devices used in the act of playing a game (more specifically, in digital games, console, computer or mobile devices such as a handheld or a smartphone), it becomes impracticable to consider the experience as determined, in a greater or lesser degree, by a specific agent over others.

Amaro (2016) systematizes this relationship by stating that gameplay is marked by a liminal situation (Nieuwdorp, 2005) that takes place “between the virtual and the physical spheres, between the graphical and material interfaces, in a system that incorporates the player to the machine and the digital to the body, in a flow that comes and goes while this relation is established” (Amaro, 2016, p. 220). It seems appropriate to mention as indicatives of this intertwine between player's body, its cognitive processes and the materiality of objects and interfaces used to play a digital game, that is usual to observe curious motor reactions when someone is playing, i.e., a racing game (tilting the body when making a curve). Or, when playing a horror game in a dark environment and, in a very tense moment, to notice physical and physiological reactions when surprised by fright or a scary creature (increased heartbeat, clamped or panting breathing, sudden movements, etc.).

To this situation of attunement between the player's body and cognitive properties, the game (its artifacts, gameplay etc.) and the context in which all this takes place in a specific moment, we call ludic attunement or ludic *Stimmung*. We could define it as how the ludic phenomenon manifests and presents itself through games and produces effects (physical, material, symbolical, and so on) in a specific gameplay situation as a kind of tension. Hence, this tension is solved as a particular experience by which *Dasein* can relate to itself, to the other being-in-the-world and its surroundings under the ludic phenomena, as a specific process of openness to the world.



Therefore, it is necessary to consider the gameplay experience as more than just one of a generic activity to which we engage in our existence, but as a component that is ontologically grounded in our disposition (*Befindlichkeit*); and also recognize its relationship with our instincts and passions, our rationality and irrationality, with our mood states and dispositions (Buytendijk, 1977).

Hence, the ludic attunement challenges us in order to put us in tune with the manifestation of the ludic phenomenon, making us burst out of our ordinary existence, constituting a comprehensive openness through which it is possible to try new ways of being and to deal with what surrounds us and with each other in ways that are often different from those we are used to. It is important to notice that, according to Coyne (2010), “for Heidegger, attunement is a condition that may pervade a whole group. It is invisible in any social situation and often goes unremarked” (p. XIV).

In this sense, we can identify three fundamental structures that make up the ludic attunement in its ontological background as responsible for tuning the player when said attunement occurs. These are intrinsically related to the temporal character of the existence of *Dasein*, namely: the past or historicity; the future as commitment; and the present as the instance in which the tensions between the two previous ones are solved and in which the tuning that enables the experience of game explicitly takes place.

### **The ludic *a priori***

This first instance refers to the prearranged modes, the socially and culturally established forms by which the being-in-the-world relates to things, to others and to itself, regardless of whether they are games or not. This is because *Dasein*, when it is born, already finds itself in an organized world, full of meaning and possible activities to be developed and engaged with – and, among these, the human familiarity with the ludic phenomenon and its manifestation in form of formalized games. That is, attunement is not only individual but also a social feature that is inherited from others as being-in-the-world.

It means, in other words, that it is possible to sustain that all of us, to a greater or lesser extent, can recognize the existence of this familiarity since it is part of a previous and significant framework to which we have access. This also means that “play is a phenomenon of life that everyone is acquainted with firsthand. Each person has already played at some point and can speak from experience about it” (Fink, 2016, p. 15).

Therefore, the ludic phenomenon and its manifestations are part of the human Lifeworld (*Lebenswelt*) and, as such, can be understood as a referentiality:

we can talk about it and use it, recognize its occurrence with certain accuracy, and decide if we want to engage with it or not. That means, the phenomenon and its manifestation described here are, ultimately, part of the human social and cultural repertoire, and are connected with other events in a utilitarian chain, given that they have a practical and operatory dimension. They possess a name, a meaning, and can be conceptually fixed; and through this we are able to establish rules, codes of conduct and ways by which it is allowed or not to engage with them in a meaningful and previous horizon.

### **Future and care (*Sorge*) as the ludic commitment**

Among the characteristics that allow us to situate *Dasein* differently concerning otherworldly beings is the idea of care (*Sorge*). Such a structure in Heideggerian thought demonstrates the active involvement of humans, both to their existence, and that of all the things with which he deals daily. This is justified by the fact that we already have access to a set of meanings and procedures relative to what surrounds us, pervading even the forms by which we speak about ourselves – for example, differentiating ourselves from others by our ability to reason, to understand, to give meaning to reality and to share these senses with others similar to us (Critchley & Schürmann, 2016; Dahlstrom, 2013; Harman, 2007; Heidegger, 1962).

The human commitment to the ludic phenomenon and its manifestations can be understood as a strategy from which we reach out to deal with the things of the world and simultaneously with others. In this perspective, it is also intrinsically linked to the idea of finitude which, on the other hand, is also related to the structure of care (Harman, 2007). In other words, the active commitment that involves our practical actions is available to us and at our reach in our Lifeworld. This is only possible because we are beings who possess the uniqueness of being aware of our death or existential limitation, and we are worried about it from the moment we perceive this inescapable destiny.

That is, we are always and already pre-occupied with this matter, and in this sense arises the human capacity to attribute meaning to the world through the ludic experiences acquired throughout life. As evidence of that, children's relationship with the world are shown to be conducted by a kind of thought essentially marked by the ludic phenomenon. Fink (2016) argues that, although this seems to be pretty obvious and almost tautological,

The world-relation of human existence is not an affair that is already previously known and ascertained in such a way that we could apply the distinction between

human being and the world, as it is, to play. It is rather the converse. In a discussion of play we perhaps achieve the conceptual resources to think and conceive primordially the difference and belonging together of the human being and the world. (p. 43)

Since the awareness of finitude is a determinant for *Dasein* to actively engage in the task of its mundane occupation (Heidegger, 1962, 2011), it seems that the comprehensive and open-world potential that underlies the ludic phenomenon and its manifestations is an existential possibility to “dodge” the uncanny fact that, at some point, our individual existence is coming to an end. For Sicart (2017), this means to recognize in our engagements with the ludic

a way of dealing with our mortality, with the inescapable fact that some years or weeks or days or minutes from now everything will be over. Being conscious is knowing that self-reflection itself will go away. At the same time, it is our conscience what anchors us to the now, and to the *then* we have lived. To be human is to deal with our own temporal limit, to find strategies to cope with our certain death.

Therefore, human engagement with the ludic phenomena, more than an uncompromised activity with which we deal in our daily lives, could be understood as possessing an ontological dimension, as a way from which we become being-in-the-world. It unveils the world around us and, by doing so, we can relate meaningfully to both our surroundings and to ourselves. This means that, while we inherit specific ways of dealing with what surrounds us, we also re-signify these prescriptions at the exact moment we play.

### **The present as an actualization of the ludic attunement**

Previously, we presented the two existential and temporal instances that allow us to trace our engagement with the ludic phenomenon and its manifestations as a particular world-opening process in our daily existence as being-in-the-world. Thus, this means that if we, on the one hand, are born in a world already built by others, in which these engagements precedes us and are allowed in some situations, contexts and life stages more than others – such as childhood in contrast to adult life (Fink, 2016) –, on the other hand it seems that its dimension as a kind of care (*Sorge*) is confirmed, included its understanding as an escape from pressures and everyday circumstances we inevitably have to deal with (Huizinga, 2001).

And it is precisely in this daily life that phenomenology aims to seek the meaning of being (Merleau-Ponty, 2014); and in this particular case, to

characterize the present as the existential instance in which the two previous ones are articulated, providing a particular kind of original openness to the world that is different from the thoughtless ways by which we deal with things (Heidegger, 1962).

In this sense, the ludic phenomenon and its manifestations as what we usually call games, challenges us in our daily existence in order to break with the established ways and the state of affairs in which the world is presented to us, as well as their meaning, clarifying the assumption that, in fact, our existence is multidimensional and that our present is effectively broader and more complex than we are used to thinking. This is because, according to Fink (2016)

playing belongs essentially to the ontological constitution of human existence; it is an *existentiell*, a fundamental phenomenon. Certainly not the only one, but nevertheless a peculiar and independent one, one that cannot be derived from the other manifestations of life. (p. 18)

This is because, as Huizinga (2001) argues, when we are involved in some manifestation of the ludic phenomenon, we can liberate ourselves from the burden of a future-oriented existence (as argued by Heidegger), at the same time in which we experience this same orientation as an ontological openness to deal with us, with others and things in other ways. If *Dasein* is a *way* from which human existence articulates itself in a contingency, when we are challenged by the tuning of the playful attunement, we are also free to experience *other ways of being*.

In addition, if our being-in-the-world is directed towards the future as care (*Sorge*), through the ludic attunement or *Stimmung* we are thrown back to the present because, while the game is being played, what matters is essentially the *here and now*. Thus, the ludic attunement brings us back to the present, the moment – often not instrumental and not ruled by the rational logic that characterizes our thoughtless worldly deal. That is to say, here is what is called “oasis of happiness” by Fink (2016) – or the “magic circle” by Huizinga (2001) – given that “the *immanent* purpose of play is not, as with purposes in the rest of human activities, projected out toward the highest ultimate purpose” (Fink, 2016, p. 18). Figure 1 illustrates the concept of magic circle in Huizinga’s thought, highlighting the cartesian, categorical and easily recognizable separation between what is game and what is not – which is clearly different from what is argued here:

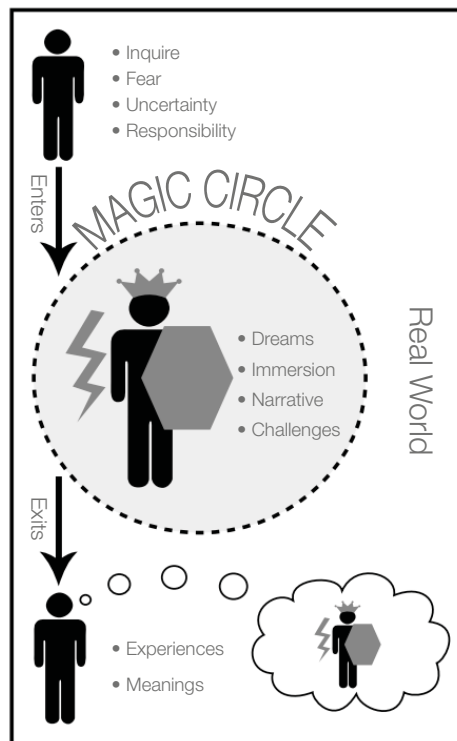


Figure 1. Magic circle in Huizinga

Source: Mastrocola (2012, p. 25).

However, this representation cannot be completely precise if we consider that, even if developed internally to the playing realm in which the *Dasein* engages, the production of presence and meaning (Gumbrecht, 2010) that emerge from this involvement does not remain restricted to the ludic sphere, as Huizinga (2001) concludes. This is because, once we are tuned in the ludic attunement in the ways we defend here, it is possible for us to experience ourselves and things in different ways from the ones we are used to.

This is reflected in the empirical object taken here to exemplify how these effects overflow the specific moment in which the game is played, as well as its narrative and gameplay – the *LARG Ingress* (2012). We have previously said that these effects can trigger a particular type of experience of the physical, social, temporal, spatial and symbolic urban context (Fragoso & Reis, 2016; Reis & Fragoso, 2017), through what was called *ludic re-enchantment of the world*. We should briefly recover some of these points, and later articulate them as effects of the player's tuning in the ludic attunement as a hermeneutical possibility of the experience in *Ingress*.

## EXPERIENCE IN *INGRESS*: GAMEPLAY, NARRATIVE, AND REENCHANTMENT AS LUDIC ATTUNEMENT

The discussion so far has provided the phenomenological basis for understanding the ludic experience in its ontological background, so as to characterize it as a process of tuning in the ludic attunement; that is, the existential structure of *Dasein*, which can relate in an original manner with itself, others and things that are part of the referentiality of its Lifeworld.

Thus, the following will demonstrate the application of the concept in the game *Ingress* (Niantic, 2012), which is played in mobile devices such as smartphones and tablets and is directly related to the social, spatial, material, cultural and temporal context in which the player is when he/she starts playing. The game is an application that, once it is installed on the player's device, displays a graphical representation of the surroundings on its interface, highlighting the portals – physically existing points that must be visited by the player so that he/she can perform actions in the game –, the XM flowing from them, as well as the links between portals and the fields, triangular links between three different portals.

It should also be noted that *Ingress* can be understood as the forerunner of another more recent and popular phenomenon: *Pokémon Go!*, launched in 2016 by the same company that developed the first game, Niantic. However, we decided to take *Ingress* as an empirical object for applying the concept we present here instead because it is already consolidated and has a broad base of players engaged in its cosmology – including the existence of player communities in Porto Alegre (RS), where the study was conducted.

According to the game's cosmology, a strange and mysterious energy was accidentally discovered by CERN<sup>2</sup> scientists in a test with the European particle accelerator, which was called by them “Exotic Matter”, or just XM. In this context, a secret organization emerges, Niantic, which investigates the XM phenomenon and the possible implications that this energy could bring to the human being exposed to it. The XM flows from physical locations around the globe, more specifically from points of cultural, historical, artistic, educational and architectural importance.

Figure 2 shows the basic interface in *Ingress*. The green and blue points are portals, and the green connection between them are links. The gray lines represent the actual streets and the irregular points between them buildings, houses and places in urban space that are not portals:

<sup>1</sup> CERN is the acronym for the European Organization for Nuclear Research, one of the world's largest and most respected centers for scientific research. The organization is based in Geneva, on the Franco-Swiss border, and operates the largest particle physics laboratory in the world.



Figure 2. *Ingress*' basic interface

Source: Elaborated by the author, 2019.

The origins of such energy remain a mystery; in any case, it is known that it is linked to the *Shapers* – which are believed to be from an international organization with unknown goals to an alien race. Consequently, two factions arise: the *Enlightened* and the *Resistance*, fighting for the domination and the destruction of enemy portals. Each of these factions has a set of beliefs around XM: the former thinks that it can be positive and lead humanity to a new evolutionary stage; the latter believe that this energy is dangerous and can lead to mental slavery of people under its influence.

The game was released in 2012 in beta mode, and in 2013 it became public for Android phones. Since 2015 it is also available for iOS devices. Game developer Niantic Labs does not officially disclose the number of players participating in the game; however, in 2015 during an interview, Niantic revealed that the game had seven million players worldwide. In December 2017, an overhaul of the game was announced, being released in November 2018: *Ingress Prime*, which brings changes to its graphic interface. Also in 2018, a game-based television series was announced, *The Ingress Anime*, released worldwide by Netflix in 2019.

Unlike most digital games for traditional consoles, *Ingress* has as game world the same context experienced daily by players – which indicates that the references brought by the game’s universe are mixed with those that the player already possesses and experiences ordinarily when he/she is not specifically playing. If, as we have seen, our experiences have as a background and condition of possibility the Lifeworld (which provides the referentiality to any experience), transposing cosmological elements to the players’ Lifeworld which until then were non-existent, modifying this same referentiality.

Therefore, this process makes urban elements and features such as sculptures, historic buildings, urban graffiti and arts in general have different meanings than those previously existing when they were appropriated by the game – and experienced by the players. *The world around you is not what it seems* is the official catchphrase of the game, and perfectly synthesizes its proposal. That is, the references which up until that point constituted the Lifeworld of players are now ontologically crossed by the presence of energies, portals, mysterious beings and other elements that change how they relate to the players. Figure 3 shows how the *Ingress* narrative and cosmology, by merging with the daily life of its players and the places in which they transit, attributes a status of non-fiction to itself.



Figure 3. Caption of *Ingress* promo video, with the “*Ingress is not a game*” catchphrase

Source: Elaborated by the author, 2019.

This everyday world experienced by the player is appropriated by *Ingress*: existing characteristics available in the urban space become, in its cosmology,



other things – portals – parallel to their instrumental, urbanistic, architectural, artistic and cultural configurations. The player experience takes place at the intersection between the overlap of these worlds: precisely due to this, we believe that *Ingress* has the potential to erupt the player from the state of what was previously known and taken for granted.

This intertwining and consequent expansion of both the act of playing and the places where the game is played provided by games such as *Ingress* demonstrates what Bogost (2016) argues as being characteristics of “game spaces”. For him, a game space, or playground, “is a place where play takes place, and play is the practice of manipulating the things you find in a playground” (p. 10). This is effectively one of the main differences in the act of playing a game: the appropriation, subversion and deliberate re-signification of spaces, objects, people, situations and temporalities in ways that very often surpass the function of what is taken when the player is tuned in the ludic attunement or ludic *Stimmung*. Thus, a cardboard box becomes a spaceship for a child; or a shoe box, also made of cardboard, can turn into a car when tied to a string. Adults, on the other hand, can become secret agents and have their cell phones transformed into devices capable of detecting mystical energies and manipulating portals and elements invisible to the naked eye. Through these mechanisms, players can identify and manipulate XM through a simple mobile app that connects urban space to the game world – which is, at the same time, the world experienced daily by the player (Adams, 2009).

The city to which we are used to becomes a strange, unknown and mysterious place, populated by events, XM flows and mystical beings – and to some extent, re-enchanted. That is only possible because, unlike other digital games for traditional consoles, *Ingress* merges, materially and symbolically, a cosmology that continually crosses and negotiates its limits, making it so that “in this transformation, otherworldly beings, space, etc., came to be viewed in terms of this world” (Tyriakian, 1992, p. 84).

Previously, we have called this a *ludic re-enchancement of the world* ((Fragoso & Reis, 2016; Reis & Fragoso, 2017) to name the process by which the rational and planned urban space, designed for specific purposes, becomes appropriated and re-signified by the *Ingress* cosmology in a two-way process: the first is a religious *lato sensu* re-enchancement; that is, despite having characteristics that resemble the religious narratives (presence of beings, energies and mystical powers etc.), cannot be understood as belonging to socially legitimized religious manifestations (Assunção, 2010).

The second is that of a scientific re-enchancement, which is guided by the accuracy, calculation, domination, and rational control of worldly natural forces.

The XM challenges the very foundations by which modern science operates, refusing itself to the scientific scrutiny; in addition to this, the manipulation of this force leaves the laboratories and formal research centers and becomes the responsibility of the players to manipulate it. Even the research institute that first detected the XM corresponds to a real institute.

At the same time, it is scientific in that XM does not claim to give the control of the world back to supernatural forces, like ancient gods; portals are not crossing points of two distinct worlds (analogously, the physical and the spiritual), but they are *intersections* in which XM reveals itself and can be clearly detected, given that it is present *in our world*. Thus, the game cosmology is still based on modern scientific assumptions, despite taking away the legitimacy of manipulating and understanding the properties of that energy from scientists themselves and giving the players such a mission.

That means *Ingress* also goes against the utilitarian chain in which modern science operates and conceives the world – a process that is, for Weber (2015a, 2015b), the core of the scientific disenchantment: the withdrawal of discursive legitimization from ordinary people and the transformation of scientists and formal research institutes in those responsible for providing answers on issues that impact social life, broadly speaking.

A two-way process can be identified: *Ingress's* cosmology appropriates urban spaces and is appropriated by players, characterizing the playful back-and-forth movement pointed out by Gadamer (2015) and Buytendijk (1977). In addition to this, Sicart (2014) argues that

In disrupting the normal state of affairs by being playful, we can go beyond fun when we appropriate a context with the intention of playing *with* and *within* it. And in that move, we reveal the inner workings of the context that we inhabit. (p. 15)

This disruption of the normal state of affairs of which Sicart talks about is, as we have said previously, one of the characteristics of what we call here ludic attunement or ludic *Stimmung*. According to its original feature, it provides the player with openness, a comprehensive and ontological gap that can promote the elaboration of different meanings about the existing entities, when the player and its experience are affected by the ludic attunement.

This means that places become more than what they were formally designed to be, and as such they are re-signified; the idea of ludic attunement not only emphasizes the concept that *Dasein* is being-in-the-world, but allows us to understand it, more specifically, as a *being-in-play-in-and-with-the-world*.

In the case of *Ingress*, this break occurs as ludic re-enchantment of the world from the player's social, temporal, spatial and urban experiences triggered by mixing the game's cosmology with the daily perceptions and experiences of city elements and contexts.

Therefore, multiple possibilities of breaking Dasein's daily attitude are opened through tuning in ludic attunement, in accordance with the ontological willingness to deal with the world, himself and others, given that, according to Heidegger (1962),

everyday Dasein draws its pre-ontological way of interpreting its Being. In the first instance ontological Interpretation follows the tendency to interpret it this way: it understands Dasein in terms of the world and comes across it as an entity within-the-world. But that is not all: even that meaning of Being on the basis of which these 'subject' entities [diese seienden "Subjekte"] get understood, is one which that ontology of Dasein which is 'closest' to us lets itself present in terms of the "world". But because the phenomenon of the world itself gets passed over in this absorption in the world, its place gets taken [tritt an seine Stelle] by what is present-at-hand within-the-world, namely, Things. The Being of those entities which are there with us, gets conceived as presence-at-hand. (p. 168)

In addition, considering the social character of the ludic phenomena and its manifestation, particularly regarding the community of *Ingress* players, the sharing of these references can be stated to collectively expand the individual ludic experiences, reinforcing the tuning triggered by the ludic *Stimmung*. According to Coyne (2010), this is because, in Heideggerian thought, the social aspect lies in the very core of the concept of attunement; in other words, the being-in-the-world is characterized by being, at the same time, being-in-itself and being-with-others (Heidegger, 1962).

As seen, the structure of care (*Sorge*) is always connected with the socially inherited ways in which we relate to things that surrounds us, while dealing with and emerging new meanings for them as anticipation and organization of the human world. Thus, the ludic attunement, when questioning the player as *Dasein*, removing them from their daily posture that is simply taken for granted, it also has a social characteristic, since this is intrinsic to the game (Caillois, 1990).

## FINAL CONSIDERATIONS

In this paper, we addressed the concept of ludic attunement to characterize the ontological nature of the gaming experience, as a way of liberating our *Dasein* from the ordinary and common-sense approach by which we deal with things, with others and with ourselves. To that end, we clarify in terms of phenomenology how this structure challenges us in our willingness to deal with the ludic phenomenon and its socially and formally produced manifestations as games – opening us to different possibilities of experiencing ourselves, others, the things we encounter in our daily life and, to some extent, the world around us.

Additionally, we presented a differentiation between the phenomenon (the ludic) and the manifestation (the game), an important point for the elucidation of the questions that followed, since it is usual in game studies to consider these two concepts as having the same meaning.

Thus, the structure of the ludic attunement has a threefold character: the past, the future and the present as the actualization and negotiation of the first two, inspired by the structure that Heidegger defends as the existential and temporal *Dasein*'s mode of being. Following this, it is possible to understand the ludic experience in its ontological character, emphasizing its importance as an element of construction, negotiation, and re-elaboration of the referentiality that characterizes the Lifeworld experienced by the being-in-the-world.

Although it is possible to understand the idea of the magic circle in Huizinga (2001) – and followed by Cailliois (1990) as a rigid separation between play and non-play – as typical modern conception of separation between the serious, productive and labor, of the activities that are characterized by the manifestation of the play phenomenon, it doesn't seem to be enough to be characterized in its entirety. The ways players experience both the game as a manifestation of play as well as the spatial, urbanistic, architectural, social, temporal, material, physical and symbolic aspects of the cities in which they play the title analyzed here seem to challenge this very separation.

To apply the concept, the game *Ingress* (Niantic, 2012) was chosen, since it is characterized by having the Lifeworld (*Lebenswelt*) as the universe in which the game takes place, experienced daily by its players; that is, it is not a fictional world apart from the ordinary context in which it is played, but *within* the latter. It intersects and develops its cosmology, its narrative and gameplay continuously appropriating the physical elements and the urban, social, temporal, cultural, historical and spatial contexts in which the players are situated.

Whether on an everyday basis or a specific purpose to play in the urban context, the player is invited to experience a reality that is different from what was previously familiar to them. The gameplay experience that emerges from

the ludic attunement indicates, therefore, the possibility of re-signification of the ways in which *Ingress*' players interact with, perceive and give meaning to the world that surrounds them when the game's cosmology becomes part of their everyday lives – even at times when they are not actually playing, or in out-of-game situations. We identified this as a process of ludic re-enchantment of the world, both scientific and religious (Fragoso & Reis, 2016; Reis & Fragoso, 2017).

An evidence of this is the understanding that, in the case of *Ingress* (but not only), one of the possible effects of the attunement on the ludic *Stimmung* would be a process of reversing the disenchantment of the world undertaken by modernity according to Weber – making possible what we have called ludic re-enchantment of the world (Fragoso & Reis, 2016; Reis & Fragoso, 2017). In sum, this re-enchantment can take place in two ways: the scientific and the religious *latu sensu*, that is, outside the socially legitimized religious spheres, characterized more by a mystical involvement with supernatural forces and powers that come to be part of a previously desecrated urban context and absent any symbolism and transcendental origin.

Thus, instead of having a purely utilitarian, rational function focused on specific purposes (Pierucci, 2013; Schluchter, 2014; Weber, 1993), the world experienced daily by *Ingress* players when they are tuned in ludic attunement comes to be intersected by the cosmology of the game, such as mysterious energies and events, fictional narratives and characters that overlap a mystical layer to the material and symbolic urban configuration.

We are aware that both the concept of ludic attunement to characterize the play experience and its applications are still at an early stage – and therefore subject to future developments and elaborations. Nevertheless, it is important that the initiative to ontologically distinguish the way in which the gaming phenomenon and its manifestations takes place in us as being-in-the-world, from beyond the hardware, software and other technical explanations, such as game design, as well as analysis marked by pure cognitive aspects that may or may not be decisive (and at different levels) in the experience of playing a game, whether it is a digital game or not.

Additionally, it is also important to notice the contexts in which this experience takes place: an *Ingress* player who circulate through fewer places than another, who explores urban points with the goal of capturing portals and defeating others of the enemy team, have different experiences that go beyond the individual's reality – but rather, they cross the urban space in different ways and also cause different interferences. Such a scenario becomes even more complex when it comes to collectives' incursions organized by players of both factions, who run through different public and city spaces together to play *with-and-in-the-world*.

That said, we believe that further research is needed to apply the concept to other games – both digital and non-digital – as we recognize this as an opportunity that can be seized in different aspects of game studies, as well as by approaches and related areas. Therefore, it is a broader research project that is not exhausted in this paper, even in the one in which the concept originated, but which can be unfolded, refined and applied as a methodology for understanding the importance of play and games in the very basis of what it means to be *Dasein* when the latter is understood according to Heideggerian phenomenology.

Moreover, given the concentration of game studies in Brazil as mostly belonging to the Social Science and Humanities – specifically to Communication –, the interdisciplinarity that characterizes the movement initiated here is consistent with the very characteristics of the field with which it is related. It is, therefore, a contribution to the theoretical strengthening of game studies not only in the Brazilian national scenario, but also internationally, as can be seen by the increasing presence of Brazilian studies in international scientific journals and events. ■

## REFERENCES

- Adams, E. (2009). *Fundamentals of game design*. Berkeley, CA: New Riders.
- Amaro, M. (2016). *Eu não posso ser dois: Uma perspectiva sobre o conceito de gameplay a partir de experimentos com o jogo Brothers: A tale of two sons* (Dissertação de mestrado, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brasil). Recuperado de <http://bit.ly/2Pph0CJ>
- Assunção, R. A. (2010). *O “reencantamento do mundo”: Interpelando os intérpretes do desencantamento do mundo* (Dissertação de mestrado, Universidade Federal de Santa Catarina, Santa Catarina, SC, Brasil). Recuperado de <http://bit.ly/2NKJNPJ>
- Bogost, I. (2016). *Play anything: The pleasure of limits, the uses of boredom, and the secret of games* [Kindle version]. Recuperado de <https://www.amazon.com.br/>.
- Buytendijk, U. F. J. J. (1977). O jogo humano. In H. G. Gadamer & P. Vogler. (Orgs.), *Nova antropologia: Vol. 4. O homem em sua existência biológica, social e cultural* (pp. 63-87). São Paulo, SP: EPU.
- Caillouis, R. (1990). *Os jogos e os homens: A máscara e a vertigem*. Lisboa, Portugal: Cotovia.
- Coyne, R. (2010). *The tuning of place: Sociable spaces and pervasive digital media*. Cambridge, MA: The MIT Press.
- Critchley, S., & Schürmann, R. (2016). *Sobre O Ser e Tempo de Heidegger*. Rio de Janeiro, RJ: Mauad X.

- Csikszentmihalyi, M. (1991). *Flow: The psychology of optimal experience*. Nova York, NY: Harper Perennial.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. Nova York, NY: Harpercollins.
- Csikszentmihalyi, M. (1997) *Finding flow in everyday life*. Nova York, NY: Basic Books.
- Csikszentmihalyi, M. (2014). *Flow and the foundations of positive psychology: The collected works of mihaly csikszentmihalyi*. Nova York, NY: Springer.
- Dahlstrom, D. O. (2013). *Heidegger dictionary*. Londres, Inglaterra: Bloomsbury.
- Fink, E. (2016). *Play as symbol of the world and other writings*. Bloomington, IN: Indiana University Press.
- Fragoso, S. (2017). *Materialidades do gameplay: uma abordagem comunicacional de situações de jogo* (Projeto de Pesquisa apresentado para a chamada CNPq 12/2017). Porto Alegre, RS: Autora.
- Fragoso, S., Rebs, R. R., Reis, B. M. S., Santos, L., Messa, D., Amaro, M., & Caetano, M. (2017). Estudos de games na área da comunicação no Brasil: tendências no período 2000-2014. *Verso e Reverso*, 31(76), 2-13. doi: 10.4013/ver.2016.31.76.01
- Fragoso, S., & Reis, B. M. S. (2016). Ludic re-enchantment and the power of locative games: a case study of the game *Ingress*. In J. Abdelnour-Nocera, M. Strano, C. M., Ess, M. Van der Velden, & H. Hrachovec (Eds.), *Culture, technology, communication. Common World, Different Futures: Proceedings of the 10th IFIP WG 13.8 International Conference* (pp. 131-148). Londres, UK. doi: 10.1007/978-3-319-50109-3
- Gadamer, H.-G. (2015). *Verdade e Método I: Traços fundamentais de uma hermenêutica filosófica* (15a ed.). Petrópolis, RJ: Vozes.
- Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. Nova York, NY: Palgrave Macmillan.
- Gumbrecht, H. U. (2010). *Produção de presença: O que o sentido não consegue transmitir*. Rio de Janeiro, RJ: Contraponto.
- Gumbrecht, H. U. (2014). *Atmosfera, ambiência, Stimmung: Sobre um potencial oculto da literatura*. Rio de Janeiro, RJ: Contraponto, Editora PUC-Rio.
- Gumbrecht, H. U. (2015). *Nosso amplo presente: O tempo e a cultura contemporânea*. São Paulo, SP: Ed. Unesp.
- Harman, G. (2007). *Heidegger explained: From phenomenon to thing*. Chicago, IL: Open Court.
- Heidegger, M. (2011). *Os conceitos fundamentais da metafísica: Mundo, finitude, solidão* (2a ed.). Rio de Janeiro, RJ: Forense Universitária.
- Heidegger, M. (2015). *Ser e Tempo* (10a ed.). Petrópolis, RJ: Vozes.

- Huizinga, J. (2001). *Homo ludens: O jogo como elemento da cultura* (5a ed.). São Paulo, SP: Perspectiva.
- Mastrocola, V. M. (2012). *Ludificador: Um guia de referências para o game designer brasileiro*. São Paulo, SP: Independente.
- Merleau-Ponty, M. (2014). *Fenomenologia da percepção*. São Paulo, SP: Martins Fontes.
- Nacke, L. E., & Lindley, C. A. (2009). Affective ludology, flow and immersion in a first-person shooter: Measurement of player experience. *Loading... The Journal of The Canadian Game Studies Association*, 3(5), 1-21. Recuperado de <http://bit.ly/332dPUm>
- Niantic (2012). *Ingress* [Jogo de computador]. São Francisco, CA: Niantic, Inc. Recuperado de <https://ingress.com/>
- Nieuwdorp, E. (2005). The pervasive interface: Tracing the magic circle. In J. Raessens, M. van den Boomen, S. Lammes, A.-S. Lehmann, & M. T. Schäfer (Eds.), *Digital material: Tracing new media in everyday life and technology* (pp. 199-209). Amsterdã, Holanda: Amsterdam University Press.
- Nitsche, M. (2008). *Video game spaces: Image, play, and structure in 3d worlds*. Cambridge, MA: MIT Press.
- Oliveira, B. A. S. (2006). *Tonalidade afetiva e compreensão de si segundo a analítica existencial de Martin Heidegger* (Dissertação de mestrado, Universidade Estadual do Norte Fluminense, Campos dos Goytacazes, RJ, Brasil). Recuperado de <http://bit.ly/2UkejY>
- Pierucci, A. F. (2013). *O desencantamento do mundo: Todos os passos do conceito em Max Weber*. São Paulo, SP: Editora 34.
- Reis, B. M. S. (2018). *Experiência de jogo como a afinação em uma tonalidade afetiva lúdica: Stimmung, LARGs e reencantamento do mundo no Ingress* (Tese de doutorado, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brasil). Recuperado de <https://lume.ufrgs.br/handle/10183/178641>
- Reis, B. M. S., & Fragoso, S. D. (2017). O reencantamento lúdico da cidade contemporânea: *Ingress* e o tensionamento da instrumentalidade. *Metamorfose*, 2(1), 134-149.
- Salen, K., & Zimmerman, E. (2004). *Rules of play: Game design fundamentals*. Cambridge, MA: MIT Press.
- Schluchter, W. (2014). *O desencantamento do mundo: Seis estudos sobre Max Weber*. Rio de Janeiro, RJ: Editora UFRJ.
- Sicart, M. (2014). *Play matters*. Cambridge, MA: MIT Press.
- Sicart, M. (2017, 21 jun.). Play and Mortality [Postagem de blog]. Recuperado de <http://www.playmatters.cc/play-and-mortality/>



- Stein, E. (2004). *Mundo vivido: Das vicissitudes e dos usos de um conceito da fenomenologia*. Porto Alegre, RS: Edipucrs.
- Stengers, I. (2015). *No tempo das catástrofes: Resistir à barbárie que se aproxima*. São Paulo, SP: Cosac Naify.
- Tyriakian, E. (1992). Dialectics of modernity: Reenchantment and Dedifferentiation as Counterprocesses. In H. Haferkamp, & N. J. Smelser (Orgs.), *Social Change and modernity* (pp. 78-94). Berkeley, CA: University of California Press.
- Tuan, Y.-F. (1977). *Space and place: The perspective of experience*. Minneapolis, MN: University of Minnesota Press.
- Weber, M. (1993). *Ciência e política: Duas vocações* (9a ed.). São Paulo: Cultrix.
- Weber, M. (2015a). *Ciência e política: Duas vocações*. São Paulo: Martin Claret.
- Weber, M. (2015b). *Economia e sociedade: Fundamentos da sociologia compreensiva* (4a ed.). Brasília, DF: Editora da UnB.

---

Article received on December 18, 2018 and approved on July 19, 2019.