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RIKKE TOFT NØRGÅRD AND CLAUS TOFT-NIELSEN

Introduction: Towards Digital Seriality as 'Movements Across'

The term seriality is generally used to mean objects that are arranged in some form of a series, whether temporal, spatial, or conceptual. (Boluk and LeMieux 2012, p. 17)

Over the past 65 years millions of fingers have constructed their own worlds of wonder with *LEGO* bricks, and thousands of fingers have controlled *LEGO* figures through franchise-designed *gameworlds* of wonder with *LEGO bits*. Typically these concrete tangible user-created story designs and activities remain absent from the field of media studies in general and research on digital seriality in particular. However, when it comes to contemporary franchises such as *LEGO*, *Skylanders*, *World of Warcraft*, or the revived *Star Wars* universe, the conceptualization of digital seriality as solely relating to transmedia or even trans-transmedia storytelling are no longer sufficient. Here, digital seriality emerges as interplay: "While the individual experience of play arises from a unique and irreducible assemblage of complex technological, conceptual, haptic, and narrative phenomena, players unconsciously participate in a vast network of composite actions that make up the aggregate histories of digital environments" (Boluk and LeMieux 2012, p. 16).

So while there have been multiple approaches to the seriality of digital games as well as their cultural and narrative practices-notably the frameworks of "transmedia storytelling" and "convergence culture" (Jenkins, 2006), "remediation" (Bolter and Grusin 1999), or the more fragmented notions of "remake culture"-we call for a more play(er)centric and interactional approach that would be more in line with the concept of "new serialities" (Steinberg 2003). These so-called "new serialities" proliferate through transformation and transgression where a figure such as Gandalf becomes "an infinitely renewable resource whose potency lies not in scarcity, but [in] its multiplication and cross-pollination" (Boluk and LeMieux 2012, p. 27). In this way, Gandalf—like Denson and Jahn-Sudmann's Batman figure—becomes a "plurimedial figure" appearing across materials, media, and modalities (Denson and Jahn-Sudmann 2013, p. 20; cf. also Denson and Mayer 2012). One could say that Gandalf is a paradigmatic figure in this regard-a figure with seriality in his genes, so to speak. Gandalf lends himself easily to practices of transmission, transformation, and transgression within what we here call "serialities-in-use." Serialities-in-use should be understood as serial forms and practices that emerge from actual play instantiations and manifestations. In other words, we look at seriality as it comes into play and is appropriated and played out in actual play situations, interactions, and experiences.

This article diverges from more narrowly franchise-centric conceptions of digital seriality and moves beyond purely text- and content-based approaches to seriality in order to develop an understanding of digital seriality as arising through players'

playful "movements across" media, materials, and modalities. The goal is to grasp and conceptualize such new playful seriality-franchises like *LEGO*, *World of Warcraft*, or *My Little Pony* that transcend narrow franchise-transmitted world-building conceptions of seriality. In this way, we follow Denson and Jahn-Sudmann's call for a decidedly interdisciplinary approach to the study of digital seriality while seeking to develop and refine their exploration of scholarly contexts within which to study it (Denson and Jahn-Sudmann 2013, p.1). Our aim is not to oppose or question their exploration but to expand some of the parameters and categories outlined by Denson and Jahn-Sudmann. Thus, we explore not only "the aesthetic forms and cultural practices of serialization as they are articulated in and around interactive digital media" (Denson and Jahn-Sudmann 2013, pp. 10-11) but also the kinaesthetic forms and practices of interaction design practices at the heart of playful serialities.

This expansion is effected through a decidedly play-centric and player-centric approach where digital seriality is "not defined by the production of software [or stories] but by play" (Boluk and LeMieux 2012, p. 15). We take this approach because within new interactive serialities like the *LEGO* franchise:

the viewer/user/player (VUP) transforms the story [and design, etc.] and enables the Artwork to surpass medium. It is in transmedial play that the ultimate story agency, and decentralized authorship can be realized. Thus the VUP becomes the true producer of the Artwork (Dinehart 2008)

To adhere to such a play(er)centric approach, this article combines conceptual frameworks and analytical insights from the fields of media studies and digital game research with the fields of interaction design and toy research studies. Consequently, our exploration itself exemplifies a "playful movement across" in our efforts to present and outline a take on (digital) seriality that to a larger degree encompasses such movements-the "movements across" materials, media, and modalities that are central, in our opinion, to the products, processes, and experiences within "new serialities." Our interdisciplinary approach to seriality within digital cultures-an approach that oscillates between design-oriented/media-oriented, interactional/ textual, and tangible/digital alternatives-is carried out in order to circumvent some of the inherent tendencies within both disciplinary sides of this article's "scholarly playing field." That is, while media studies and game studies have a tendency to exercise a relatively narrow focus on media contents, texts, audiences, or fan cultures in relation to the practices and experiences of seriality, interaction design and toy culture have a tendency to exercise a similarly narrow focus on tangible materials and design practices, users' action-oriented interactions, and participants' technological appropriations.

Answering Denson and Jahn-Sudmann's call for a multi-pronged approach, therefore, we likewise hope to initiate a dialogue between (at least) two distinct fields of research: media/game studies and design/toy studies. Both echoing and expanding the efforts of Denson and Jahn-Sudmann, our focus here is on three sets of interrelations with respect to (digital) serialities:

1. interrelations between transmission, transformation, and transgression on the one hand and world-building, world-sharing, and world-designing on the other;

- 2. interrelations between technologies, social practices, and spaces on the one hand and franchise-centric, play-centric, and player-centric spaces of serialities-in-use on the other;
- 3. interrelations between intra-texts, inter-texts, and para-texts on the one hand and what we call intra-actional, inter-actional, and para-actional levels on the other, including how they come together in the intra-ludic, inter-ludic, and para-ludic serialities described by Denson and Jahn-Sudmann¹

Taking the *LEGO* franchise as a prime example and tracing these multiple interrelations within and around it, we will see that "it becomes increasingly limited to analyze a game solely as a bounded textual object, as transmedia techniques have led to interesting overlaps in cultural norms, textual design, and fan engagement across normally distinct media, highlighting the need to think across ludic and narrative modes" (Mittell 2012, p. 5). Two decades ago, we witnessed a shift in perspective on the way digital media and technologies "function as structure" to how they "communicate as content" (Winograd 1997); now, we suggest, it is time to shift our attention once more and to retrain our focus from what digital media and technologies "communicate as content" to how they emerge in the form of hybrid "trans/media-design/actions" where serialities materialize through playful transactions between participants and franchises.

The LEGO franchise can in many ways be viewed as the epitome of the "new serialities," for LEGO at its very core is characterized by playful seriality and movements across materials, media, and modalities—oscillating, centrally, between tangible bricks, digital bits, and blockbuster worlds. Through an analysis of the LEGO Star Wars and LEGO Lord of the Rings franchises, the present article aims to develop a conceptual understanding of how playful serialities within contemporary culture are something concurrently material/tangible (bricks and interaction designs) and digital/imagined (bits and perceived worlds). Experiencing and interacting with the LEGO franchise involves movements across these spaces-not as demarcated products and processes, but as a unification of interaction-design ecologies and transmedia storyworlds. Hence, digital seriality does not connote separate chunks of media experience or technology interaction, but a hybrid totality of material/digital and interactional/textual "worldness" expressed and experienced across different technologies and media platforms (Toft-Nielsen 2013, Nørgård 2012). Hence, this notion of seriality implies flowing compositions of interaction design and storyworld, fused into particular spaces for hybrid trans-actions.

Overall, the present article argues for the benefits of fusing insights from the fields of media studies, game studies, and interaction design. More specifically, the article merges perceptions of "intra-texts, inter-texts, and para-texts" and their relation to storyworld, with "intra-actional, inter-actional, and para-actional" levels and their relation to tangible design. We endorse Winograd's contention that advances in our understanding will not emerge simply by getting a fuller or deeper comprehension of what we already know "but [also] from finding new metaphors, new starting points" (Winograd 1997). This article is an attempt at establishing such a new starting point.

Seriality as *Brick*olage: The Paradigmatic Case of the Rise and Fall (and Rise Again) of the *LEGO* Brand

LEGO – from LEg GOdt (Danish for "play well")—is without a doubt most renowned for its line of construction toys—*LEGO* bricks. These bricks are colorful interlocking plastic pieces that can be assembled and connected in multifarious ways. As of 2014, more than 560 billion *LEGO* parts had been produced and sold to playful constructionists all over the globe.



Figure 1: Pictures exemplifying the five waves of the LEGO franchise: 1. wooden toys, 2. "Automatic Binding Bricks," 3. the "System of Play," 4. assemblage of "products-to-assemble," 5. play(er)centric brickolage (all pictures by Rikke Toft Nørgård)

It all kicked off when carpenter Ole Kirk Christiansen began making wooden toys in Billund, Denmark in 1932. In 1949 he began, under the *LEGO* brand name, to produce an early version of the now famous interlocking bricks. These first "Automatic Binding Bricks" were modelled after the Kiddicraft Self-Locking Bricks (patented in the United Kingdom in 1939), a development of traditional stackable wooden blocks but locked together by means of round studs on top and a hollow bottom. Finally, in 1958, the iconic modern freeform "System of Play" *LEGO* brick design was developed.

A lot has changed since the *LEGO*'s System of Play *LEGO* brick was patented. The *LEGO* brand now encompasses theme parks, digital games, board games, movies, television shows, robotic technologies, clothing, plush toys, and much more. Since 1999, *LEGO* has increasingly partnered with major franchises to create licensed lines based on established "texts" (or "properties," as they are increasingly referred to in the industry) such as *Batman, Toy Story, The Lord of the Rings, Star Wars*, and many more. Recently, however, there has been a move away from the diversification and heterogeneity of autonomous *LEGO* franchise lines (e.g. *Clickits* or *Bionicles*) and a return to the unifying homogeneity and interconnectedness of the original "System of Play" brick-logic.

Looking through the lens of "seriality," broadly conceived, we can conceptualize the development of the *LEGO* brand as consisting of a series of waves across different forms of serial thinking:

• from the initial wooden blocks and toys (1932-1949), expressing a "pre-serial" thinking in which detached products did not yet connect to other products,

- to the "automatic binding bricks" (1949-1958), expressing a physical, masonrybased seriality where consumers could buy a line of brick-sets to build their own designs of "stacked constructions,"
- to the "System of Play" bricks (1958-1995), expressing an interaction designbased seriality that shifts the framing of bricks from masonry components to design components for "open-ended Imagineering,"
- to a proliferation of heterogeneous stand-alone product-lines (1995-2004), expressing a from-franchise-to-consumer serial transmission where "productsto-assemble" are marketed to consumers in a form that, like IKEA furniture, dictates a standardized "assemble-to-never-disassemble" product poorly disguised as open-ended process,
- to the present intermingling and interplay of tangible bricks and digital bits across designs and worlds (2004-present), expressing a play(er)centric *brick*olage across interconnecting design-lines on the basis of reciprocal enactments of participants and brand, play and design, bricks and bits, expressions and experiences, constructions and consumptions.

From the above, we can see how the fourth wave—characterized by hermetically compartmentalized design-lines and serially transmitted (narrative) consumption of franchise-sanctioned worlds—is very much in line with traditional transmedia thinking within consumerist fan culture. With this shift, *LEGO* adopted a "transmedia worldbuilding" thinking, moved away from constructing itself as a material design tool for playful designs, and instead began branding itself as a series of narrative-oriented products for "assembling in order to play." Adopting this lens of "transmedia worldbuilding," *LEGO* succumbed to a culture of franchise-dictated narrative content and stand-alone, click-together products. When these products were assembled, there was nothing left to do but to enact the implied franchise-built storyworld. Within this wave, "[m]any of the new products were, for example, not compatible with the System of Play. Preformed elements were often only useful in the context of one single *LEGO* set" (Lauwaert 2009, p. 61).



Figure 2: Picture 1: Bionicle figures to be assembled and played with; Picture 2: None of these LEGO design-lines are compatible with each other; Picture 3: The Bionicle series is not compatible with the classic System of Play (all pictures by Rikke Toft Nørgård)

philosophy-articulated along of This design the lines franchise-built compartmentalized transmedia worlds, of discrete "content" lines and products that turned the constructor into consumer-almost ruined the LEGO company, until "[t]he classic construction toys were re-established in 2005 as one of the LEGO company's core product lines" (Lauwaert 2009, p. 61). Importantly, however, LEGO did not simply return to its former pre-textual, storyworld-free brick-logic of purely constructionist toys. What makes *LEGO* a paradigmatic case of new serialities within digital culture is its fusion of participant play and brand design, narrative worlds and tangible engagements, material bricks and digital bits, constructionist expression and consumer experience. It is a vibrant form of participatory design seriality where consumers are not only "prosumers" but co-constructors of their own serialities-inuse. Within this new form of seriality, material-digital contents and materials intermingle with one another to such an extent that Gandalf suddenly finds himself on the Death Star: "The return to the bricks, to the classic construction toys does not mean that popular media tie-ins and themed LEGO products that center on narrative play disappeared. Rather, it means that the LEGO Company intends to keep a better balance" (Lauwaert 2009, p. 61).

Today's playful digital culture has changed the structure of digital seriality—from corporately transmitted franchise-centric world-building to transformational playcentric world-sharing and onwards to transgressive player-centric world-designing. Against the backdrop of *LEGO*'s development through more or less successful ways of "moving across," we argue that the replacement of pre-participatory design culture's top-down serialities by the more transformational and transgressive participatory and networked "new serialities" calls for a new approach: an approach attentive to playful processes rather than products and to the intertwining of participants and franchises as they bring seriality to life through playful textual and interactional aesthetic-kinaesthetic engagements. What this more specifically implies for our understanding of seriality in general and for serialities-in-use in particular will be unpacked in the following.

Introducing Gandalf on the Death Star

Play itself, we must recall, is an essentially serial activity, characterized by ritualistic practices of repetition and variation. (Denson and Jahn-Sudmann 2013, p. 8)

In line with this broad statement, we can see how a particular instantiation of play with(in) bricks, bits, or blockbusters is itself part of larger serial network ecologies. Seen in this way, actual manifestations of *LEGO*-based play – "hands-on" play sessions in the hands of participants – constitute episodes in an ongoing series of "single-player" *LEGO* play within the worlds of individual participants (intra-seriality), as well as series of "multi-player" *LEGO* play between participants around the globe (inter-seriality), thus constituting *LEGO* play itself as an emergent cultural realm of practice.



Figure 3: Selma exploring the Lego franchise through kinaesthetic play-episodes of moving across LEGO as material, media, and modality (all pictures by Rikke Toft Nørgård)

When seven-year-old Selma explores the *LEGO* franchise through a series of playepisodes, she is simultaneously exploring her place within the *LEGO* franchise. As she uncovers the storyworld and interaction design of *LEGO Star Wars* or *LEGO Lord of the Rings*, she is also uncovering how the franchise envisions her as a fan and participant. In any particular instantiation of play she will move across *LEGO* as material, media, and modality and oscillate between consumption and construction, experiencing through immersing herself in a world of play and expressing herself through designing a world in play. In other words, the seriality of *LEGO* emerges and is accessed by Selma in the form of seriality-in-use through her (kin)aesthetically engaged hands and imagineering perception as she playfully moves across bricks, bits, and blockbusters.

When Selma puts her finger on the smartphone or tablet to access and experience LEGO movies, YouTube videos, and digital gameworlds, and when she puts her hands into the crates filled with LEGO bricks to create her own worlds. Selma is getting to know the technologies, social practices, and spaces of this particular form of contemporary seriality. She explores how this interaction design welcomes her engagement, inviting her to express herself (kin)aesthetically through her body while she explores how this storyworld has carved out a place for her in which to experience and imagine herself through her perception. By moving across the bricks, bits, and blockbusters of the LEGO Star Wars and LEGO Lord of the Rings franchises and their structures of textual, interactional, and ludic seriality, Selma is coming to grips with the materials and technologies this form of seriality has to offer when put into use-how she is able to transform and transgress the franchise through interaction, and how she is able to take the world in and make it her own through transformational or transgressive media storytelling. Herein, Selma experiences the seriality-spaces of LEGO as "transmutable," as she can shift between episodes of franchise-oriented world-building, co-produced world-sharing, and independent world-designing.

In a typical episode of Selma's engagement with the franchise in this seriality-in-use, she will perhaps start by watching some YouTube episodes of LEGO Star Wars before she turns to her crates and transformatively enacts her own episode through LEGO brick-play. Then, when she grows weary of constructing, imagineering, and role-playing within the LEGO Star Wars universe, she will throw herself on the beanbag to play a range of *LEGO* games on the smartphone that she used earlier to watch LEGO Star Wars. Perhaps she will play some LEGO Lord of the Rings games. Then she suddenly returns to the LEGO Star Wars universe - but now with the Lord of the Rings in mind and LEGO Lord of the Rings in hand. Giggling while she playfully places Gandalf on the Death Star, only minutes later she will be involved in deep transgressive play when Pinkie Pie from My Little Pony comes flying on a Ninjago ice dragon, with the Lion Laval from LEGO Chima as her sidekick, to rescue LEGO Harry Potter from the evil scheming of Gandalf and Darth Vader. Swivelling through the hybrid space of transgressive trans-action she has designed, she is experiencing and expressing the inner core of new playful serialities such as the LEGO franchise.



Figure 4: Putting Gandalf on the Death Star (all pictures by Rikke Toft Nørgård)

Grasping Gandalf on the Death Star: Digital Seriality between Transmedia Worlds and Interaction Design

In the following, we present a short outline of "interaction design ecologies" and "transmedia world-building" as two methods for grasping the tangible-digital products, processes, and practices involved in this new seriality. These two methodological takes on (digital) seriality are then combined in an analysis of playing with "Gandalf on the Death Star" as an intermingling of franchise and participant, tangibility and imagination, materiality and digitality across materials, media, and modalities. In this way, we hope to provide an analytical foundation for understanding "Gandalf on the Death Star" as a multifaceted compound of tangible bricks, interactional bits, gameworlds, and media blockbusters.

Grasping Digital Serialities as Transmedia Worlds

The strategy of utilizing two or more media platforms for distributing a coherent narrative universe has been described and theorized most prominently in terms of "transmedia storytelling." Following Henry Jenkins, who defines the concept as a narrative that "unfolds across multiple media platforms, with each new text making a distinctive contribution to the whole," transmedia storytelling has been hailed as the narrative model best suited for engaging users and promoting user participation through cross-promotion in our contemporary media ecology (Jenkins 2006, pp. 95-96). Transmedia storytelling is, at its core, based on the principle of seriality, since it is the unfolding of a story over time, through the process of chunking meaningful bits of the story and dispersing it through interconnected installments via different media platforms. Through recurrence, repetition, and seriality, transmedia storytelling allows users to become acquainted with the characters and spaces of a narrative, which through the sum of transmedia installments makes a complete and persistent world.

Thus, a core characteristic of transmedia storytelling is the act of world-building described by Henry Jenkins as: "[t]he process of designing a fictional universe that will sustain franchise development, one that is sufficiently detailed to enable many different stories to emerge but coherent enough so that each story feels like it fits with the others" (Jenkins 2006, p. 294). Transmedia stories are defined by their expansively serial abilities: they expand and enrich franchised fictional worlds, they expand cross media platforms, and they empower an expansive fan base by promoting collective authorship and participatory spectatorship by way of a constant revisiting and reengagement with the franchise. But such constellations are, at the same time, the product of industrial consolidation and conglomeration, mirroring the "economic logic of a horizontally integrated entertainment industry" (ibid, p. 96). Transmedia storytelling has much to offer and has paved the way for theoretical understandings of the phenomena of seriality in distributing an expansive, coherent, and canonical narrative world across multiple media platforms. But it has also reinforced a perspective centered on the coordinated strategy of the (corporate) sender or world-builder responsible for extending such franchises across media. What we are faced with here are distribution models that work through industrial conglomeration, through the controlled flow of content across platforms, which in turn consolidates a canon of official texts and, at the same time, discourages unauthorized fan use (Hills 2012; Scott 2010, 2013). These models reward a particular kind of creator-centric use: "affirmational" fandom, in which "the source material is restated, the author's purpose divined to the community's satisfaction, rules established on how the characters are and how the universe works, and cosplay etc. occur" (obsession_inc 2009). In other words, transmedia storytelling serves to bolster the boundaries of a single franchise through sender-controlled, franchised seriality. But what happens when fan use and fans' participation moves beyond the consumption of texts that narratively and financially supplement a single franchise? How do we theorize the playful intermingling of multiple franchises through multiple media?

Matt Hills offers a description of the cult text as operating according to the idea of "hyperdiegesis," which was originally conceptualized as a vast, coherent narrative world, only a fraction of which is ever glimpsed by audiences (Hills 2002, p. 104)— that is, as a textual quality that promotes fan engagement in cult texts. In a more

recent article Hills revisits and reframes the idea of hyperdiegesis through the concept of "trans-transmedia" as a means of thinking about how narrative worlds are co-produced between fans and producers over time, as "trans-discourses which move across industry and fan contexts as well as across media" (Hills 2012, p. 425). In a similar vain, while still working within the framework of franchising, Derek Johnson suggests that we shift our focus and move "past world-building to conceptualize the franchise in terms of world-sharing among creative workers and communities" (Johnson 2013, p. 109). Taken together, Hills and Johnson highlight the role of users in acts of world-sharing which bring together specific universes that are not, from the outset, held together by a singular, auteur-controlled, coherent world. The notion of hyperdiegesis and transmedia world-sharing can here be understood as phenomena which emerge through fan engagement in and fan use of multiple texts and worlds.

This kind of engagement is configured along the lines of a "transformational fandom," which is "a democracy of taste; everyone has their own show at declaring what the source material means, and at radically re-interpreting it" (obsession_inc 2009). This kind of re-interpretative and playful seriality is a means of opening up transmedial worlds to a wide array of different forms of engagement and uses, both as franchise-centric world-building and transgressive, re-interpretative world-sharing.

These processes all invoke and intermingle with different layers of seriality through transmedia world-sharing: We find what Denson and Jahn-Sudmann call a layer of intra-ludic seriality within computer games themselves, in which the replayable nature of games, through structures of repetition and variation are manifested in the game levels or worlds. Another layer of inter-ludic seriality emerges between specific games—the sequels, prequels, remakes, updates and versions are explicit continuations of a game series. The third and in this context most pertinent level of seriality we find is the para-ludic, which is the transmedial web of connected media platforms and especially the social practices of a fan community (Denson and Jahn-Sudmann 2013).

These three levels of seriality can be utilized to both bolster and to transgress the boundaries of a particular franchise, as we have discussed earlier in terms of "affirmational" and "transformational" fandom. These types of fandom support two very different sorts of user practices, each of which informs the three levels of seriality. On the one hand we have a vertically informed seriality-in-use, which works as a depth engagement within a franchise, according to what Jason Mittell has labelled "drillability." The term is used to describe media texts that "encourage viewers to dig deeper, probing beneath the surface to understand the complexity of a story and its telling [...]. Such programs create magnets for engagement, drawing viewers into story worlds and urging them to drill down to discover more" (Mittell 2009).

Opposed to this, we find a horizontally informed seriality-in-use, which works as a practice of moving across franchises, as communities circulate content according to their own interpretations, uses, and social relations (Jenkins, 2009). Drillable practices work vertically within a single franchise, and in relation to its world-building strategies whereby content is serially distributed to users for them to engage with and immerse themselves in. "Spreadability" practices, on the other hand, work

horizontally across franchises, transforming, negotiating, or re-interpreting content through a serial play of multiple texts. Here we have moved on to world-sharing, as a co-construction between world-builder and world-user, intended play and actual play – which can also encompass "improper use," as Jonathan Gray reminds us: "Though *Star Wars* toys offered many implicit end explicit 'proper' uses, in the schoolyard, garden, or on the bedroom floor, children could do anything they wanted with those toys, from the 'proper' to the 'improper'" (Gray 2010, p. 187). Viewed this way, vertically informed and horizontally informed serialities-in-use are two opposing practices of play, co-present in the process of play itself.

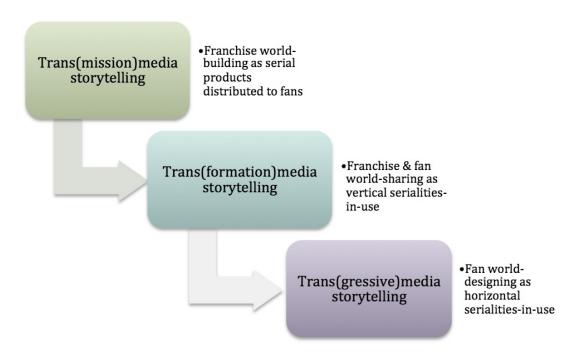


Figure 5: Three levels of "transmedia storytelling" within playful serialities

Grasping Digital Serialities as Interaction Design

Shifting our attention from digital seriality as transmedia worlds to contemplate digital serialities through the lens of interaction design, we are encouraged not only to grapple with digital seriality as experienced storyworlds but also with the tangible and embodied expressions of seriality within digital culture. To understand contemporary playful serialities such as Skylanders, Star Wars, World of Warcraft, My Little Pony, or LEGO, we also need to understand participants' expressive (kin)aesthetic engagements with the tangible bricks and digital bits of these franchises. Here, the lens of interaction design suggests itself because it is centred on embodied interactions and experiences with material-digital designs (cf. Smith et al 2013, Crabtree and Rodden 2009, Kaptelinin and Bannon 2012, de Valk et al 2013). As is often the case with flourishing play-based franchises and brands working within the logic of seriality, LEGO's own transmedia storyworlds are only part of the overall material-digital space of possibilities that a participant encounters when entering the serial brick-logic and brickolage of LEGO. An equally large contributor to these contemporary playful serialities' longevity, penetration, generation, and advancement within our digital cultures is the open invitations they put forward to participants to become active designers and agents that move across tangible-digital materials, media, and modalities. A playful franchise, such as *LEGO*, calls upon its participants to become participatory designers in an iterative cycle of construction and consumption.

Given that many playful serialities today emerge as much from participants' expressive (kin)aesthetic interactions with materials, media, and modalities as they stem from their perceptions of the content of immersive storyworlds, we need to incorporate a balanced emphasis on the tangible and interactional ecologies in which digital serialities are embedded and from which they emerge. In other words, if we want to adequately grasp contemporary playful serialities within digital cultures we need to balance narrative content with (kin)aesthetic interaction, storyworld with interaction design, and participants as fans with participants as designers. Such a balancing becomes possible when we pair the "transmedia worlds" of media studies with the "tangible hybrid ecologies" of interaction design.

In the field of interaction design, the focus is on "how new technologies [for seriality] might stimulate new patterns of use" (Smith et al 2013). Such hybrid ecologies merge tangible technologies and intangible content, immersive worlds and interactional spaces, fan perceptions and design expressions into a "hybrid reciprocal world-designing." Within these playful serialities, participants and franchises intermingle as they shape and co-design each other through material-digital products, processes, and practices across multiple materials, media, and modalities.

Hence, if we acknowledge the fact that many contemporary playful serialities, such as those exemplified by World of Warcraft or LEGO, do not operate within static serialities of transmission or even the more dynamic serialities of content transformation, but are rather serialities in the making, (kin)aesthetic interaction by interaction, we need to incorporate aspects of embodied interaction and design as well as tangible environments and technologies into our analytical methodologies. Such an attention towards social practice as tangible participatory interactions within digital-material environments has been a central focus within interaction design for many years (e.g. Weiser 1991; Crabtree et al 2005). Through integrating such frameworks within our understanding of "transmedia worlds" and "digital serialities," a more holistic approach is enabled: media content is paired with interaction design, immersive storyworlds are paired with tangible (kin)aesthetic possibility spaces, consumption is paired with construction, and fan experiences are paired with designer expressions. We need to start emphasizing how the totality of media content and interaction design of playful franchises or brands are scaffolded in order to promote shared hybrid material-digital storyworld/interaction-design ecologies ecologies in which interactions and experiences emerge in the entanglements of participants and franchises/brands. These technology and media saturated tangibledigital spaces have also been described as "third spaces" (Muller and Druin 2010), "design collaboratoriums" (Bødker and Buur 2002), and "technology-enhanced" activity spaces" (Kaptelinin and Bannon 2012); they are generally characterized by a shift of focus to "the entire use ecology [...] [that is,] the entire activity space including the physical space of children's technology use" (Smith et al 2013). It is with this perspective in mind that we can invoke such third spaces to investigate how new forms of media and technology organize new serialities that transmit, transform, and

transgress the constructions and consumptions of participants and franchises/brands.

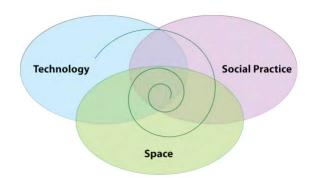


Figure 6: The three dimensions of the Ecological Inquiry (Smith et al, p. 185)

From the standpoint of digital seriality, we can interpret Figure 6 as the construction and/or unfolding of seriality (the spiraling thread) in terms of a movement across three dimensions (technology, social practice, and space). These three dimensions, as seen through the lens of digital seriality, will be explained briefly in the following, before we go on to merge "interaction design" with "transmedia worlds" into a compound model for grasping "Gandalf on the Death Star."

- Technology (movements across media and materials): When grasping digital seriality as movements across media and materials, we look for how digital seriality as technology emerges through participants' appropriations and improvisational iterations of hybrid technologies for world-sharing and -designing inside participants' everyday context of digital culture. The focus here is on how digital-material technologies scaffold and promote transmission, transformation, and/or transgression.
- Social practice (movements across modalities): When grasping digital seriality
 as social practice, we focus on how participants design and share digital
 seriality through (kin)aesthetically engaged digital-material constructions and
 consumptions with and across modalities. Through participants' engagement
 in social practices within hybrid participatory cultures, technologies shift from
 merely being products for consumption to becoming ingredients in processes
 for socially embodied practices of play.
- Space (movements in hybrid story-interaction worlds): When grasping digital seriality as movements in hybrid story-interaction worlds, we look for the ways digital seriality emerges simultaneously as an experienced storyworld in which to immerse oneself and an interactional possibility space in which to express oneself. In this way, participants' instantiations of a particular seriality turns abstract seriality space into a concrete seriality place that is experienced and expressed through participants' and franchises' entanglements of consumption and construction.

Seen through these three perspectives, seriality is always "in the becoming" by way of a franchise's or participant's movements across technology, practice, and space. Accordingly, digital seriality becomes something that is always processual and performative. Digital seriality is, when viewed through the lens of interaction design and on the grounds of transformative or transgressive interaction with(in) hybrid ecologies, a form of assemblage—where "assemblage is imagined as inherently unstable and infused with movement and change [...as it] generates enduring puzzles about 'process' and 'relationship'" (Markus and Saka 2006). Given the interaction design lens, which views digital serialities as hybrid ecologies, the smallest unit of analysis will always be relational and interactional rather than isolated and static.

Grasping Digital Seriality with Both Hands

Our presentation above of a media-cultural and design-interactional approach to playful digital seriality as transmedia worlds and (kin)aesthetic design for engagement, we believe, does justice to the basic idea that participants and brands, play and design, bricks and bits, expressions and experiences, constructions and consumptions are not essentially opposed but capable of complex forms of interplay and intermingling. The goal here is to move beyond purely text- and content-based approaches to seriality and to present perspectives and models for grasping the ways contemporary playful seriality-brands and -franchises (e.g. LEGO, World of Warcraft, or My Little Pony) are themselves shaped by and around the serialized transformative and transgressive practices of players. We are building, in this article, on Denson and Jahn-Sudmann's exploration of contexts within which to study digital seriality and following their call for a decidedly interdisciplinary approach to this study; but, as should be clear by now, we seek to develop and expand this horizon by including not only "the aesthetic forms and cultural practices of serialization as they are articulated in and around interactive digital media" (Denson and Jahn-Sudmann 2013, pp. 10-11) but highlighting also kin-aesthetic forms as a subset of what they have termed "serial interfacing" and interaction design practices as overlapping both the latter and the realm of "collective serialization." In other words, ours is an effort to grasp how serialities can emerge as transmitting transformational or transgressive storyworlds and interaction ecologies through the social practices between players and franchise in hybrid spaces with digital-material technologies. Below (Figures 7-9) is a first outline of such an interdisciplinary model for grasping the levels of seriality between bricks, bits, and blockbusters in the study of materialdigital play-centric serialities such as World of Warcraft, My Little Pony, and LEGOit is an attempt to grasp Gandalf on the Death Star with both hands, so to speak.

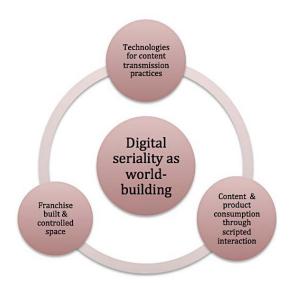


Figure 7: Franchise-centric seriality as world-building through transmission technologies and product-consumption practices

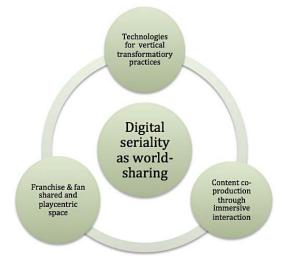


Figure 8: Play-centric seriality as world-sharing through transformation technologies and content-production practices



Figure 9: Player-centric seriality as world-designing through transgressive technologies and product-construction practices

Fusing the "transmedia worlds" of media and cultural studies with the "hybrid action spaces" of interaction design we get three distinctive ecologies or systems of digital seriality. Besides underlining the fact that digital seriality needs to be read in the plural – digital serialities – these models furthermore demonstrate the potential intermingling and interplay of different dimensions and levels of seriality within a particular franchise such as *LEGO*. This thinking is in line with that of Nick Couldry, who argues for talking about convergence cultures in the plural in order not to obscure cultural differences (Couldry 2011, p. 495). Likewise, we would argue for the need to talk about serialities in the plural in order not to obscure structural differences between distinctive ecologies of seriality.

Furthermore, the above should not be read as compartmentalized models of autonomous ecologies of seriality. Rather, they should be viewed as abstract logics of seriality that can be mixed and matched within concrete instantiations of seriality in the intersections and interplay of participants and franchises. Consequently, even though the form of content (transmitted, transformed, or transgressed storytelling), the aim of practice (world-building, world-sharing or world-designing), the functionality of digital-material technologies (consumption, production, construction), and the logic of control within the space (franchise-centric, play-centric, or player-centric) relate to their own specific abstract logics of seriality, they can shift or be replaced from series to series, from instantiation to instantiation, and even from unit to unit. A play-episode that takes off with the consumption of an official episode of the franchise TV-series LEGO Star Wars can evolve into a re-enactment and transformation of that episode through LEGO play with LEGO Star Wars sets; it can be followed up with a further exploration of the episode's storyworld through playing a LEGO Star Wars digital game; and it can end up in a transgressive explosion of franchise mash-up when the player constructs his or her own YouTube channel featuring LEGO Star Wars episodes where Pinkie Pie from My Little Pony comes flying in on a Ninjago ice dragon with Spiderman as a sidekick to battle "Gandalf on the Death Star" in a constructed landscape of diverse LEGO Star Wars, Chima, Ninjago and Friends sets inhabited by My Little Pony figures and LEGO mini-figures.



Figure 10: Pinkie Pie in a Hama beads rainbow landscape, with Spiderman as sidekick, coming to battle Gandalf on the Death Star

In the midst of the media-design interdisciplinary collisions outlined above, we can see the beginnings of something new—something that might be called a method for "hybrid trans/media-design/actions" or "hybrid trans-actions"—where digital seriality emerges through playful trans-actions (i.e. actions of trans-mission, trans-formation,

or trans-gression) between participants and franchises within hybrid aesthetickinaesthetic environments of construction and consumption. It is a hybrid worldness that is both experienced and expressed, narrated and designed, received and delivered, as "[s]ocial practice, hybrid spaces, and digital technologies are embedded with other technologies, social contexts, past and future events, in more holistic ecologies and continuous acts of appropriation" (Smith et al. 2013, p. 184). This hybrid worldness involves a comprehension of seriality as trans-actions across materials, media, and modalities as Gandalf is placed on the Death Star in various ways by participants and franchises. Consequently, playful seriality becomes extended into tangible materiality and decentered from core products into productive processes wherein serialities emerge as "containers or scaffolds that rely on participation and user-driven contributions to take their form. Their shape emerges through activities of use, over time, and their use is social and situated and depends on activities of those who use them" (Hagen and Robertson 2010, p. 77).

Conceptual Levels of Seriality within Gandalf on the Death Star

Moving now from grasping the technologies, practices, spaces, and worlds at play within new playful serialities and on to the task of conceptualizing the textual and interactional levels at play within serialized transmedia worlds and (kin)aesthetic interaction designs, we need to add additional layers to our model. Firstly, we need to be able to distinguish between the structures of narrative worlds and the levels of text-seriality put into play by participants and franchises (text-serialities-in-use). Secondly, we need to be able to distinguish between the structures of interaction design and the levels of actional-seriality put into play by participants and franchises (actional-serialities-in-use). Therefore, we present a short outline of "expressive worlds of play and text-serialites" and "expressive worlds in play and actionalserialities" before drawing up a compound model for comprehending Gandalf on the Death Star as the intermingling of bricks, bits, and blockbusters within ludicserialities-in-use.

Immersive Worlds of Play and Text-Serialities

When conceptualizing seriality at different levels and across different media, modalities, and materials, the traditional notion of what constitutes the text is challenged and becomes fluid, as texts are connected to other texts through the transformational process of play. What is at stake here is the very notion of texts and textuality. How do we grasp a textuality in which Gandalf emerges as a part of the world of *Star Wars*?

The concept of "text" is a central category in media studies, game studies, and cultural studies. Engaging the question of "what is a text," Couldry argues that "[s]pecific forms of 'textuality' have to be examined in their own right" (Couldry 2000, p. 72); the playful practices and the serial dialogue of combining franchises, media, and modalities, we suggest, constitute a very specific form of textuality. When we as fans and playful users are engaged with multiple worlds in and through different media, the task of defining the text becomes immensely more difficult, as "texts"

cannot be conceptualized as fixed or bounded units. Texts are positioned in, engaged through, and experienced from a whole universe of related and surrounding texts: "Each narrative is a rewriting of theses already written 'knowledges' of the culture, and each text makes sense only insofar as it rewrites and re-presents them for us" (Fiske 1987, p. 115). This means that individual texts are part of a wider web of textual occurrences and their textual elements are read in the context of other texts. The end of a singular textuality is a result of the shift in perspective from the text itself to its reception and appropriation, to the user herself.

We can distinguish between three forms of textual connections here. The first of these consists of "intra-textual" relations, where the references are solely within a single text or a single diegetic universe. We find such connections when *Star Wars* computer games reference the archetypical narrative or the familiar characters found in the canonical films, the cartoons, the novels, or other media. This often serves to uphold the histories, cultures, themes, structures, and logics of *Star Wars* across media.

The second form of textual references is the "inter-textual." The traditional understanding of intertextuality, in a Kristevaian sense, functions as a semiotic framework where "every text is from the outset under the jurisdiction of other discourses which impose a universe on it" (Culler 2001, p. 116). In this way, intertextuality functions like an inescapable link between texts and creates added meaning by linking to the huge network of related, never-ending plotlines within a franchise. This serially informed intertextuality invites viewers/users/fans in and gives their imaginations acres of space in which to roam. This understanding does not account for the playful practices of navigating between universes and between media. Such movements function para-textually. This third level of textual relations-"para-textuality"—is a key concept in Jonathan Gray's work on popular culture franchises as textual worlds. Gray has shown how paratexts, depending on their specific users, can shift the very balance between what we regard as primary texts and paratexts. Where "inter-textuality" has to do with world-building, "para-textuality" pertains to world-sharing and the user experiences inherent therein. The "text" at play is not a finished production, but a continuous serial productivity, larger than any film, game, book, or LEGO set. It is, in short, the entire world at play. We are thus faced with a particular type of serial textuality, consisting of what Cornell Sandvoss describes as "fan objects"; they form

a field of gravity, which may not have an urtext in its epicentre, but which in any case corresponds with the fundamental meaning structure through which all these texts are read. The fan text is thus constituted through a multiplicity of textual elements; it is [...] formed between and across texts (Sandvoss, 2007, p. 23)

When Gandalf is placed on the Death Star, neither the character of Gandalf nor the universe of *Star Wars* is completely deprived of its original meaning and rewritten in the process of play. Rather, the characters and objects function as "story pieces" of sorts, ripe with their own narrative potential—"starting blocks" which can be brought together and spark a story. These can be seen on a continuum from weak to strong narrative anchoring. Some of the elements can carry more narrative baggage than others, a heavier structure or implicit directions for how the story or the characters

should develop or be played with. We may think of these as serially infused "play scripts": "sequential patterns of action and meaning—which children replicate in their play" (Kline 1993, p. 327). This ties in with the notion of "affirmational fandom" we discussed earlier, whereas "transformational fandom" comes into play where mediatized objects become tools for assessing, negating, or even challenging play scripts. Here the transformational processes of play can prompt the user to enter into an "intermediate space" of "interactive fantasy" (ibid, p. 38) where the different objects are open to replacement, rewriting, recombination, where they function as mere content or raw material in the construction of the play world.

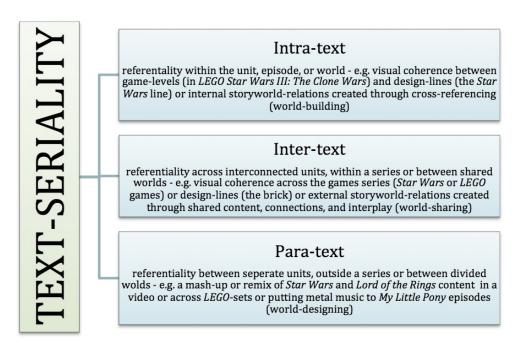


Figure 11: Levels of text-seriality within immersive worlds of play

Expressive Worlds in Play and Actional-Serialities

In this section we move from conceptualizing "Gandalf on the Death Star" as text and as content to be transmitted, transformed, or transgressed through different intratextual, inter-textual, and para-textual practices, to conceptualizing "Gandalf on the Death Star" as hybrid interaction space and design. Where the media-cultural take on "Gandalf on the Death Star" helps us to comprehend and conceptualize how digital serialities are generated from worlds of play between participants and franchises, the design-interactional take on "Gandalf on the Death Star" helps us to comprehend and conceptualize how digital serialities emerge from participant-franchise interactions with and within play(er)centric designs. Here, the traditional notion of (digital) seriality as transmedia storytelling becomes fluid and merges with participants' embodied (kin)aesthetic engagements. In this way, worlds of play manifest themselves not only as immersive or expressed narrative (text) worlds but also as tangible (action) spaces for immersive or expressive (kin)aesthetic engagement. What is at stake here is the very notion of digital seriality. How do we grasp a form of seriality that is composed not only of intra-texts, inter-texts, and para-texts but also of intra-actional, interactional and para-actional levels? How do we grasp a serial form in which Gandalf not only emerges and is experienced as part of the Star Wars universe but is also actively placed there by participants through expressive interaction in an attempt to construct their own serialities through embodied transgressive world-designing?

The concepts of "open-ended play," "design toys" (de Valk et al 2012, 2013; Bekker et al. 2009, 2010), and "geographies of play" (Lauwaert 2009) lend themselves nicely to such a perspective. Thus, the concept of open-ended play seems apt when we are dealing with the design of contemporary playful serialities that endorse and promote transformative and transgressive practices:

Open-ended play with interactive objects provides children with the freedom to construct their own rules, goals and meaning. Instead of games with strict rules, open-ended play designs offer interaction opportunities as a trigger for creating personalized games. The process of developing these designs differs from designs with predefined use. (de Valk et al 2013, p. 92)

Within such contemporary playful seriality designs (and *LEGO* is the epitome of these), technology, practice, and space is designed to invite the participants to interpret the digital-material components of seriality and create their own transformative or transgressive serialities with them. In other words, such franchises deliberately leave room for interpretation by the participants both in relation to the content level and the construction level of the franchise's seriality. In the case of *LEGO*'s *brick*olage the participants are free to spontaneously enact, improvise, and design with what the hybrid trans-action space offers them. Importantly, open-ended play is not the same as free play: "Open-ended play somewhat restricts children in their free play as it offers objects with design intentions" (de Valk et al 2013, p. 93).

This is also the case with *LEGO* and even more so with other playful serialities such as *World of Warcraft* or *My Little Pony*. However, playful serialities share some traits with respect to the ways they invite participants to transform or transgress through their interaction design. In general, they aim to deliver serialities for improvisation that is, participants should be able to create their own "story pieces" and "play scripts" spontaneously without being challenged by a hermetically sealed seriality. However, as it is not "free play," franchises working within the logic of playful serialites offer shared "mental models" or "storyworlds" as a basis upon which participants can improvise. This is the case in design-lines such as *LEGO Lord of the Rings* or *LEGO Star Wars*, where storyworlds are presented to participants as geographies of play atop which participants can improvise through transformational or transgressive interactions. Playful serialities operate within the design-logic of leaving room for design interpretation and construction in order to trigger participants' creativity.

This is, however, a delicate balance: "On the one hand, the [seriality] design should not be too open. At one point it will be nothing anymore, no real design. [...] Openended play should focus on finding a balance between spontaneity and structure [...] between directing play and emergent play" (de Valk et al 2013, p. 97). Accordingly, every (digital) seriality constitutes its own "geography of play" through its combination of interaction design characteristics—its layout of bricks and bits—and the texts and discourses embedded in or surrounding the design (its intra-, inter-, and para-texts). Here, tactile bricks and digital bits function as connectors and facilitators that enable and catalyze transformative and transgressive play practices within and across the storyworlds encompassed by the *LEGO* franchise. Consequently, digital-material seriality also depends on the ways participants (are able to) click bricks and bits together through intra-actional, inter-actional, or para-actional practices: "toys and play practices are intimately connected, and the design of a toy facilitates certain play practices (and not others)[;] [...conversely] the way people play with *LEGO* toys will also influence the design of (future) *LEGO* products" (Lauwaert 2009, p. 53).

On this view, bricks and bits function as two-way facilitators of serial construction and consumption as they are continuously assembled, disassembled, and reassembled by participants and franchises through intra-actional, inter-actional or para-actional practices, "thereby opening up a large area for divergent design and construction" (Lauwaert 2009, p. 57). Hence, the emergence of playful serialities as movements across tangible toy bricks and interactional digital bits is performed as a kind of dialogue between a franchise's brick-and-bit-design and participants' brick-and-bit-Bricks and bits are mediators between transmedia worlds and interaction play. design, and they serve as intermediaries in bridging participants and franchises. Accordingly, through intra-actional, inter-actional, and para-actional levels of engagement, bricks and bits are transformed from simple "components to consume or construct with" into mediators, mirrors, and promoters of participant-franchise world-building, world-sharing, and world-designing. Bricks and bits are in this way much more than a vessel for digital seriality. They are the design components from which digital seriality arises and is carried out-and in this way also a determining factor in how a particular serial form functions, is constructed, and consumed. They are active and dynamic "seriality-shapers" (Lauwaert 2009, pp. 40-41).

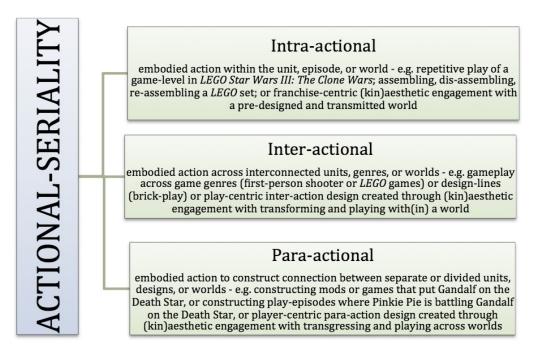


Figure 12: Levels of actional-seriality within expressive worlds in play

Conclusion: A Compound Model for Ludic-Serialities-in-Use, or: Gandalf on the Death Star

Looking back at the trajectory marked out in this article, we can see how far we have moved from Henry Jenkins's original concept of transmedia storytelling—a concept which, in essence, frames seriality in accordance with Hollywood's transmission of franchise-controlled world-building and fans' story and product consumption (Hills 2012, p. 413). When viewed in the light of the conception we have developed here of new playful serialities-in-use, we can see how the original concept of trans(mission)media storytelling only grasped serialities consisting of singular coherent storyworlds built for the purpose of distributing the franchise to its consumerist or prosumer fans across multiple platforms. This understanding of seriality is basically a "derivation of academic television studies" (Clarke 2009, p. 448), where fandom is key and where fan-produced content is structured and controlled within these trans(mission)media ecologies by the franchise (which Hills's reading of *Torchwood* as trans-transmedia also clearly demonstrates) (Hills 2012).

In its answer to the call put forward by Denson and Jahn-Sudmann, our article can be viewed as an attempt to broaden the study of seriality and transmedia to encompass new non-transmission forms of seriality operating under the logics of transformation or transgression. It is an effort to develop an appreciation for the ways in which a franchise emerges through transmitting, transformational, or transgressive (embodied) play-practices within hybrid trans-action ecologies. And we underline the fact that seriality must always be in the plural in order not to overlook crucial differences. We argue, that is, for the need to talk about "serialities" as well as consider actual "serialities-in-use" in order to avoid obfuscating important structural differences between distinctive ecologies of seriality.

When considering the levels of seriality at play in "Gandalf on the Death Star" and between the bricks, bits, and blockbusters that come together here, we must be able to grasp how transmedia storytelling meets interaction-design technology, space, and social practices to form a particular seriality-in-use through the ways it brings textseriality and action-seriality into play. Through this interplay, a ludic seriality arises in the space between participants and franchises, where immersive transmedia worlds of play and expressive interaction-design worlds meet in the form of particular instantiations of world-building, world-sharing, and world-designing.

In the diagram below, we have drawn together these different levels and dimensions of ludic serialities-in-use as we have conceptualized them in this article. This compound model, which articulates "levels of new playful serialities-in-use within hybrid trans-action ecologies," is our contribution to the study of seriality within digital culture; it is an attempt to broaden our understanding of how new playful serialities (also) emerge through the logics of transformation and transgression when franchises and participants playfully move across media, materials, and modalities.

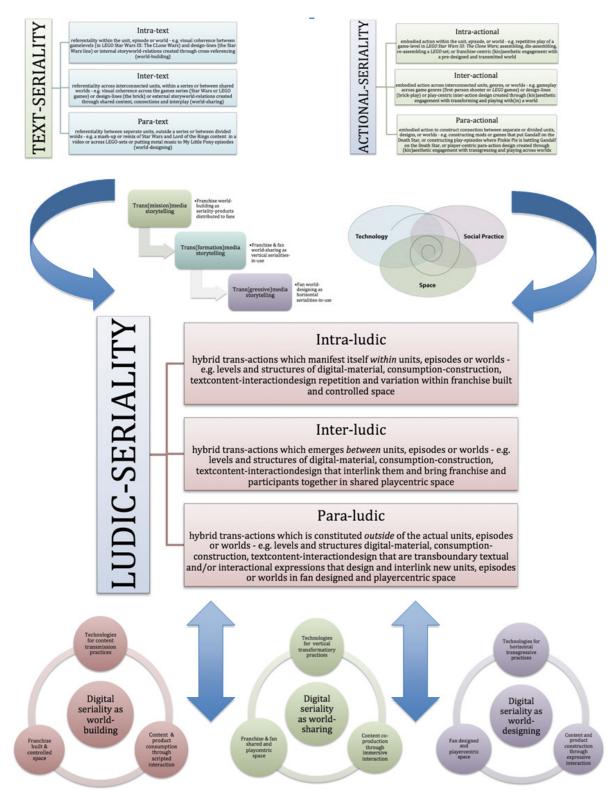


Figure 13: A compound model of levels of new playful serialities-in-use within hybrid trans-action ecologies. The central model of "ludic-seriality" is a refinement and further development of the model found in Denson and Jahn-Sudmann (2013, p. 11).

Importantly, the model is also meant to encompass the fact that even though a participant may initially have put Gandalf on the Death Star as a playfully transgressive act against the intended purpose of the franchise's designed universe,

that participant may well subsequently find that this act of transgression is appropriated by the franchise and incorporated into its product line. This might in fact explain the logic behind *The LEGO Movie* (2014), where worlds and franchises blend together in a way that makes previously segregated bricks, bits, and blockbuster universes disintegrate and melt into each other. By acknowledging and allowing for this reciprocal mode of new serialities, "divergent play practices can become facilitated play practices [...where] divergent uses of designed objects will often lead to the design of new consumer objects that have at the intersection of design and discourse, in the core, exactly those unintended uses" (Lauwaert 2009, pp. 18-19). Such is the inherent logic of franchises operating under the logic of playfully transgressive serialities.

The scholarly study of new playful serialities has just begun. We still need to put the compound model to real work by exploring actual serialities-in-use in depth. And we need, through such in-depth analyses of transformative and transgressive serialities-in-use, to deepen our comprehension of the underlying structures and interplay of the layers and levels within the compound model. The models and conceptualizations outlined here are primarily aimed at pointing towards possible futures and pathways for research in this the field. Thus, the perspective outlined in this article should be read as a supplementary dimension to those facets explored by Denson and Jahn-Sudmann in their "Digital Seriality: On the Serial Aesthetics and Practice of Digital Games" (2013)—with the understanding that further dimensions wait to be uncovered in an ongoing serial unfolding. So just as we have playfully placed our "transformative interdisciplinary Gandalf" on their "research Death Star," we can only hope that somewhere somehow somebody will playfully place their own "transformative Gandalf" on the "Death Star" we have developed here.

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Notes

¹ We are here adopting a broad notion of the "ludic," such as it is defined in both the Oxford Dictionaries and Merriam-Webster Encyclopedia – viz. "showing spontaneous and undirected playfulness" and "playful: ludic behavior."