At the edge: periludic elements in game studies.

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At the Edge:

Periludic Elements in Game Studies

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Short Description:

We propose the concept of the periludic as an analytical lens for game studies that focuses on peripheral-to-play interfaces such as authentication and character configuration. This lens helps us better understand transactions of authority in games by emphasizing the role of interfaces and systems that support digital games.

Abstract:

While much of the scholarship around games focuses on either communities of play, or the content of the games and gameplay themselves, comparatively little attention has been paid to the infrastructures that players must negotiate to gain access to the gameplay experience. In this paper we focus on the interfaces on the periphery of gameplay. These systems—such as authentication and login systems, distribution platforms, menu systems, controllers and character configuration and selection interfaces—serve as thresholds that mediate and dictate who may experience gameplay, and what kind of experience they are permitted to have. We term these kinds of peripheral-to-gameplay interfaces *periludic*, drawing on Genette's formulation of peritext. We focus on interfaces for authentication and character configuration because of the practical, legal and performative outcomes they enable and enforce. Authentication processes control who is permitted to access games and gameplay, and under what legal and conceptual terms. Character configuration constrains who players are allowed to be within game worlds, and thus who games

are about. We use these examples to position the notion of the periludic at an intersection between game studies, media studies, HCI and social science. We argue that attention to these often invisible or transactional aspects of gameplay experiences will allow games scholars to better observe how power and authority are negotiated by players of games.

Introduction

When encountering a new digital game, the first thing we experience is seldom the gameplay, or gameworld itself. Instead, we must unbox the game or download game software from a digital distribution platform. We may need to install or set the game up in some way. We probably have to wait for patches or updates to download and be applied. We will likely need to accept an End User License Agreement (EULA) and consent to abide by whatever Terms of Service (TOS) have been set forth by the game's publisher. Often, we have to create credentials for ourselves, or we must use a pre-existing digital account we maintain, such as a Facebook, PlayStation, Steam, or Xbox Live account to access the game. Optionally, we may change audiovisual settings for the software, review or remap key bindings, and select the hardware interface device that will mediate our interactions with the game software. For many games, even the act of pressing "Start" or selecting "New game" does not mark the end of these kinds of administrative processes. We still might be asked to create or select a character, choose a game type, adjust the difficulty, wait in a lobby, form a party, or engage in any number of activities that occupy a liminal space between "game" and "not game."

The extent to which we must grapple with these transactions may change from game to game and vary widely across different platforms and genres. No matter the game, however, there is a territory of interfaces that must be traversed by players that entangles them in various outcomes beyond gameplay such as data monitoring and copyright management. This territory occupies an often-overlooked space in scholarship around games and play; perhaps because, while it is not entirely separate from the experience of games, it is not entirely part of gameplay either. And yet, the design decisions that shape this space often have significant consequences for how a game is experienced. In this article we examine two examples of interfaces that inhabit this territory. We propose the term *periludic* to describe interfaces that surround and enclose gameplay, and explore how attending to these and similarly positioned interfaces and systems can support a new perspective on contemporary gameplay experiences.

Periludic interfaces can exert influence on player experience, frame player expectations and determine how in-game content is presented and accessed. Investigating periludic interfaces allows us to observe in new ways how infrastructures of authority, influence and meaning in games contextualize, regulate and inflect more commonly foregrounded activities of gameplay. Although some scholars have looked at aspects of what we term periludic, we will discuss in greater detail below how existing scholarship tends to relegate these interfaces to the periphery of other analyses. In this article we re-centre, clarify and develop a lens that highlights these interfaces as an important aspect of contemporary gaming.

As our opening scenario illustrates, periludic interfaces can encompass many possible interactions that occur with and around gameplay. In this article we focus on two examples of these: authentication and character configuration.

Authentication is implemented to protect the property and information of both developers and players. Sometimes, authentication occurs at the outset of each individual play-session. Often—in the contemporary digital context—players must authenticate with a distribution platform, or broader developer, publisher, or retailer account (such as PlayStation, Steam, or Xbox) to play their games. Players may need to interact with multiple layers of authentication prior to beginning gameplay. Each layer of assent to terms of use, establishment of ownership or licensing and verification of identity has its own implications and obligations that inform and underlie the gameplay that eventually occurs.

We refer to character selection or creation as character configuration to acknowledge how these characters are figured and re-figured through design, interface and performative play. Character configuration can vary widely: in some games, players have no say in who their character is, while in other cases they may choose one of a possible cast of characters. In still other cases, elaborate parametric interfaces composed of menus and widgets allow players a greater degree of freedom to configure their character. Character configuration has significant influence on the visual performances or interpretations available to players, and influences the actions they may take within the game.

These two examples were chosen because authentication controls who may access games to begin with, while character configuration constrains who players may *be* in-games. However, before we unpack these two examples, we must first spend some time more fully describing the concept of *periludic*.

Defining Periludic

Paratext, Peritext and Epitext

We derive both the concept and term periludic from Gerard Genette's descriptions of paratext (Genette and Maclean, 1991; Genette, 1997[1987]). A literary theorist and structuralist, Genette is concerned with the *form of the material text* in the "form … of a book" (Genette & Maclean, 1991, p. 261), and its relations to other cultural and material phenomena, rather than its content. Genette describes paratext as the "fringe … between the text and what lies outside it," "the threshold," the "productions" which reinforce and accompany the text, and in fact "assure [its] presence in the world" (Genette and Maclean, 1991, p. 261). Although games scholars are already familiar with Genette, his distinction between the components of paratext—peritext and epitext—is not always retained.

Peritext is described as that which is "around the text, in the space of the same volume" (Genette and Maclean, 1991, p. 263); an essential component of the material artifact itself. Genette's examples of peritext are the functional material accompaniments of the text that comprise a book: cover, table of contents, page numbers, illustrations and even introductions. Genette argues texts are incapable of *existing* in the world without these elements. Narrative texts are embedded within

collections of these elements that materialize and contextualize a text for our acquisition, storage, or consumption.

Epitext, which Genette uses to refer to cultural knowledge, promotional materials and other objects outside the material textual artifact, is more in line with how many scholars have used and evolved the broader concept of "paratext." For example, media and games scholars such as Lunenfeld (1999), Consalvo (2009) and Gray (2010) have adapted Genette's paratext to include broader elements of the experience and production of media and the creative labor of readers, watchers and players. Concerned with film, games and digital media in a wider sense, these authors all trouble the boundary between what is or is not a part of the "textual" experience. Where Genette primarily describes the productions of the textual author and publisher, these scholars celebrate the rise of fan-production, knowledge and modification, and the affordances of digital technologies. Consalvo redefines Genette's paratext as "all of the elements surrounding a text that help structure it and give it meaning" (Consalvo, 2009, p. 21). Consalvo's definition is in line with Genette, yet as games and narrative scholar Daniel Dunne has noted (2014, 2016), the emphasis in media and games scholarship on epitext while using the term paratext, seems to obscure the original distinction between Genette's paratextual categories and the presence of peritext-focused studies in contemporary scholarship.

New media scholar Alexander Galloway begins to apply Genette in the way that we suggest when he discusses the "indecisiveness" of "intrafaces" in *The Interface Effect* (2016). However, his analysis of intrafaces is about interfaces "within the aesthetic" (Galloway, 2016, p. 40), which is itself a decisive position *within* media that may be applied, as he continues, to heads-up displays (HUDs), for example. While much of Galloway's analysis at this point is aligned with ours, our central claim is about how many periludic interfaces are not *decisively* within media. In this article, we are suggesting how analysis such as Galloway's broader treatment of interfaces-as-mediation might be taken even further by a deeper re-mediation of Genette.

New media and games scholar Kristine Jørgensen's analysis of "gameworld interfaces" is the closest to a general periludic approach in games studies we are aware of (2013). Jørgensen emphasizes the ways interfaces on the periphery of gameplay are "necessary for interaction with the game and [enable] the player to act meaningfully with respect to the game rules" (2013, p. 2). However, she overlooks a re-mediation of Genette and focuses only on peripheral interfaces such as heads-up displays (HUDs) that appear *during* gameplay while we suggest the inclusion of interfaces that direct gameplay experience as less decisive components of gameplay.

A primary goal of this paper is to introduce *periludic* as a redeployment of Genette's *peritext* within game and media studies to bring various peripheral-to-gameplay interfaces into better focus without detracting from the work of scholars who have productively employed paratext or examined media interfaces. In addition, periludic is a shift from textual reading to gameplay interactions and activity. To Genette, "the most essential of the paratext's properties … is functionality" (1997[1987], p. 401). He argues that paratext, especially peritext, should lead the reader to a text and in their reading of that text. Genette is concerned with examining how these elements on the fringe of the text *direct* the reading of a text in powerful ways, devoting most of *Paratext: Thresholds of Interpretation* to considering a list of elements to be found there—e.g., illustrations, page numeration (1997[1987]). In this paper, we examine how two examples of elements on the fringe of contemporary games that may *direct* gameplay.

Framing Examples

Genette's analysis highlights the structure of the books within which texts are bound. We similarly consider how contemporary digital games are published upon cartridges or discs or embedded within executable software that contains them. Digitally distributed games, once purchased, become part of a player's *library* on platforms such as Steam. Where books have peritextual tables of contents indexing chapters or sections, games have periludic menus directing players to different modes, materials, or options. Games have introductory cut-scenes instead of forwards or prologues, and playable characters must generally be cast in some way before gameplay can begin.

With digital games, as with books before them, specific elements exist to direct a player or reader to the content within and direct our consumption. The presence of these elements of game software is often what materializes or makes distinct a specific game within a broader digital library, platform, operating system, device, or player experience in the same way the elements Genette describes as peritext support the practice of reading—materializing books and differentiating one book from another on a shelf without resorting to reviewing its content.

Peritextual elements vary in their impact, complexity, formal development and the extent to which they integrate with networks of influence beyond the "text." Even something as seemingly straightforward as pagination indexes historical and cultural networks of influence. Initially rare in written text and created as a tool to organize writing, rather than reading, pagination saw a marked increase with the creation of printing and the spread of literacy, and is now in decline again with the rise of digital publication (Baron, 2015; Saenger, 1997). In books, these external networks of influence and relations coalesce into a static material artifact. While peritexts may evolve and invite comparison between print editions, the peritexts of a specific edition remain representations of the context of their creation until the artifact itself is defaced or destroyed.

We differentiate periludic elements of modern digital games from peritext in part because of how they may shift dramatically within the lifespan of the artifactual game, and often persistently and dynamically index external networks of labor, production, distribution and culture. Developers may maintain or update periludic interfaces over the lifespan of a game in ways those who produce print media cannot. Subject to hotfixes and version updates as often as the games and gameplay they enclose, periludic interfaces continually renew their relationships between players, publishers and external networks of influence. Players can re-configure their characters, controls, difficulty level, audio and visual settings and even the practical dynamic progression of gameplay *texts* in ways readers cannot with books.

Though periludic interfaces may operate similarly to peritextual elements of books given a single reading or playing, their dynamic nature extends the relationship between developer and game—and developer and player—beyond the equivalent physical authorship and point of sale in books. This dynamic, and computational, nature that maintains or renews external relationships of influence is part of why we do not merely re-apply peritext in the ludic context. The following sub-sections each examine one of two specific examples we identify as periludic interfaces.

Verification and Validation

Authentication can be defined as "the process of establishing confidence in the truth of some claim" (National Research Council, 2003, p. 19). This definition applies readily to the username and password interfaces games, applications, or platforms use to verify the identity of users by confirming "an identifier [that] points to an individual" (National Research Council, 2003, p. 18), in return for access. Game software, developers, publishers and retailers *authenticate* player claims to identity through login interfaces that require a username and password or some other identifier. However, the interfaces these entities use to acquire assent to EULAs and TOS also serve as authentication. In these cases, players *authenticate* developer, publisher and retailer claims to ownership, and rights associated with responding to player behaviour.

Although assenting to EULAs and TOS and verifying player identities are clearly not a part of gameplay, they have become integral to contemporary *gaming.* Having to authenticate with developers or anyone else to play board games such as *Sorry!* (Story, 1929), *Pandemic* (Z-Man Games, 2008), or even early digital games would seem odd, yet it is now a common requirement to access our digital games and gameplay. In a related study of 200 games and six digital delivery platforms, one author found that players must assent to two to three EULAs or TOS and further verify their identity one to two times as a condition of accessing gameplay in *all* surveyed games (Gardner, 2021). Authentication is a common tool for protecting and maintaining ownership and access in our digital age. In addition, however, it is a powerful tool for enforcing the authority of developers, publishers and retailers in and out of their domains, and for enabling potentially invasive data collection and surveillance. Authentication alone is a function whose practical technical parameters are simple, standardized and not inherently periludic. Authentication applied periludically, however, becomes a functional, transactional process for dictating gameplay access and ownership. Periludic authentication connects external influences—such as access control, legal consequences and data monitoring—to games and gameplay.

Unlike periludic elements that are close peritextual analogies (such as tables of contents in books to level selection in games), authentication may not immediately suggest a direct comparison. Although we may not apply access controls to our individual sci-fi or young-adult fiction novels, we do practice other forms of authentication with books. While our own libraries may be freely accessible to us, public libraries require an identification or membership card as proof of being an authorized borrower. Academic articles are kept behind paywalls, unless an individual belongs to an institution that provides them authorized access. Online book retailers such as Amazon utilize personal identifiers to verify return customers and protect electronic book libraries.

Although library cards and Amazon accounts may be features of institutions that control access to books, not books themselves, they are still examples of authentication in the textual domain that suggest insights into how we interact with games and gameplay. Even if a library may not be part of the books it contains, is our Amazon account part of our e-books or Kindle content? These accounts and the authentication they demand become part of the activity of reading in these contexts that deserve attention in a similar manner as authentication requires attention for its role in the activity of gaming. Literature and English scholars such as McCracken (2013) and Smyth (2014) have even considered how textual peritext may be applied to the platforms upon which we access e-books.

In digital games, authentication processes are often functionally, to use Genette's phrase, "in the space of the same volume" (Genette and Maclean, 1991, p. 263), and are required to access individual play sessions. The rise of digital delivery platforms complicates this in similar ways as the Kindle and Amazon account does the e-book. Account and identity verification, as well as assent to EULAs and/or TOS with the digital delivery platform—or at the scale of a personal game-library—is common in digital games across hardware platforms. Digital delivery platforms and the accounts they require are separate *and* inseparable from contemporary games in ways that make them difficult to dismiss even in a strict games-focused analysis.

Digital delivery accounts integrate into the games they host to an extent that requires their inclusion in our discussion of periludic interfaces. Authenticating these accounts is increasingly essential to accessing even offline gameplay. The identities that are verified by these accounts often follows players *into* games, labeling save files and avatars, and being displayed to others in shared or competitive contexts. These accounts, and authentication even at the digital delivery platform or personal game-library level, can be used to enforce the identities they verify even when in-game, or during gameplay. Many games, especially on home-gaming consoles will even prohibit gameplay, impede progress, or prevent saving until players have *signed in* through platform level authentication.

Even when authentication to a distribution and library management platform like Steam is complete, separate authentication may be requested or required by either an individual game, or through a developer specific account (e.g., Kalypso Media, EA and Ubisoft). Despite the game a player may want to play being installed on their own device, residing in their home, they must provide credentials to access it every time they want to play.

In the physical library scenario, a book is checked-out and returned; the reader does not need to notify the library every night when they read before bed, nor is the book integrated in a wider network of monitoring systems. With digital games, players must negotiate the threshold of platform or personal game-library level authentication every time they wish to access gameplay.

Acquiring Assent

EULAs and TOS legally define the roles and responsibilities between players and developers, and between players and the games. Law scholar Dan Burk describes how TOS establish "legal regimes" over players (2010). He argues that they establish "what behavior is and is not permissible" in a given digital context (2010, p. 1). EULAs and TOS outline the conditions of game access for players, including consenting to be monitored, agreeing to uphold copyright by not modifying or re-distributing the game software and accepting limits on the liabilities of developers in the events of loss or damage. They describe the consequences to players who disregard these conditions, such as loss of access or legal prosecution. In addition, EULAs and TOS define game-support services the player should expect from the game's creator, such as server connectivity, maintenance and forms of in-game conflict resolution. Assent to EULAs and TOS is a nearly ubiquitous requirement for accessing digital games and gameplay.

Because finding complete versions of these documents may require visiting an external website or similar, their *content* is more appropriately described as epitext. The interfaces that present these documents to players and demand player assent in return for access, however, operate periludically.

Burk distinguishes between governing (rule-based) aspects of games and game software. There are rules that limit what constitutes gameplay activities by defining win conditions and other aspects of what players may do *in* a game. EULAs and TOS maintain another layer of rules that constrain what players may do *during* a game or *to* a game or game software, either by manipulating its underlying code or infrastructures (directly or with third party software), redistributing it, or influencing the experience of other players beyond gameplay interactions either by cheating or other malicious behaviour. The subject and presentation of these documents pertains to the behaviour of players and developers beyond gameplay rather the activity of gameplay itself. These documents are contractual. The transactional interfaces that demand assent through the click of an "agree" button function as temporary thresholds to gameplay, while enabling consequences far beyond it.

Assent to EULAs and TOS dictates access to games and EULAs in particular are about establishing intellectual property ownership. Game companies are clear to point out players are only granted "license" to play their games rather than ownership of a copy of them; all content, related material and imagery are the sole property of the developer and publisher. That is, rather than games, players are often purchasing the equivalent of travel visas granting limited, monitored, access to ludic worlds—provided they validate EULAs and TOS at the point of authenticated entry.

Verifying Identities

Identify verification through login interfaces is an every-day access control mechanism gating individual gameplay sessions of specific games, or all games attached to a given platform account. Identity verification is an important tool for enforcing the rules described in EULAs and TOS. Developers or publishers can only revoke a player's access to a game or bring them to court if they are able to identify and differentiate individual players. Similarly, developers, publishers and retailers can only collect reliable data on players if individual players can be identified and differentiated across repeat play sessions.

There are many studies on the technical and practical implementation of identity verification and authentication, and the vulnerabilities and techniques for mitigating them in all sorts of approaches to security. The few studies that specifically examine authentication in relation to gaming seem mostly to be concerned with piracy, cheating and the same loose category of efficacy and implementation to prevent unauthorized access (Assiotis & Tzanov, 2006; Dotan, 2010; GauthierDickey et al., 2004). While these studies often include the risks associated with the failure of these systems in a general sense—i.e., loss of controlled access—there is very little interrogation of the relationships authentication functions make possible between player and game, and player and game-developer or publisher.

Identity verification resolves more than simple access and relies on more than players remembering their passwords. Some accounts may limit access to registered devices, which is verified as part of the login process. Some games and accounts, even when played offline, require an internet connection.

Access control is essential in our contemporary digital gamescape to protect the financial resources and time players may invest in their games and in-game characters, and to protect the integrity of the proprietary systems and resources developers or publishers rely on to conduct business. However, constant identity verification enables levels of authority and oversight not traditionally ascribed to game makers.

Traditionally, other than organized sports there were rarely formal records of the games we played. Hasbro does not know how many hours players have spent playing *Monopoly* (Parker Brothers, 1935), or for that matter the collection of games they manufacture, the way that companies like Blizzard, Electronic Arts, or Ubisoft do today. In the past, the best Hasbro could do was give sales numbers on units out the door, where in fact their relationship with their games, generally and practically, promptly ended.

Identity verification supports more than simple access control. The identifiers players provide each time they log in points to them; they *index* players (National Research Council, 2003). Identifiers allow for player information to be organized for aggregation and analysis. Account names are the mechanism that enable a consistently verified, precise record of all player activity.

In *Seeing Like a State,* political scientist James Scott describes how large institutions and states eventually require systems to make their members "legible" (1998). Scott describes the rise of surnames in England and Italy in conjunction with the need to record tax and tithe collection in official documentation across wide geographic areas. "Some second designation was absolutely essential for the records, and, if the subject suggested none, it was invented for him by the recording clerk" (Scott, 1998, pp 67-68), not unlike an account creation interface letting a player know their desired username is already in use and suggesting alternatives.

Account names in the digital context operate like surnames to make players legible to the institutions to which the accounts belong. Scott describes the 14th century implementation of surnames as an "administrative fiction designed to make a population fiscally legible" (1998, p. 68). Account names make players fiscally legible too, for all manner of purchases and subscriptions, *and* legible for all manner of data monitoring and rule enforcement.

Intel Researcher and applied social and cultural theorist Melissa Gregg, describes "Data Sweat" (2015), adapted from A. Williams' "Data Exhaust" (2013), to describe the trails, or streams of data users create organically through the access to, and activity within various applications, tools, or in this case games. Gregg writes that producing data, like sweat, is a fundamentally human trait, especially in this digital age (or digital gaming age). Like sweat, players cannot always control when and where they create data, or all the consequences of its creation. Player identity verification and authentication mechanisms become at once a reasonable safeguard against potential misuse and theft, as well as a convenient tool for marking, observing and analyzing each individual player's trail through gaming domains.

Burk is explicitly un-interested in in-game content or gameplay while emphasizing the influence TOS can have on players and games. Although Scott and Gregg are completely uninterested in

games, they describe a broader scale of implications of systems like those now commonly *attached* to games. Analysis of the consequences of these every-day, unremarkably familiar systems is essential for scholars and designers who may otherwise take them for granted. By acknowledging the influence, consequences and effects of authentication—and studying both designer and player experiences of authentication—we can interrogate relationships and consequences of their authority and governance in games, and the priorities inherent in their design and implementation.

Character Configuration

Character selection, customization and creation tend to occur at the outset of gameplay. For games with single default characters, characters are configured as part of the development cycle on behalf of players. Players take on the role of a playable character when gameplay begins. With games that contain parametric character customization or creation, players contribute to the configuration of playable characters by interacting with settings and selections within constraints set by a developer. In any case, players take on the performative embodiment around which their gameplay will centre before gameplay or as it begins.

In books, the author decides who the story will follow. Who these characters are at some level, and how they *perform* throughout the book is relatively predetermined. Because writing is not an inherently robust visual medium, and authors do not always describe their characters in detail, different readers may still imagine protagonists in sometimes wildly different ways—perhaps even in a different manner than the author. However, central aspects of their personality, activity and dialogue are often rigidly dictated.

Character configuration in games is a bit more complex. In games with single default characters, many aspects of the role players will take on are chosen for them in a way that more closely resembles a textual character. In games with parametric interfaces, players are able to take a more direct role in configuring the main character than book readers—or most previous media for that matter.

In many games (especially role-playing games) players may continue to customize or augment different magical, technical, or other traits and abilities related to gameplay as they progress. However, what traits or abilities may become available over time is often dictated when characters are selected or created. Although these other mechanical outcomes have periludic implications, in this paper we are primarily concerned with the performative possibilities of game characters that exist beyond individual game contexts and that may align to those of actual players.

The formal inclusion of player choice into the configuration of the characters they will take on, and around whom gameplay may centre, presents something somewhat new while materializing theories couched in older media. Barthes's rejection of a singular authored meaning in a work (1977) and Eco's notion of the *open work* (1989) are empirically *observable* in action when many players play through the same game with radically different customized characters, or radically different interpretations of who their games are about. Barthes and Eco suggest a denial of singular, fixed meaning in texts. Other games scholars still apply their analysis directly to narrative and content in games in much the same way it has been applied to previous media (e.g., Lauteren, 2002; Simons, 2007; Tanenbaum, 2015; and Tanenbaum & Bizzocchi, 2009). In games however,

Barthes and Eco's theories materialize and mechanize within the periludic interfaces that mediate character configuration.

Examining character configuration through a periludic lens highlights the formalized incorporation of players into the co-creation of games. Looking closely at character configuration interfaces creates an opportunity for those who make and study games to reflect on processes that both enable alternative ways for players to interact with their games, and structurally and functionally reproduce the sorts of broader inequalities games and other media continue to struggle with (e.g., Benshoff & Griffin, 2011; Davis & Needham, 2008; Gardner & Tanenbaum, 2018; Gray, 1995; Griffin, 2006; Higgin, 2009; Hooks, 2009; Howard & Jackson, 2013; Kafai, Cook, & Fields, 2010; Onwuachi-Willig, 2007; Passmore, et al., 2017; Shaw & Friesem, 2016; Singer, 2002; and Williams, et al., 2009). Single-default characters taken in aggregate display the limits within which an industry is willing to cast main characters. Multiple default characters and customization or creation interfaces display the constraints within which developers or publishers will allow players to control game casts. Limitations on body types, skin tones, hair styles, or other physiological and cosmetic features in character configuration interfaces represent the limits on who games are *permitted* to be about.

Game studies scholars tend to follow two primary vectors when examining characters in games: player-focused and media-focused. The first observes player relationships with characters, with players as the focus. The second examines games themselves as media artifacts with or without the player as an important component of analysis. Both approaches are important for a holistic understanding of games, and one or the other may take precedent depending on the kind of question scholars are attempting to address. Here, we highlight examples of both approaches that we argue suggest a need for a periludic lens.

Player-Focused Approaches to Character Configuration

There are many studies that have examined how players experience characters or avatars in games and online (e.g., Boellstorff, 2008; Higgin, 2009; Nakamura, 2002; Nardi, 2010; Passmore, Birk, & Mandryk, 2018; Passmore & Mandryk, 2018; Reza et al., 2020; Shapiro, 2015; Shaw, 2015; Taylor, 2006). All of the early ethnographies of massively multiplayer online (MMO) games contain at least some description of character configuration or character creation that reflects on the importance of what occurs in these interfaces. T.L. Taylor describes "becoming a gnome" (2006, p. 11), and the ways the choices she made making her character influenced or altered the way she would later experience the gameworld. She narratively differentiates the process of *becoming* a gnome, and later accounts of playing *as* a gnome. At the outset of her adventures in *World of Warcraft* (Blizzard, 2004), Bonnie Nardi describes the challenges she faced creating "an animated character with which to adventure in the three-dimensional virtual world" (2010, p.4). As someone new to digital games at the time, Nardi expresses an unfamiliarity with the semantics and conventions of the interfaces of character creation to the point that they became an explicit barrier to entry.

Though explicitly concerned with player experience in and out of game rather than character creation per se, Lisa Nakamura (1995, 2002), Celia Pearce (2011) and Crenshaw & Nardi (2014) can provide direct insight into how studies oriented to periludic interfaces might be useful. While

none of these scholars use the term "periludic," or analytically focus on the interfaces we apply it to in this article, we argue our readings of these studies should suggest how productive including a consideration of these interfaces may be to investigating player experience.

In her study of multiuser dungeons (MUDs), Nakamura writes about how menus can "work to deny the existence of ways of being raced that do not fit neatly into categorizable boxes" (2002, p. xvii). She introduces the concept of "menu-driven identities" to highlight "interface design features… force reductive, often archaic means of defining race upon the user" (2002, p. 101). Although her primary analysis is about disembodied performances in text-based digital spaces, nowhere can this analysis be more readily applied than to an embodied analysis of character configuration interfaces. While Nakamura is concerned with more broadly defined digital spaces, she foregrounds the interfaces on the periphery of more central activities that mediate individual people's ability to perform in these spaces.

Pearce discusses the "Uru," "refugees" attempting to find a new home after the destruction of their "homeland," a canceled MMO from which they take their name (2011). The Uru established colonies in various other games while struggling to recreate, if only in part, their homeland in new virtual worlds. While Pearce's analysis focuses largely on the translation of community and cultural artifacts between worlds, she still pays special attention to how she and the Uru adapted and enacted their personal performances in various worlds while attempting to maintain some continuity. Figure 1 below, depicting all of Pearce's or Artemisia's avatars (including their physical one), visually represents this aspect of her analysis. Pearce/ Artemisia is at once all of these separate embodiments, and performances. There is a continuum of certain kinds of experience between them with Pearce meaningfully in the centre. While players may identify with or as their avatars, there are always players *and* avatars. In addition, Pearce's story of the Uru highlights how there are always systematic limitations and affordances that determine how players translate continuous embodied performance into or between proprietary worlds. In the image below, we see characters that are at once the same, and visually distinct in features and visual styles based on the limitations of different character configuration interfaces. Pearce's work suggests the need to investigate how character configuration interfaces afford or exclude certain performative choices, and, further, how examining character configuration interfaces specifically enhances work like Pearce's focus on players and their communities.

Figure 1: Celia Pearce and Artemisia's avatars used with permission of owner (Pearce, n.d.)

For Pearce, the functional limitations imposed by the developers in the creation of their worlds, and character creation, shape the possibilities of "emergent" play. Her analysis illustrates how these limitations shape the possible performance and enactment of identity. Attending to the interfaces that present these limitations can organize more nuanced approaches to examining how players experience the characters or avatars they create, and the identity work avatars may

represent, or support—in this case, the literal identity labor of negotiating with character configuration interfaces to enact or maintain a persistent identity through various worlds.

Although only concerned with one specific aspect of character configuration, Crenshaw & Nardi write about identity curation in games through an analysis of avatar naming practices (2014). It is important to note that while Crenshaw & Nardi are explicitly studying player character/ avatar names *in games,* they do not actually discuss gameplay at any point in their article. The article describes the very rich, well-articulated and far-reaching relationships their participants have with the game-character names they choose and naming challenges players sometimes face. Crenshaw & Nardi describe how the relationships players have with a variety of textual and epitextual material, cultural influences and other aspects of their lives come together within the naming function. This function supports or challenges their participants' ability to curate a facet of their identity persistently or consistently across many games. Although the meaning of the names Crenshaw & Nardi's participants assign may originate from identity work that occurs in games or elsewhere, how that meaning is maintained or expressed in new games is constrained by peripheral-to-gameplay interfaces that allow or hinder successful translation into new games and gameworlds. Players must negotiate with a periludic interface that dictates whether the names they wish to attach to their in-game embodiments will be permitted.

Research like Pearce's and Crenshaw & Nardi's helps to understand how the affordances of character configuration interfaces may provide, produce, or limit meaning for players in relation to their characters. Asking players about choices they make surrounding the (re)creation of characters, or about their feelings surrounding limitations in the mechanics of character configuration, can highlight how these interfaces encourage or discourage the performances and identities they hope to enact in gameworlds. These can provide insight into the *practice* of avatar creation and the ways players wield the various tools offered for the process. Although this may sound like Usability or UI/ UX-type research—rather than evaluating how intuitively of efficiently players navigate any one specific interface—these sorts of questions can help illuminate how players may intuit, understand and interact with an entire type of interface at a more ontological level. With slight modifications of scope, this sort of research can help build a better understanding of the design of these interfaces more broadly. Asking developers to narrativize the development of these interfaces and their limitations can provide insight into the choices and values that shape their design as a category of interface.

Pearce describes how frustrated some of the Uru became when they were not able to reproduce their original avatar to their liking in new virtual worlds (2011). Other scholars have described how some players struggle to reproduce racial, gendered, or other demographically linked aspects of their identities in the avatars they play at all (e.g., Higgin, 2009; Kafai et al., 2010; Shaw, 2015; Passmore, Birk, & Mandryk, 2018; Reza et al., 2020). While the outcomes of these limitations may play out in-game, studies such as Pearce's and Crenshaw & Nardi's draw attention to how players must often literally negotiate with various interfaces that constrain their performative possibilities even before gaining access to gameplay.

Media-Focused Approaches to Character Configuration

There is an ever-growing amount of research that observes the *outcome* of character configuration in games. For example, scholars such as Higgin (2009), Williams et al. (2009), Shaw & Friesem

(2016), Passmore et al. (CITE 2017), Shaw (2017) and Gardner & Tanenbaum (2018) all observe samples of gendered and/ or racial representation in games. Higgin describes the erasure of non-European characters in MMO role-playing games. Williams et al., Shaw & Friesem, Passmore et al., Shaw and Gardner & Tanenbaum all empirically ground debates of poor representation in games using large data sets of characters in games. Although most of these scholars value the role of players in their arguments, the core of their analysis tends to focus on media artifacts and game software.

McArthur, Teather & Jenson. (2015) and Gardner & Tanenbaum (2018) are two examples of studies that have interrogated character configuration directly. While again, neither of these studies use the term periludic, both largely disregard the textual, ludic, content in the thrust of their arguments. They further implicate peripheral interfaces and the processes of character configuration in broader networks of experience in and out of game.

McArthur, Teather & Jenson describe their "Avatar Affordances Framework" as explicitly for comparing different character or avatar creation systems (2015). They are clear to point out that the characters created by players are content and textual, while the tools, widgets, or interfaces players navigate to create these characters only define the bounds within which that content is created. McArthur, Teather & Jenson are keenly aware that what they are studying is explicitly *not* in-game, even though these interfaces control and influence what occurs there; they are concerned with how these systems negotiate the relationship between players and their games. McArthur, Teather & Jenson are concerned with the "hegemonic" values that may materialize in the construction of these interfaces. They are concerned that when developers implement limitations that exclude embodied performances in games, it limits the player's "ability to represent themselves online" (McArthur, Teather & Jenson, 2015, p. 232), and describe a framework for charting the capacities for representation within these kinds of interfaces.

Concerned with questions about representational limitations in games, Gardner & Tanenbaum conducted a census of the playable characters and the parametric interfaces of 200 games (2018). They limit their observations to playable characters, and the ability to create playable characters, highlighting the role selected or created avatars take on as players' virtual interface with in-game worlds. The majority of the data collected in their census concerns games with a single default playable character and provides insight into the representational landscape within their sample. While customization interfaces like those focused on by McArthur, Teather & Jenson are popular, and provide plenty of material for analysis, Gardner & Tanenbaum point out how the fixed transactional outcome of default characters becomes important when considering a diverse player population. Aligned with the work of scholars like Shaw (2015), Passmore, Birk & Mandryk (2018), Passmore & Mandryk (2018), and Reza et al. (2019, 2020), Gardner & Tanenbaum note how the values of a default character's performance means different things to different players, especially players of colour and women. Gardner & Tanenbaum describe the variety of judgements that may be applied to characters of difficult to read demographic identities and the importance of diverse observers. Though focused on game-media as an object of observation and analysis, rather than players, Gardner & Tanenbaum are only minimally concerned with the *text* of the game. Their insights are fueled by and concerned with an examination of the mechanisms, processes and influence of character acquisition, selection, or creation.

Pervading questions and analysis surrounding game characters or representation in games tend to bring either gameplay content or players into focus and tend to assume the interfaces that configure

characters are *just* part of the game if they are directly addressed at all. Foregrounding these interfaces allows game studies to more precisely examine how players understand or articulate the ecology of affordances within which they are given, select and create their characters. Or, it allows us to more precisely examine how these interfaces are designed and integrated into a broader process of game design and production.

In digital games, publishers and players co-construct main characters through character configuration. Character configuration interfaces are a contact point where publisher priorities and player feelings about the characters they will play come together in gaming practice. Publishers dictate the limitations on which virtual bodies are *permitted* in their games. Players play along or contend with those limitations to participate in gameplay. Examining *how* character configuration interfaces constrain and mediate embodied performative potential provides an opportunity to investigate how they influence gaming and game design.

Conclusion: Logging Out

Periludic interfaces *surround* gameplay, while depending on games to exist, and require us to consider that relationship. As dependent components of a ludic artifact, periludic interfaces interact and create relationships with whomever *plays* that artifact.

Periludic interfaces are specifically designed to communicate to players in a direct fashion that games themselves are not. Marie Maclean, who originally translated Genette to English, points out the way that peritexts are meant to communicate to the reader in a more direct way than textual content[1]. She explains how the content of a text serves the narrative, setting, development, or argument of the text itself. On the other hand, she highlights how Genette's paratext, especially peritext, serve the activity of reading itself, or the use, of the medium the text is embedded within. With paratexts, "the author, the editor, or the prefacer are … informing, persuading, advising, or indeed exhorting and commanding the reader" (Maclean, 1991, p. 274). Few functional elements within the activity of gaming "exhort" the player as strongly as authentication, which demands the player identify themselves before they may proceed to gameplay. Or, character configuration interfaces that may either inform the player who they will play as or asks them, "as who would you like to play (subject to terms and conditions set by the limits of this parametric interface)?"

Although peritext might easily be used to describe similarly functioning aspects across any medium where the textual metaphor is applied, we argue that *periludic* is a useful semantic and practical differentiation for the category of peritextual functions specific to games. Recall our earlier distinction between peritext and periludic on the grounds of the continuing relationships periludic interfaces are able to support. When re-reading a long-owned, favorite edition of a book, readers can be confident the author or publisher has not snuck in different pagination, forwards, tables of contents, or similar features that help to navigate to familiar textual passages or scenes. Videogame players cannot always be so sure menu interfaces or gameplay settings will remain consistent when revisiting a game they have not played recently. Even if the core gameplay

[1] Moments in texts, games or otherwise, that "break the fourth wall" are partial exceptions to this. However, they are an example of exceptions that prove the general rule. Fourth wall breaks are rare and operate precisely on the assumption that in-text characters don't usually converse with readers or players.

remains relatively familiar, players may have to confront new interfaces, options, or barriers implemented by the developers to access game-modes or old save files. While well-played players may be fluent enough with these sorts of interfaces to adapt well enough, this change is still felt, complaints are still made on online forums, and re-negotiations with how they access their games are made. Relatedly, it is possible for a table of contents in a book to be ignored and forgotten by someone who has read a book enough times; there is no shortage of those who can quote chapter, verse and page number from a favorite text. In games, however, a player *must* navigate menu interfaces, perhaps "chapter select," each time they would like to participate in gameplay. Digital games have systems in place to ensure players cannot spoil the ending by navigating directly to the last boss, the way we might turn to the last-page of a mystery book to immediately reveal the murderer. In addition, not all periludic interfaces occur *before* gameplay like those we describe in this paper. In a related study, one author explores how controllers function periludically to direct gameplay in real time, while shaping the design *and* accessibility of games and gameplay (Gardner, 2021). Controllers can similarly become a barrier to players of even familiar games when played on a new platform with a different controller, or when their physiological capacities are not aligned with the assumptions of hardware designers.

Although some of these characteristics of games are driven by the nature of the medium, many are because of choices made by designers and are shaped by explicit or implicit values of the cultures that produce them. Both of these explanations suggest the importance of examining these interfaces more closely if we wish to better understand the medium of games.

In *Play Between Worlds,* T.L. Taylor says she is "interested in boundary work, in that such locations can be the place in which definitions become problematized or previously hidden practices are accounted for" (Taylor, 2006, p. 10). Taylor approaches games "focused on players" (Taylor, 2006, p. 10), and player experience on the periphery of play. Here, we instead point to a functional and mechanical periphery that is also "not seen as central in the retellings of these games" (Taylor, 2006, p. 10). Susan Leigh Star, writing about infrastructure in information systems, argues for the importance of studying the "hidden mechanisms subtending those processes more familiar to social scientists" (Star, 1999, p. 377)—or in our case perhaps, those who study games. "Study a city and neglect its sewers and power supplies (as many have), and you miss essential aspects of distributional justice and planning power (Latour & Hermont 1998). Study an information system and neglect its standards, wires, and settings, and you miss equally essential aspects of aesthetics, justice, and change" (Star, 1999, p. 379). Study games, and neglect their distribution platforms, licensing and authentication processes, character configuration, or hardware interfaces, and you miss equally essential aspects of values in design, aesthetic, inclusion, expertise or fluency and governance. While the interfaces we examine in this paper may be secondary, obscured, or out of focus compared to many common objects observed in game studies, they are no less essential. Like Star's description of infrastructure, these periludic elements are both relational and ecological and attending to them provides important detail, nuance and context to the questions we ask and the arguments we make about our experiences with games and gameplay.

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List of Acronyms:

EULA	End User License Agreement
HUD	Heads-up Display
MMO	massively multiplayer online
MUD	mulit-user dungeons
TOS	Terms of Service