Opening the black box of gameful experience: Implications for gamification process design

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ABSTRACT

Gamification is attracting the attention of practitioners and researchers because of its power to generate experiential value for users. However, despite its wide adoption by managers, the practice is poorly conceptualized. In response to this theoretical gap, we propose a set of foundational propositions developed using a microfoundational approach. We explain gameful experience, and we construct a conceptual framework that depicts the underlying process. We expand prior research on the topic through the notion of gameplay. Our conceptual discussion of gamification suggests a research agenda that can stimulate further academic efforts.

1. Introduction

Since its introduction in the early 2000s, gamification has become a highly successful and popular practice of managers (Werbach and Hunter, 2012). Initially defined as "the use of game design elements in a non-game context" (Deterding et al., 2011a, p. 2), gamification has become an umbrella term for describing the use of video game elements—from contests to the collection of badges—to improve user experience and steer engagement in nongame services and applications (Deterding et al., 2011b). Despite its relatively short history, the number of managerial books and webinars that are dedicated to gamification is considerable (Zichermann and Linder, 2013). Indeed, firms are devoting substantial effort to the development of efficient gamification practices. Thus, since 2011, investigations into gamification have exponentially increased. Gamification has been applied in various domains, such as training (Armstrong and Landers, 2017), retailing (Poncin et al., 2017), innovation (Leclercq et al., 2017), mobile marketing (Hofacker et al., 2016; Souiden et al., 2018), healthcare (Hammedi et al., 2017), banking (Rodrigues et al., 2016), logistics (Warmelink et al., 2018), human resource management (Kim, 2018) and transformative services (Mulcahy et al., 2018).

Although gamification has been widely adopted in business, the

academic literature reveals mixed results concerning its benefits (Seaborn and Fels, 2015). Studies show that gamification may be a valuable approach to improving learning outcomes (e.g., Armstrong and Landers, 2017; Smith, 2017), increasing user motivation (e.g., Landers et al., 2017), influencing user behavior (e.g., Rodrigues et al., 2016; Ruiz-Alba et al. (2019)) and stimulating engagement (e.g., Eisingerich et al., 2019). However, the application of gamification does not systematically yield desired outcomes. Several studies revealed no effect on user behavior (e.g., Högberg et al., 2018; Imlig-Iten and Petko, 2018) or questioned the efficiency of such practices by highlighting potential drawbacks, such as over participation (Hammedi et al., 2017), conflicting interactions (Leclercq et al., 2017), stress (Page et al., 2019), negative effects on products choices (Högberg et al., 2018) and user disengagement (Leclercq et al., 2018). This lack of coherence contributes to a dissonance in gamification-related assumptions and models (Landers et al., 2018a; Thorpe and Roper, 2017).

In response to these mixed results, Nacke and Deterding (2017) indicate that research is experiencing a transition from defining and advocating for the use of gamification to explaining its underlying processes and potential boundaries. On this basis, scholars have emphasized the use of gameful experience for predicting gamification efficiency (e.g., Eppmann et al., 2018; Wolf et al., 2019). However, the subjective nature of user experience implies the need to understand gamification from a user perspective. Consequently, understanding how gamification affects user experience is necessary for researchers to

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reconcile the mixed results in the literature and further develop knowledge on the topic and for managers to introduce successful practices. Incomplete consideration of the processes involved can result in the appearance of gamification missing its intended objectives (Landers and Landers, 2014).

In response, this conceptual paper adopts a microfoundational approach (Felin et al., 2015) to explain how and why gamification design results in value realization for users. Through four foundational propositions, we highlight that gamification design shapes the intrinsic motivations of users to participate in gameplay (i.e., a form of cognitive, emotional and behavioral engagement that is usually associated with gaming). We present a typology of four types of gameplay (i.e., *Easy Play, Hard Play, Interactive Play* and *Serious Play*) that affect gameful experience.

The contribution of this paper is threefold. First, we provide new insight on recent work arguing the need to consider the gameful experience (e.g., Eppmann et al., 2018; Huotari and Hamari, 2017; Wolf et al., 2019). We open the black box and describe the process by which gamification design affects gameful experience, thereby introducing the microfoundational approach to the conceptualization of gamification. Through this approach, we provide a multilevel analysis that combines top-down theorizing framed by macro-constructs of service management with bottom-up theorizing based on the notion of gameplay. Second, in line with Landers (2019), we move the literature on gamification forward by providing a user-centered approach. Our research complements the recent work by linking gamification design, intrinsic motivation, engagement and gameful experience. On this basis, we discuss how gamification design is integrated into user resources to shape engagement and generate experiential value. Third, this conceptual work reconciles current mixed results on gamification efficiency by depicting the gamification process and clarifying how gamification design generates value for users. We reveal new issues related to this fresh and emerging perspective and outline new research directions to structure future empirical studies.

The following section describes the literature and introduces the microfoundational approach that we use to explain gamification. The paper then examines four foundational propositions to discuss how gameplay is an important foundation of the gameful experience. In the final section, a research agenda is developed to structure future inquiries into this nascent topic.

2. Literature overview

Over the last decade, gamification has rapidly gained attention in education science and management disciplines as a fruitful way to influence user behavior. Accordingly, gamification has been the subject of an exponential number of empirical studies showing its benefits in domains such as training (Armstrong and Landers, 2017), retailing (Poncin et al., 2017), innovation (Leclercq et al., 2017), mobile marketing (Souiden et al., 2018), healthcare (Hammedi et al., 2017), banking (Rodrigues et al., 2016), logistics (Warmelink et al., 2018), human resource management (Kim, 2018) and transformative services (Mulcahy et al., 2018). However, gamification rapidly emerged as a buzzword in all practices related to the application of games for management purposes. Some research was conducted to further conceptualize gamification and explain its success. Table 1 offers an overview of these conceptual works. On this basis, three streams of research were developed: the gamification design perspective, the motivational psychology perspective and the service perspective.

First, adopting the gamification design perspective, Deterding et al. (2011a, b) highlighted the opportunities to transpose game elements in nongame contexts. In this regard, scholars mobilized game design theories to classify various mechanics that may be transposed to nongame contexts. For instance, Hofacker et al. (2016) distinguished aesthetics, story, mechanics and technologies based on the elemental tetrad model (Schell, 2008) to define gamified practices. Robson et al.

(2015) considered setup mechanics, rule mechanics, and progression mechanics in game design based on Elverdam and Aarseth (2007). More recently, Mullins and Sabherwal (2018) adopted the mechanics, dynamics and emotions framework (Hunicke et al., 2004; Robson et al., 2015) to emphasize the potential effects of gamification on the emotions, cognitions and behaviors of users.

Second, scholars have emphasized the effects of gamification on user motivations using self-determination theory (Cardador et al., 2017; Landers, 2014; Landers et al., 2018a, 2018b; Warmelink et al., 2018). Accordingly, they highlighted the ability of gamification to raise intrinsic motivations, as games may do for management purposes (Ryan et al., 2006). In this regard, Thorpe and Roper (2017) showed the potential ethical issues of gamification being perceived as manipulation and exploitation. On this basis, Landers (2019) (p. 2) highlighted the need to further consider the psychological impacts of gamification and diligently design gamification practices to "*motivate new behaviors in a consistent, generalizable, ethical, and theoretically justifiable way*". Therefore, Deterding (2019) called for a humanistic design to emphasize the central role played by the users in gamified interactions.

Finally, researchers adopting a service perspective tend to focus their attention on gameful experience rather than the gamification design, Huotari and Hamari (2017; p. 25) defined gamification as "*a process of enhancing a service with affordances for gameful experiences in order to* support *users' overall value creation*". This definition marks an important shift in the literature by conceptualizing gamification as affording a gameful experience to users instead of the application of gamification design. Gamification design solely suggests a gameful experience that may be integrated or even created by users who agree to participate (Dymek, 2018). While the psychology perspective views users as passive actors who may be manipulated, the service perspective defines gamification as a way for users to create experiential value through deliberately integrated gamification design.

This conceptual work integrates design, motivational psychology and services to deeply explore the process through which gamification design affords experiential value to users. Accordingly, we complement each perspective and unify the exponentially developed literature on gamification around a common theoretical framework.

3. The microfoundational approach

To discuss the gamification process, we adopt a microfoundational approach. The microfoundation movement provides theoretical and empirical explanations at a lower level of analysis than the phenomenon itself to identify causal relations in actions (Felin et al., 2015). Therefore, the microfoundational approach examines the link between macrolevel constructs and microlevel constructs. Microfoundations indicate theoretical building blocks of macrofoundational theory that have narrower conceptual applicability, rendering these closer to the realm of practice (Gavetti, 2005). Macrofoundations, in contrast, are wide-ranging theoretical entities that are characterized by high levels of aggregation and theoretical abstraction (Storbacka et al., 2016). Microfoundational reasoning emphasizes the explanatory primacy of lower level constructs, such as individuals and their social interaction, to explain the relationships between higher level concepts, such as organizational routines and capabilities (e.g., Felin et al., 2015; Felin and Foss, 2005).

The microfoundational approach has been widely applied in organizational management to understand how employees' skills and practices affect the overall performance of the company. Bogers et al. (2018) discussed the microfoundational view at the employee level and theorized how social capital affects a firm's openness to external knowledge sources (macro level) by considering the diversity of employees' skills on a micro level. Adopting a similar approach, Martin et al. (2019) explained how a changing business environment improves organizational flexibility by identifying, on a micro level, the role of conflict among employees. In service management, this approach has

Table 1
Overview of conceptual works on gamification.

	Objectives		Perspective		
Reference	Defining gamifications	Explaining the effects of gamification	Gamification design	Motivational Psychology	Service
Deterding et al. (2011a, b)	X		X		
Robson et al. (2015)	X		X		
Hofacker et al. (2016)		X	X		
Mullis and Sabherval (2018)		X	X		
Landers (2014)		X		X	
Cardador et al. (2017)		X		X	
Thorpe and Roper (2017)		X		X	
Deterding (2019)	X			X	
Landers et al. (2018a)		X		X	
Landers et al. (2018b)	X	X		X	
Warmelink et al. (2018)		X		X	
Dymek (2018)	X				X
Huotari and Hamari (2017)	X				X
Current conceptual work		X	X	X	X

been increasingly used to explain customer value realization and engagement (Hollebeek et al., 2018; Storbacka et al., 2016; Vargo, 2011). For instance, Hollebeek et al. (2018) adopted the microfoundational approach to describe how service design leads to customer value cocreation by considering the resources customers have at their disposal.

The motivation for applying the microfoundational approach relies on its relevance to digging into causal relationships between macro- and microlevel concepts to describe the underlying process (Foss and Lindenberg, 2013; Foss and Pedersen, 2016). Accordingly, the microfoundational approach aims to describe the causal relationships between constructs that cannot be fully understood on a macro level such as the organizational level. Explaining the macro-macro relationship requires consideration of the processes appearing at a lower level. Therefore, Hedström and Swedberg (2006) posit the interplay of three interrelated mechanisms: situational mechanisms represent how contexts affect actors (macro-micro mechanisms); action-formation mechanisms indicate how individuals integrate contextual conditions into actions (micro-micro mechanisms); and transformational mechanisms explain how individuals generate social outcomes through their actions and interactions (micro-macro mechanisms).

To understand how gamification design, i.e., game-like elements provided by firms, affects users' experiential value (macro-macro), we review the situational, action-formation and transformational mechanisms at play. In line with the service perspective, we argue that gamification design operates as a service ecosystem that will not directly generate value to users but rather afford value realization (Huotari and Hamari, 2017). The experiential value is consequently cocreated by users who integrate these elements to the resources they have at their disposal to satisfy personal motivations and consequently generate value (Vargo and Lusch, 2016).

As depicted in Fig. 1, we explain how gamification design influences users' intrinsic motivations (situational mechanisms, macro-micro level) and how these motivations affect game-like engagement, i.e., gameplay (action-formation mechanisms, micro-micro), which in turn influence gameful experience (transformational mechanisms, micro-macro). These mechanisms are discussed through four testable foundational propositions (FPs).

4. Gamification foundational propositions

4.1. Macrolevel relationship

Gamification literature is rooted in game studies (Kriz et al., 2018). However, games may take many forms, from card-playing to ever-evolving video games (McGonigal, 2011). Sociologists, psychologists and game designers have dedicated significant efforts to identifying the properties that are shared by all games and the manner in which we conceptualize them (Avedon and Sutton-Smith, 2015; Caillois and Barash, 2001; Salen and Zimmerman, 2010). Accordingly, the most consensual characteristic of games relates to the design. This design includes rules that are followed by players to reach an identified goal (Avedon and Sutton-Smith, 2015; Caillois and Barash, 2001). These rules set up the environment of the gamified interactions (Hofacker et al., 2016; Robson et al., 2015) and define needed objects and how these objects are distributed among players. They also shape the complexity of reaching the goals pursued by the players by prescribing actions that are permissible and the constraints that limit these actions (e.g., restrictions or permitted behaviors to win). The rules finally include the elements that affect the ongoing interactions and cover intermediate and final goals. For instance, the rules of chess determine the number of pieces, how the pieces move and take other pieces, the number and pattern of squares on the board, and how a winner is decided (i.e., the goal). When these rules and associated goals including games are transposed outside the game context, these constitute the gamification design (Salen and Zimmerman, 2010; Deterding et al., 2011b).

The rules and associated goals constituting the game design are fictitious and voluntarily followed by players who decide to play the game (Avedon and Sutton-Smith, 2015; Caillois and Barash, 2001). Similar to games, gamification design is voluntarily followed by users, but the rules and associated goals are not fictitious, as they imply consequences outside the limits of the settings (Klapztein and Cipolla, 2016). For instance, firms organize contests to award their best sellers with social recognition (e.g., being designated as the best employee of the month) or financial incentive (e.g., bonuses). Thus, gamification may affect employee well-being even after the contest has ended.

The gamification design is proposed by firms. However, as value is unique, subjective and experiential (Vargo and Lusch, 2016), the role of firm/designer is limited to value proposition. Accordingly, the firm/designer may afford value realization but does not create value. The goals and rules associated with gamification design operate on value affordance to users as institutions. These institutions are "humanly devised rules, norms, and beliefs that enable and constrain action, and make social life predictable and meaningful" (Vargo and Lusch, 2016, p. 11). Thus, institutions determine what constitutes value and the process by which it is derived. Gamification goals and rules operate in a similar way to institutions by providing norms and objectives and affording the realization of experiential value through qualified as gameful (Huotari and Hamari, 2017). The effect of gamification goals and rules on experiential value realization embodies the macro-macro explanation of gamification.

Foundational proposition 1: Gamification is a process through which the rules and goals constituting a design that are commonly associated with games afford experiential value realization to users in
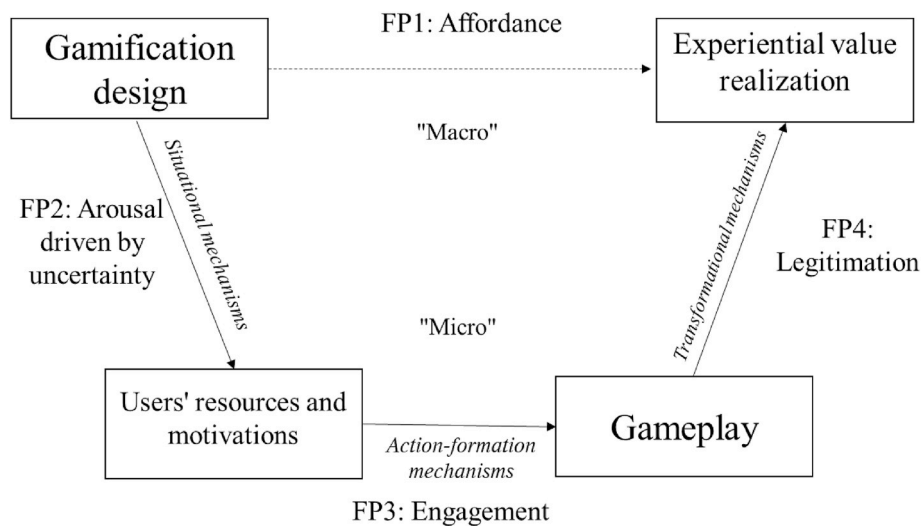
Fig. 1. Foundational framework.

nongame contexts.

The next sections describe how gamification design arouses intrinsic motivation (macro-micro relationship), how intrinsic motivations foster users' gameplay (micro-micro relationship) and finally the process by which users' gameplay affords value realization (micro-macro relationship).

4.2. Situational mechanism

The use of gamification mechanisms for business purposes relies on the abilities of games to arouse motivations (Salen and Zimmerman, 2010). Self-determination theory highlights that individuals' behaviors are driven by extrinsic and intrinsic motivations (Deci and Ryan, 2004). Extrinsic motivations are defined as the factors that influence a person to execute activities to obtain rewards or some separable outcomes associated with the activity. Conversely, intrinsic motivations are defined as the factors that influence a person to engage in an activity for its own sake rather than for some separable consequences. While extrinsic motivations have only short-term effects and require continuous reinforcement, individuals who are intrinsically motivated to do an activity tend to continue to execute this task over time (Deci and Ryan, 2004). Intrinsic motivations include a need for competence, relatedness, and autonomy (Deci and Ryan, 2004). Competence is the need to feel effective in one's ongoing actions. Relatedness is the need to feel connected to others and to be part of a community. Autonomy is the need to perceive oneself as the origin of one's behavior (Ryan and Deci, 2000).

On this basis, playing video games activates intrinsic motivations by satisfying needs for autonomy, relatedness and competence and consequently ensures continuous participation (Ryan et al., 2006). Therefore, game design influences users' perception of the uncertainty in reaching their objectives (Malone, 1981). Indeed, gamification design constrains users' behaviors and makes the goal more difficult to achieve (Landers et al., 2018b). Studies in neurobiology highlight that individuals feel aroused when they perceive uncertainty in their environment as long as they consider themselves competent and autonomous enough to reduce this uncertainty through their actions (Anselme, 2010). The uncertainty also promotes relatedness when several players tend to control this uncertainty together (Koster, 2013). Gamification design similarly manipulates uncertainty to execute an activity to make it intrinsically motivating and promote long-lasting effects on user actions and interactions. Although gamification may involve rewards and incentives, these extrinsic motivations have only short-term effects and require continuous reinforcement (Zuckerman

and Gal-Oz, 2014; Rapp, 2017). Gamification requires promises to satisfy intrinsic motivations so that users' actions are maintained over time (Kim and Ahn, 2017).

Foundational proposition 2: Gamification arouses users' intrinsic motivations by introducing uncertainty in task execution.

4.3. Action-formation mechanism

Intrinsically motivated by gamification design, users invest operant resources, including cognitive, emotional, behavioral and social knowledge, within the gamified activity. This volitional investment of user resources refers to user engagement (Hollebeek et al., 2018). For instance, by taking part in an idea contest, participants may use their creativity to submit an original proposition or their knowledge to propose technical solutions (cognitive resources) and perhaps design prototypes (behaviors). They may also propose a persuasive description to present their idea or mobilize their friends and relatives to vote for them (social capital). Finally, they may feel attached to their idea and greatly value their participation to the contest (emotional resources). In game studies, the manifestation of this engagement is defined as gameplay (Hunicke et al., 2004). User engagement is characterized using two axes characterizing the investment of resources and the object to which users are engaged.

The first axis displays the way users engage their resources and apply the provided resources. Similar to games, user engagement of resources in gamified activities may take two forms. Users may either integrate gamification design to complement their own resources or structure their resources to comply with gamification design. Caillois and Barash (2001) referred to the distinct forms of engagement using the concepts of *Paida* and *Ludus*. *Ludus* indicates gameplay wherein users' resource investments are guided by rules that clearly define a winner or a loser. Conversely, *Paida* eschews rigid formal structures in exchange for more freeform play. In the latter case, users integrate resources from the gamification design to complement their own resources. For instance, users participating in a contest based on online votes may submit their best ideas to try to win. Therefore, they structure their resources to comply with the requirements of the contests. However, some users may also use the network associated with the contest to improve their submission. In this way, they complement their resources with the ones provided by the gamification design.

The second axis considers the engagement object. In this way, gamification differs from games. While games suggest that resource engagement is exclusively oriented to the game itself, users executing a gamified activity may be engaged in an activity that has been gamified.
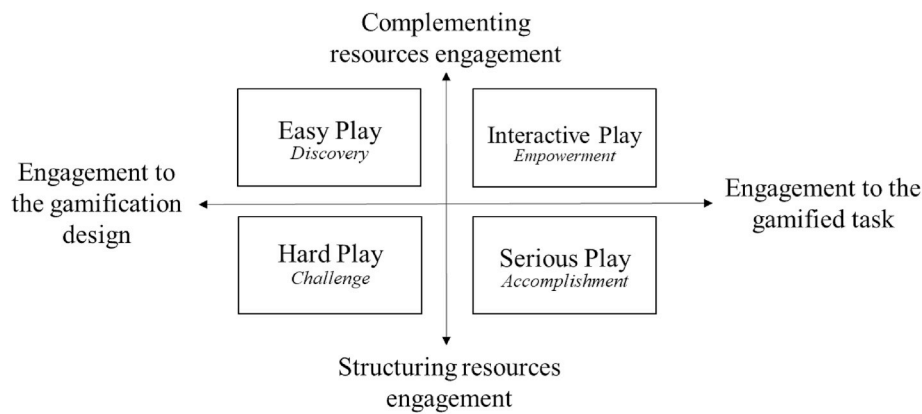
Fig. 2. Gameplay typology.

Concretely, users may either execute an activity to benefit from the gamification design or use the gamification design to execute the activity. For instance, Leclercq et al. (2017) and Leclercq et al. (2018) identified several profiles of users based on their reactions when facing a similar gamification designs in an innovation community. Some of the users decided to instrumentalize the gamification design to show their abilities to innovate and dedicate attention to the submission of promising ideas. Others mainly enjoy the challenges without paying attention to the results.

From these two dimensions and adapted from typologies in game studies such as Bartle and Bateman (2010) and Lazzaro (2004)'s typology, four realms of gameplay emerge, i.e., *Hard Play, Serious Play, Easy Play*, and *Interactive Play*, as depicted in Fig. 2.

Hard Play refers to user's engagement toward the gamification design to structure their resources. It is associated with the actions related to challenges. The objectives of such challenges are fixed a priori, and users need to structure their resource engagement to comply with the rules suggested by the gamification design. In this case, the gamified process of acting toward this objective has greater importance than task execution. Accordingly, users' resource engagement is oriented toward the gamification elements rather than the execution of the gamified task. For example, when participating in innovation contests, participants may value the process of moving toward the goal, competing with each other or developing solutions rather than actually generating innovations.

Serious Play refers to user engagement toward the gamified activity to structure user resources. It is associated with achievement and accomplishment. Like *Hard Play, Serious Play* is gameplay in which users structure their resource engagement to reach a fixed objective. However, users developing S*erious Play* dedicate more effort and attention to the execution of the gamified activity than to the gamification design. For example, users may engage in the gamified activity to reach an objective related to the context while paying then less attention to the gamification design itself.

Easy Play refers to user engagement toward the gamification design to complement user resources. It is associated with the actions of exploring and discovering new objects or items in the new environment in which the users are participating. Unlike *Hard Play* and *Serious Play, Easy Play* refers to applying user resources and abilities to reach an objective by immersing the users in an environment that is different from their normal environment. Their actions are oriented toward discovering the new items or features proposed by the gamification design. For instance, users who are immersed in a virtual world escape their own environment and discover a world where their abilities are improved (e.g., they can fly, change their appearance, or add features to their avatars).

Finally, *Interactive Play* refers to the use of resources provided by the gamification design to execute a gamified activity. Users participating in *Interactive Play* focus their effort on the activity they must execute. They consider resources provided by the gamification as a means of reaching an objective they would not be able to reach alone. The social aspect is intrinsic to this gameplay, which may consider the collaboration and interactions that users initiate in the community. Accordingly, other users are considered potential resources that may be accessed. For instance, users may benefit from cooperative activities to mobilize other users and reach objective they would not be able to achieve alone.

This typology complements prior works in game studies such as Tondello et al. (2016)'s work. While their typology relies on users' motivations to interact with gamification design, our typology adds to this distinction the way users interact with the gamification design to identify the various gameplays. Our four gameplays constitute various forms of engagement. The gameplays are subjective. Users facing similar mechanisms may consequently develop distinct gameplays that evolve over time. For instance, Nike + organizes various running competitions to stimulate user activities. Facing such a gamified setting, users may first develop *Serious Play* by considering the opportunity to win when participating in the competition. Then, they may enjoy competing with other runners and develop *Hard Play*. Another example lies in the use of an interactive screen, where users personalize items by participating in small challenges (e.g., launching a virtual ball of paint to color items). In this context, users may first develop *Easy Play* by discovering how their actions are reflected on the screen, then develop *Hard Play* by experiencing the challenges proposed to personalize the item, and finally develop *Serious Play* when they see the items personalized. Suggesting these gameplays, firms may change user behavior over the long term by first having users engage with the gamification design in *Hard* and *Easy Play* and then stimulate engagement to the gamified activity in *Serious* and *Interactive Play*.

Foundational proposition 3: Gamification triggers gameplay that reflects the way users apply their resources to reach a specified goal.

4.4. Transformational mechanism

The generation of gameplay relies on the intrinsic motivations of users, which are driven by perceived uncertainty (Hassan, 2017). Creating value based on gameplay requires users to legitimize the gamification process in which they are participating by considering their engagement in the gamified activity (Landers, 2018). Legitimating gameplay indicates the extent to which the gameplay is perceived by the users as contributing to their experience. In this regard, Poncin et al. (2017) and Lucassen and Jansen (2014) suggested avoiding the use of gamification for its own sake. Without legitimation, gamification risks being considered a manipulation or exploitation of users through a game-like environment (Kim, 2018; Deterding, 2019). When gamification is perceived by users as legitimate, value may be realized.

While a game implies that no real outcomes are generated outside its scope, gamification occurs in nongame contexts and thus affords customer value beyond the limits of the gamified interactions (Huotari and Hamari, 2017). Accordingly, the literature has highlighted that gamification affords the realization of value related to the gameful experience itself and value associated with the potential outcomes of the gamified process.

Eppmann et al. (2018) developed a scale for measuring gameful experience. Therefore, they integrated prior academic efforts to identify experiential value suggested in game studies (e.g., Brockmyer et al., 2009; Jennett et al., 2008; Korhonen et al., 2009) and identified the types of value that may be transposed to gamification by considering the literature in marketing (e.g., Hammedi et al., 2017; Harwood and Garry, 2015; Robson et al., 2015) and in psychology (e.g., Poels et al., 2012; Russell, 2002; Ryan et al., 2006). Six dimensions were identified: enjoyment, absorption, creative thinking, activation, absence of negative affect and dominance. Enjoyment and absence of negative affect reflect the interrelated nature of positive emotions and involvement. Absorption indicates a deep cognitive engagement of users through which they feel disconnected from their actual environment. Creative thinking assesses the imaginative and explorative aspects of gameful experience. Activation refers to the ability of gamification to stimulate emotions, cognitions and behaviors. Finally, dominance is associated with the control users experience when playing.

Additionally, gamification has been revealed as a means of generating experiential value related to the context in which it is implemented. Adapted from the U&G framework (Nambisan and Baron, 2009), Jang et al. (2018) distinguished the following three types of values users may develop by interacting with a system: epistemic value, social integrative value and personal integrative value. Epistemic value refers to information acquisition and increased understanding of the environment. In educational sciences, gamification has been widely emphasized as a potential way to stimulate learning (e.g., Armstrong and Landers, 2017). Social integrative value strengthens user relationships; it includes the formation of interpersonal attachments and the inherent human desire to benchmark one's own abilities and accomplishments using those of other people (Hammedi et al., 2017; Jang et al., 2018; Wolf et al., 2019). This form of value strongly relies on *Interactive Play*, as it relies on user interactions. Personal integrative value strengthens credibility and social status; it contributes self-development, including feelings of competence, autonomy and freedom (Jang et al., 2018; Kim and Ahn, 2017).

Accordingly, a gameful experience in the context of gamification refers to the association of the experiential value related to games to the users' experience in a nongame context. For instance, organizing challenges in education may involve combining the experiential value of

learning (epistemic value) with the enjoyment and sense of dominance commonly associated with games.

Foundational proposition 4: Gameful experience of a gamified process combines the experiential value associated with gamification design and the gamified task/activity.

While Huotari and Hamari (2017) considered the extent to which the structures and rules associated with gamification afford users value realization in nongame contexts, we go a step further by explaining how gamification design affords value realization based on the four foundational propositions depicted in Fig. 1.

Gamification design suggests rules and goals that users can reach. Shaping uncertainty, gamification arouses intrinsic motivations to recover control. Therefore, users engage resources as they would in games. This resource engagement constitutes gameplay. Gameplay may take various forms according to the engagement object, i.e., engagement toward gamification design or the gamified activity, and the way users engage their resources, i.e., complementing their resources with gamification design or structuring their resources to the gamification design. Once gameplay is legitimized by users, it creates a gameful experience by combining the experiential value associated with both gamification design and the gamified task.

While Warmelink et al. (2018) emphasized the impact of gamification design on the intrinsic motivations of users, our conceptual work highlights the central role played by uncertainty during that process. Then, we contribute to the literature by showing the effects of gamification design on engagement by identifying the various forms this engagement may take using four types of gameplay: *Hard Play, Serious Play, Easy Play* and *Interactive Play*. In line with Deterding (2019), we distinguish gamification design, i.e., the gamification architecture, from the humanistic gamification characteristics, i.e., the gameplay. Finally, we complement the discussion initiated by Landers (2019) by emphasizing the need to develop legitimate gamified practices to afford the value realization of users.

5. Research agenda

Based on our conceptual discussion, we propose a research agenda to more the literature forward. This section outlines further research that deserves attention to support academic and managerial purposes. This research agenda covers three areas underlying the microfoundations of gamification through the following questions: (1) *Can gamification be prizeless?* (2) *Gamification business: the challenge of building a personalized gameplay* (3) *Managing the gameful experience over time: Thinking the Gamification Journey Design (GJD)*. Table 2 summarizes the topics requiring further investigation and illustrates these topics through research questions.

Table 2
Research agenda.

Further research areas	Suggested Research Questions
Can gamification be prizeless?	• What is the impact of prizes on the users' motivations to participate in gamified activities?
	• Does the size of the reward matter in gamified activities?
	• Does the nature of the reward affect users' motivations to participate in gamified activities?
	• What is the impact of winning or losing decisions based on the user attributions of success or failure?
Gamification business: the challenge of building a personalized gameplay	• What are the factors explaining the development of gameplay during gamified activities?
	• How does the level of resources influence the development of gameplay during a gamified activity?
	• How does gamification initiate proactive learning by users?
	• How do the various types of gameplay interact when gamification is applied in social contexts?
Managing the gameful experience over time: Thinking the Gamification Journey Design (GJD)	• How does gameful experience evolve over time?
	• To better understanding the gamification journey, what are the key challenges and outcomes?
	• To manage extreme gameful experience, how does addiction differ from satiation?
	• How can gamification transform routine tasks and unpleasant experiences?

5.1. Can gamification be prizeless?

While the gamification design shapes users' intrinsic motivations, as suggested by our second foundational proposition, most gamified activities also imply prizes and reward systems that may arouse extrinsic motivations (Rapp, 2017). Accordingly, extrinsic rewards may affect intrinsic motivations depending on how users interpret them (Deci and Ryan, 1988). If users consider that rewards provide positive information about their own competence and self-control over results, we can hypothesize that intrinsic motivations will increase. However, if users interpret the rewards as indicating external control, they may feel under control and perceive themselves as less competent; thus, intrinsic motivations may decrease. Further research should empirically test the effect of prizes and rewards on users' motivations to participate in gamified activities. Research should also consider the potential size and nature of rewards. Rapp (2017) classified rewards that may be transposed from games to gamified activities using three categories: enabling rewards, exchanging rewards and flexible rewards. This research would contribute to research and managerial purposes by assessing the extent to which rewards are necessary to develop gamified activities. Finally, research related to rewards also require the investigation of the effects of winning or losing on users' intentions to participate in the gamified activity. Self-serving bias and attribution theory would help understand how users consider win/lose decisions and the reasons underlying success/failure. Frontline employee management that increasingly imposes gamification practices on employees offers an inspiring context for understanding individual reactions when facing "mandatory fun", mainly relying on extrinsic rewards (e.g., job promotions, bonuses).

5.2. Gamification business: the challenge of building a personalized gameplay

The third foundational proposition emerging from our conceptual discussion highlights that users may develop various forms of engagement, called gameplay, when faced with gamification design. These distinct forms of gameplay are classified according to the engagement object and the extent to which the gamification design is used to structure or complement user resources. Although gamification design may seem to support specific forms of gameplay, this belief remain subjective. Thus, future academic research should consider the factors that allow the development of specific types of gameplay. Accordingly, the initial level of user resources may be a first path for understanding the development of gameplay. In line with Vargo and Lusch (2016), users may complement their resources by integrating the resources they have at their disposal. In this regard, users revealing a low level of resources may tend to complement their resources with the ones provided by the gamification design through *Easy* and *Interactive Play*. Conversely, users with a high level of resources may use the gamification design to structure their resources and focus their efforts through *Hard* and *Serious Play*. For instance, research on innovation communities pointed out various profiles of members revealing distinct levels of creativity (Bullinger et al., 2010). Participating in a contest organized in an innovation community, users with a high level of creativity may tend to submit their best ideas to compete against the other users, developing *Hard* or *Serious Play*. Users with a low level of creativity may develop *Easy* or *Interactive Play* by collaborating with others. Gamification may emerge as an efficient means for users who reveal a lower level of resources to feel engaged and potentially develop new resources through a learning process (Dominguez et al., 2013; Landers and Landers, 2014; Moorman and Day, 2016).

Furthermore, the increasing importance of social and networked contexts implies that users interact with and influence their experiences. Our conceptual discussion assumes that the rules and structures that users integrate into their experiences work as institutional arrangements that guide the users' investment of resources. In a social context, when these institutions are coordinated, a network effect generates added value for all engaged actors. Accordingly, by following distinct rules and goals, participants may reveal various types of gameplay. Therefore, users can synergistically engage their resources to compensate for low levels of specific resources by interacting with their peers through the gamification process. Investigating how this social aspect can affect gameplay is crucial for understanding how to manage gamification in networked contexts such as online communities.

5.3. Managing the gameful experience over time: Thinking the Gamification Journey Design (GJD)

Based on the fourth foundational proposition, gamification may add the value commonly associated with games to the value related to the gamified context only when the gamification process is legitimate. Further research should empirically examine the criteria applied by users to legitimize a gamification approach. In line with this inquiry, studies should test the potentially counterproductive effects when gamification is not legitimized by users, which was characterized as rhetorical gamification by Landers (2019). Furthermore, the experiential value provided through gamification offers the opportunity to enhance user experience during routine tasks. Accordingly, further research should investigate the implementation of gamification during activities that users perceive as boring or unpleasant. For instance, hospital and medical centers are increasingly developing initiatives in which they introduce games into their services. An exploration of these initiatives should be conducted to assess the relative effectiveness of gamification, specifically concerning patients' age and disease severity. The measurement scale developed by Eppman et al. (2018) would greatly contribute to these investigations.

The motivations and gameplay of users evolve over time. This evolution might imply the emergence of various experiences. Although ample attention has been dedicated to the identification of the short-term impacts of gamification on user experience, little research has investigated the extent to which these benefits evolve over time. Further research should empirically study how the gamification process operates and evolves to properly revise gamification designs over time. To address this issue, researchers should investigate how the gameful experience influences users over time. Therefore, the concept of consumer journey from Lemon and Verhoef (2016) can be mobilized to go beyond the punctual gameful experience and understand the gamification journey of users. Variables that reflect a longitudinal perspective should be analyzed, including behavioral changes or the continued usage of technology. Such studies would contribute to the literature on technology adoption and the research dedicated to the initiation of healthy or civic practices. The literature on game-related addiction should be heeded (Charlton and Danforth, 2007), as it provides valuable insights into the risks that may be encountered when users become highly engaged in gamification settings for a long time. These risks of addiction to gamified settings should be further explored to analyze the risks related to gamification that raise ethical questions (Thorpe and Roper, 2017). Furthermore, even with a gameful experience, where the level of enjoyment is high, people can ultimately become satiated when the experience is repeated too often (Alba and Williams, 2013). The notion of *satiation* describes situations in which an individual derives reduced marginal utility from an experience under increasing exposure to a stimulus (Sevilla and Redden, 2014). In general, experiences become less enjoyable under repeated or prolonged exposure, and any decrease in enjoyment resulting from repeated or prolonged consumption is known as satiation (Loewenstein and Angner, 2003; Sevilla and Redden, 2014). Accordingly, we predict that fostering long term engagement with gamification can be challenging, given the risk of satiation, which extends beyond satisfaction. We therefore expect that this risk of satiation will have a huge effect on users engagement over time and thereby crucial implications regarding the design of gamification elements and processes.

6. Conclusion

In an increasingly competitive and ever-changing environment, providing users with a rich and engaging experience is crucial. Due to the explosion of touchpoints in new media and the increasing importance of user-to-user interactions, providing such experiences has become a challenging corporate task. Gamification is as an efficient means of providing users with engaging experiences. However, the conceptualization of gamification focused on company practices is unclear. To address this gap, we construct a theoretical framework that depicts gamification according to the user's perspective. We discuss four FPs based on a microfoundational approach by combining literature from the fields of game studies, marketing and services management. On this basis, we explore gameplay as a microfoundation of the gameful experience. Finally, we suggest a research agenda for stimulating and structuring further academic efforts.

Our approach provides a new and more complete understanding of gamification. We provide a deep understanding of gamification, its processes, and its applications and contribute to the literature by explaining the gamification process through a user-centered perspective by emphasizing the need to shift research and practitioner attention away from gamification mechanisms to the facilitation of user gameplay. We summarize and depict these insights through a conceptual framework. Finally, we suggest concrete directions for research. We strongly recommend additional investigations of the suggested topics to obtain a better understanding of the emergent topic of gamification. These continued insights will have applications in multiple management contexts for both academic and managerial purposes.

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