3 Interfacing comics and games

A socio-affective multimodal approach

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Once deemed mere pastimes, digital games and comics have evolved into significant sources of narrative deepening, aesthetic experimentation, and revenue in this cultural moment of transmedial storytelling and franchises. Each has become the subject of increasing academic interest, inspiring an expanding body of literature and research methods. Digital game criticism broadly involves three trajectories: formalist approaches that examine the aesthetics and forms of games, social approaches that consider cultural and historical aspects of the medium, and approaches that integrate practice and design (Jagoda 2017). The reconsideration of comics and graphic novels as complex artifacts has motivated, for instance, investigations of their role as critical discourses regarding identities and politics (Bramlett 2012); cognition and visual literacy (Cohn 2013b); the genealogy of comics as ethical engagement with history, war, and trauma (Chute 2016); interactions with documentaries as carriers of narrative, performativity, and witnessing (Mickwitz 2016); and the medium's potential contributions to memory studies (Ahmed and Crucifix 2018). Against this backdrop, we find digital games characterized as hybrid forms, such as *Framed* (2014) and *XIII* (2003), which play with the structures and stylistic conventions of comics, creating distinct gameplay experiences indicative of changing media technologies and landscapes, as well as aesthetic experimentation practices.¹

Examining such “in-between” media creates a multilayered challenge. For games and comics as emergent media forms, analytical literature, approaches, and tools geared to dissect their materiality on a foundational basis are still emerging.² Attempts at critical inquiries appear to be commonly restricted by research foci and the vocabulary of particular disciplines, or by degrees of interdisciplinarity at the potential expense of maintaining analytical control. In this context, “hybridity” has become a default descriptor in research and design that is devoid of distinct elements. A notion transposed from biology to the humanities, social sciences, and media studies, hybridity concerns new forms of media and aesthetics resulting from interweaving media logics and technologies. For instance, films such as *The Matrix* trilogy (1999–2003) or comics adaptations like *Sin City* (2005) and *300* (2007) signal a change in global visual culture since the late 1990s. Shot on digital backlit sets, they

blend the medial logics of illustration and filmmaking, as well as architectural design, for a new visual aesthetics of continuity. This aesthetics explores juxtaposition and integration of varied visual media within the same frame in ways that are unlike live-action cinematography or computer-generated imagery (Manovich 2007). Approaching this phenomenon from a political science perspective, Andrew Chadwick (2017) examines hybridity as a constant in all contemporary media systems, where political communication and power are increasingly defined by the effective blending of older and newer media logics by sign users and organizations.

This sketch already suggests the conceptual and sociopolitical heft of hybridity. Yet it has shifted from a necessary heuristic into a banal assumption (Kraidy 2015). While isolating “permissible” design units may risk promoting a normative understanding of medium specificity that, in relatively radical forms, resembles purism, it remains constructive to gain a deeper understanding of what combinations of semiotic resources constitute hybridity, and from what aspects we can appropriately investigate such hybridization processes. Artifacts connecting games and comics involve and implicate three dimensions, namely aesthetic, ludic, and narrative. Expounding these dynamics requires a methodological intervention anchored in the empirical inquiry of multimodal complexities and meaning-making mechanisms of media. This chapter therefore first outlines the socio-semiotic theory of multimodality and processes of digital annotation, focused on delineating layers and combinations of semiotic resources for systematic analyses. Second, I examine three interactive audiovisual media to illustrate development foci in particular moments of the continuous convergence between games and comics. This provides the basis to discuss four facets of “movement” that I consider significant to examining such convergence: (1) on medium, (a) the animation of semiotic resources that transpose meaning-making functions across media; (b) the kinetic aspect of player enactment; (2) on sociocultural context, (c) a heightened focus on embodiment in interface design; and (d) shifts in societal discourses on the role of digital games and comics. Orienting this analysis toward the perspective of media ecology, my last section posits an interdisciplinary approach of intersecting affective sciences, multimodality, and media user experiments to account for patterns among meaning making, affects, and perception for a critical evaluation of what hybridity entails and of its relevance to the study of any emergent media.

Multimodality

Multimodality examines how diverse media artifacts, interactions, and performances combine expressive resources for communication, including visual, linguistic, sonic, haptic elements, and more. Research of the field aims at a foundational understanding of how an expanding range of phenomena convey meaning, enabling productive, empirical collaborations

across disciplines. These encompass inquiries in reception and perception studies, psychology, cognitive science, and growing work in empirical comics research (Dunst et al. 2018). In investigating (hybrid) media, it is necessary to identify the meaning-making mechanisms involved as they manifest in the combinations of semiotic resources and the ways of engagement within specific medial and technological constraints. Examining how adaptation and crossmedia experimentations transfect such mechanisms is integral to any meaningful discussion of hybridity. For this endeavor, data-driven approaches of multimodality introduce analytical rigor, with emphasis on artifact-guided interpretation, discourse, and the provision of the analytical concept “canvas” (Bateman et al. 2017a). To articulate complex intersemiotic relations, the concept of canvas, or multimodal slices, ensures that one selects and analyzes meaning-making units and aspects appropriate to particular research questions. Regarding comics, the canvas as a perceptual unit refers to any comics-resembling organizations, such as pages, double-page spreads, panels, and any panel-binding visual resources (see Figure 3.1). In this analysis, the selected canvases are the gameplay interface/screen and the medium-specified range of player enactment possibilities.

As detailed in a recent article on comics studies and digital humanities scholarship analyzing comics from the 1930s through the early 2010s (Bateman et al. 2017a), page layout and the organization of panels as well as visual materials fundamentally shape the interpretation processes of comics and graphic novels. Yet page composition receives inadequate analytical attention, even as psychological studies affirm that panel layouts notably affect reading paths (Cohn 2013a). A linguistics-inflected multimodal

Figure 3.1 Exploded view of *Batwoman Vol. 2: To Drown the World* (Williams and Blackman 2013, 54–55; see also Bateman et al. 2017a, 478).

approach examines organization patterns of meaning-making units. These foci motivate an open, multilevel, annotation scheme complementary to extant ones inclined toward geometric descriptions (which are limited for interpretive analyses) and further empirical, corpus-based inquiries. Additionally, this provides access to understanding the diachronic development of comics and graphic novels, a dimension likewise relevant in the present task of researching hybrid media forms.

The theory and methodologies of multimodality are increasingly taken up in media and communication studies, including inquiries into the rhetoric of digital games (Hawreliak 2018, 2019) and ludonarrative models for game analyses (Toh 2019), experimental literature (Gibbons 2012), and the narratology of comic art (Mikkonen 2017).³ From a disciplinary perspective, multimodal analyses have been applied to, among others, film (Bateman and Schmidt 2012), interactions (Norris 2004), movement in space (McMurtrie 2016), and digital platforms (Jewitt 2014). A framework considering multimodal discourse semantics will facilitate further research involving larger data sets, degrees of computer-assisted automatic analyses, and current convergences among media and neuroscience studies on the role of semiotic mode organization in guiding interpretations. Concerning the visual narratives of comics and graphic novels, there is a need to explore additional annotations for intra-panel and panel-linking operations, to articulate the discursive dimensions of meaning making involved. This chapter addresses this need.

Analyses and discussion

In this section, I explore three types of interactive audiovisual media: the digital graphic novel, gestural media, and the comics game. They are, respectively, *Metal Gear Solid 2: Bande Dessinée* (2008),⁴ *Breathing Room* (2014), and *Gorogoa* (2017). The aim is to identify commonalities and contrasts among these selected artifacts as indicators of shifting foci in the technological and aesthetic intersections between games and comics. *Metal Gear Solid 2: Bande Dessinée* forms part of a war-themed, Japanese stealth videogame franchise of the same title (1998–2015), globally recognized for subversive gameplay, narrative complexity, and a critical stance toward the military-entertainment complex (Noon and Dyer-Witheford 2010).⁵ Adapted from the second installment *Metal Gear Solid 2: Sons of Liberty* (2001), the digital graphic novel, along with the one based on its prequel *Metal Gear Solid* (1998), construes the first medial transposition of its kind: from games to graphic novels, then interactive and animated versions. *Breathing Room* was a gesture-driven comic exhibited at the 2014 Conference of the Modern Language Association, which focused on the 25-year history of experimental literary art. The most recent among the selected media, *Gorogoa*, is an independent digital game playable on PC, console, and mobile systems.

Through puzzle-solving, it explores the protagonist's childhood encounter with a mythical beast and the lifelong ramifications.

As a potential result of an unquestioned embrace of medial hybridity, few studies demonstrate in detail how alleged features, such as animation in comics, communicate and shape the medium experience. To address this research gap, transcription is a productive start. Figure 3.2 provides a snapshot of the process, applied to analyzing the *development* stage of *Metal Gear Solid 2: Bande Dessinée* (shots 12–19, totaled 50 seconds).⁶ Based on shots as the analytical units, the transcription sequentially tabulates the use of seven semiotic resources in relation to content, ranging from graphics, speech, intermedial features, to sound/music. In this narrative stage, we find the protagonist, Snake, infiltrate a US military tanker to capture photo evidence of a latest prototype Metal Gear Ray, an amphibious machine with nuclear capacity in secret development. Snake is, unknowingly, being photographed by the antagonist, Ocelot, and will be framed as the perpetrator for sinking the tanker.

The current analysis emphasizes *functional* motivations that anchor intermedial experimentations. I posit that using the panel as an analytical threshold contributes to examining animations of traditionally motionless features of comics, for it sheds light on two scales: content communicated in individual panels and content interpreted across panels. That is, the analysis examines intended interpretations shaped by the layout designs. The *Metal Gear Solid 2: Bande Dessinée* sequence stresses shifts in point of view. Three instances of *zoom-out* occur from shots 15–17, shifting from a contextualizing, level-angle shot stressing the enormity of Metal Gear, to two shots of increased shot sizes (close to medium) that denote Snake's perspective and then the fact that he is a subject of surveillance. The use of a *handheld* camera and the coupling of semiotic resources in shots 17 and 19 further support this discourse interpretation. With a frame-crossing speech bubble, characters' speech, changes in music, sound effect, and image brightness, the intermedial feature "insertion" in shot 19 communicates a layering of points of view via a visual overlay—a panel-within-panel presentation.

Across 12 chapters of the digital graphic novel, we find different combinations of intermedial features that modulate dramatization effects and pace (see Figure 3.3). Four intermedial features are identified, three of which concern the animation and interaction of panels; one involves the animation of onomatopoeia, i.e., word formations of sounds, such as "click" in imitation of camera shutters movements in photo-taking. Occurrences of these features reflect the narrative development of *Metal Gear Solid 2: Sons of Liberty*, widely deemed a significant postmodern videogame that critiques motifs of control, social engineering, artificial intelligence, and existentialism. Regularly presenting players with contradictory information, the gameplay experience is undergirded by uncertainty and unease. Thus, we find in the initial narrative stages limited instances of *panel flash* (n=3),

	#12-14: 0:04:07-0:04:09	#15: 0:04:13-0:04:18	#16: 0:04:19-0:04:37	#17: 0:04:38-0:04:41	#18: 0:04:42-0:04:48	#19: 0:04:49-0:04:57
Content	Parts of a gigantic machine (Metal Gear Ray) are shown, via 3 shots.	The Metal Gear Ray prototype is shown to be amid gathered marines.	Snake begins taking photos of the prototype, which is more advanced than the Rex model.	Snake is being observed by an unidentified character (Ocelot).	Ocelot takes photos of Snake.	Ocelot takes photos of Snake.
Graphics	N/A	Pop-up of speech bubble	Pop-up of speech bubble	The string-like tail of the speech bubble goes beyond the frame.	Onomatopoeia: KCLICK (blue, comics-ish font)	Onomatopoeia: KCLICK Adjustment of image clarity in inserted panel (POV)
Inter-Medial Features	N/A	N/A	N/A	N/A	Onomatopoeia	Insertion Onomatopoeia
Shot / Angle	Extreme close; Low	Extreme close; Level	Close; Above	Medium; Above	Medium; Low	Close; Above
Camera/work	Pan	Handheld; Zoom out	Zoom out	Zoom out (Fast)	Handheld	Dissolve (end)
Speech	N/A	Snake: "There it is. Metal Gear Ray..."	S: "Impressive. You should see how sleek this Metal Gear is, Otacon. It makes ol' Rexxy look like a dumpster with legs." O: "Yeah, yeah... Just make sure you remove the lens cap before shooting, okay?"	Ocelot: "Heh. Our boy is right on schedule."	Ocelot: "Smile for your adoring public, hero."	Ocelot: "After I'm done with you, they'll all think you're public enemy number one. "
Sound /Music	SFX: Air effects	SFX: Thunder	SFX: Camera shutters	Ominous music	SFX: Camera shutters	SFX: Impact

Figure 3.2 Transcription of *Metal Gear Solid 2: Bande Dessinée* (narrative stage: development).

Figure 3.3 Intermedial features in *Metal Gear Solid 2: Bande Dessinée* (x-axis: number of instances; y-axis: chapters).

which communicate action sequences through fast successions of panels. Occurring in all chapters and concentrated in chapters 2, 7, and 10, *insertion* ($n=122$) highlights changes in perspectives or focuses on significant objects, by injecting panel(s) onto existing frames. *Dynamic panels* kinetically interact with one another, occurring in spikes in chapters 5, 7, and 9. While *Metal Gear Solid 2: Bande Dessinée* is approximately 14 minutes longer than the animated version of its prequel, the use of dynamic panels has increased fourth-fold ($n=80$). I propose that this is in part a technological and commercial decision. *Metal Gear Solid 2: Bande Dessinée* was released simultaneously with *Metal Gear Solid 4: Guns of the Patriots* (2008) and the *Metal Gear Solid 4 Database* (2008). At that historical moment, videogames and console systems were heavily evaluated by audiovisual aesthetics and processing power. Dynamic panels transpose what is conveyed in the organization of panels with higher technical finesse, offering optimal indicators of the pursued technological progress.

The analysis above points to an ability to construe complex semiotic operations in what are generally considered motion comics. More importantly, it indicates intentional animation, motivating particular forms of reading that align with the layout and thus designers' intended interpretations. In this regard, ludicity further complicates meaning communication

Figure 3.4 Dynamic layouts and time-lapse effects by dialing motion in *Breathing Room* © Erik Loyer.

and organization mechanisms through the procedural and interactive elements entailed in player action. *Framed* (2014) is, for instance, among the pioneering comics-games where panel manipulation shifts the narrative and gameplay outcomes.

My discussion turns to two media as illustrative of experimentations that play with the said principle with distinct aesthetic and immersive experiences. The first is *Breathing Room*. A prototype developed for the Leap Motion controller, *Breathing Room* intersects players' arm and hand gestures, audiovisual aesthetics, and algorithms to generate dynamic layouts, captions, and distinct experiences (see Figure 3.4). "Breathing," in the literal sense of the narrative, is the sound of breath triggered by player motion and accompanies changing visuals of a tree and the landscape. This interactive multimedia experience shows the possibility of using contemporary technologies for artistic and literary expressions. Experiencing *Breathing Room* involves an interplay of semiotic, procedural, and embodied elements, which, as we shall see below, is an aspect increasingly emphasized in the digital present.

Lastly, I turn to *Gorogoa*. The 2017 puzzle game originates from an attempted interactive graphic novel, from which the designer, Jason Roberts, experimented with concepts of comics panels, frames, and layout structure. Like *Framed*, *Gorogoa* proceeds from the manipulation of frames. Players explore, combine, and overlay frames within a two-by-two structure, thereby opening up subsequent scenes and puzzles of the narrative (see Figure 3.5). Yet its jigsaw puzzle mechanic and reliance on visual matching introduces an analogue quality to its narrative revelation and gameplay experience. A likewise productive metaphor in understanding the gameplay is, in my view, forming stacks and combinations of cards. By amplifying a specific nostalgic aura and aesthetics, *Gorogoa*'s puzzle-solving mechanics "stretch" the gameplay experience between a two-dimensional interface and a three-dimensional game world, crisscrossing between periods of the protagonist's lifetime (the narrative dimension), the audiovisual ensemble at localized gameplay moments and a creative process of

Figure 3.5 Capture from *Gorogoa* (2017).

producing hand-drawn graphics for over five years (the aesthetic dimension), and different forms of frame manipulation to realize gameplay (the ludic dimension).

With *Breathing Room* and *Gorogoa*, this chapter discusses ways of experimenting with frames and panels observed in recent multimodal artifacts that are technologically refined and gradually diverge from page-based comics conventions. Rather than an uncritical celebration of technology, my provocation is to re-contextualize our perception of digital games and gamified comics as interfaces. To evaluate the analytical possibilities of this perspective, we should take into account trajectories in motion in our current mediasphere.

Tracing trajectories

Motivating the diverse phenomena of the mediasphere are practices of transmedial storytelling and intermediality, embedded in wider sociocultural contexts where technological, economic, and social discourse factors shape media developments. Appreciating the multivalence of the comics and games nexus needs a joined understanding of the micro- and macro-level effects of such practices. The discussion thus far identifies how movement

becomes manifest on the micro level. When content is transposed across media, shifts in the main meaning-making mechanisms change the (aesthetic) delivery and experiences of narratives. For instance, *Metal Gear Solid 2: Bande Dessinée* demonstrates how the animation of panels realizes inference patterns informed by the layout of a comics page. The forms of movement in *Breathing Room* and *Gorogoa* indicate an arising trajectory in the current media ecology, a fuller understanding of which requires a contextualizing perspective. I posit that such perspective specifically concerns notions of digital interfaces, where the assorted media and experiences within the comics and games nexus bear relevance.

Digitally mediated experiences and their development are anchored by two logics: immediacy and hypermediacy (Bolter and Grusin 1999). The former concerns transparency, the illusion that the user interacts with a technology, medium, and its content directly without mediation. This often takes the form of close reflection of the user's visual experience, as pursued in virtual reality interfaces. Second, hypermediacy refers to the use of multiple resources, such as linguistic texts, images, and videos, to enable user interaction. In other words, interfaces are intermediary, rhythmic, and multimodal, involving both algorithmic and interactive processes. Recent accounts further reveal inherent complexities in interfaces as zones of effects and processes (Galloway 2012) and organizations of "envelopes" that regulate users' perception, attention, and media use (Ash 2015), diverging from the industrial focus on instrumentality. To counter the risk of muddling all digital media as interfaces, the present approach emphasizes systematic dissection of analytical units, aspects, and their layered dynamics. These include, for example, gameplay mechanics, narrative, and representations. I provide a more detailed conceptualization of digital games as interfaces in earlier work (Ng 2017), which considers how digital gameplay creates edges, where traversals among proceduralism and semiotics, aesthetics and narratives, players and machines occur.

Both *Breathing Room* and *Gorogoa* emerge at a moment when the proliferation of digital media and interfaces capitalizes on (a) technologically-expanded possibilities for aesthetic experimentation and interaction; (b) an increasing overlap between the real and virtual worlds; and (c) a heightened focus on embodiment, observed across designs, visions, and discourses of human-technology interactions. Exemplars include electronic literature (E-lit) and interfaces for virtual and augmented reality experiences. E-lit, as texts of digital creation and consumption, harnesses fundamental properties of digital environments, such as their procedural and navigable aspects (Murray 2012). In so doing, they realize a multimodal complexity illustrating the distributed subjectivities characteristic of experiences in the digital present, involving bodies, machines, and networks, to name a few (Hayles 2008). Gaming devices and virtual reality headsets, such as Meta AR headsets, similarly facilitate experiences that are interactive, intuitive, and attuned to users' embodied actions (Gribetz 2016). Within such emerging technologies

and contexts, research into digital games and comics necessitates a rigorous, empirical approach that identifies the meaning-making mechanisms as they manifest in the materialities involved. This vitally contributes to the refinement of theories and methods for understanding and problematizing important concepts revolving around media, including hybridity and embodiment, as this chapter attempts to illustrate. Next, I summarize an affect-driven approach in contribution to further research on comics and digital games.

Envisioning an affective multimodal approach

At the next frontier of conducting empirical multimodal research on comics and digital games, I contend that consolidating knowledge on how the materiality of media incubates both the use of semiotic modes *and* medium users' affects is crucial. Where meaning is bound by contexts and configurations of semiotic resources, it inheres an affective aspect. Affect and theories of affect have challenged the longstanding notion of emotions as universal categories, redirecting our focus to fluctuating, moment-to-moment bodily intensities that shape thought and behaviors, yet often beyond human observation (Massumi 2002; Stewart 2007). While recent work discusses intersections among digital games and emotions (Tettegah and Huang 2016), with inquiries into comics, cognition, and visual literacy, studies that aim to empirically expound dynamics among affect, meaning, and communicative logics of media are only nascent. To comprehend connections among the medial, semiotic, and affective aspects of meaning in experiencing shifting media forms, I propose a mixed-method research methodology that combines qualitative and quantitative data through "body-text assemblages." This involves cross-examining findings from multimodal analyses, interviews with medium users, and experiments with affect-sensing equipment, which registers users' affective states through, for instance, skin conductance and facial expressions. This introduces an analytical vector that guides us to appreciate the varied meaning-making strategies and interpretive possibilities of particular media, rather than medium-specific "aesthetics," which implies unwarranted oppositions among art, mass culture, and what is deemed valuable or inconsequential (Manovich 2001). The aim is to acquire an empirical understanding of the affective impact of comics and digital games as complex multimodal artifacts and experiences by identifying the relevant affect-semiotic-procedural patterns. This knowledge expectedly informs and enhances the design of future medial renditions resulting from the comics/games cross-pollination.

Conclusion

In this chapter, I have discussed socio-semiotic multimodality with an empirical orientation as a productive methodology to examine contemporary

media that interconnect digital games and comics. Through exploring a digital graphic novel, a comic-game, and gestural literary media, this chapter has presented the analytical concept of “canvas” and digital annotation as a first step in conducting multimodal analysis, which aims to secure a foundation for studying the materiality of media. I propose to re-conceptualize digital games and gamified comics as interfaces that emerge from changes in medial complexity, designs of digital interfaces, and shifting social discourses on human-technology interactions. This conceptualization, combined with a fine-grained understanding of how meaning unfolds across semiotic modes and mechanics, can contribute to addressing several significant questions about design, media studies, and projections on how interactions between games and comics may foster new forms of media and experiences.

Among such questions, expounding just what “hybridity” means beyond a buzzword associated with the gamification of media is important. Not only does this affect the development of aesthetic and commercial practices of particular media, it gestures toward queries in the broader media ecology, the historical development of specific technologies, and social contexts.⁷ One issue concerns increasing overlaps between “immaterial interfaces” and the real world, as evidenced by how digital games and their meaning-making logic via mechanics and interfaces have turned from metaphorical to instrumental social tools (Trammell and Sinnreich 2014). For instance, research has shown how digital interfaces shape economic subjectivity and contemporary indebtedness by modulating user affective states at thresholds of application processes for high-cost short-term credit loans (Ash et al. 2018). Building critical literacies about the sociopolitical impact of digital media and interfaces, in addition to their aesthetic influences on existent audiovisual narratives, is therefore vital. For such endeavors, various parties involved (including researchers, educators, designers, and medium users) will benefit from ways of re-framing that expand our understanding of how ramifications of digital games and interfaces extend into the sociopolitical realms.

For this purpose, this chapter has centered on the question of how to conceptualize and research forms of medial experimentation that arise from the comics and games nexus. Oriented to socio-semiotic multimodality for such re-framing, I illustrate transcription as a means to capture communicative dynamics among semiotic resources on an intra-panel level and cross-panel dynamics realized by layouts and animation. Knowledge of such dynamics fundamentally informs our grasp of the inclusion of ludic strategies and their diversifying effects on aesthetics, interpretation, experiences, and design. Research on digital games, comics, and the in-between artifacts, as explored in the present chapter, can benefit from linguistics-inflected approaches. Such approaches aim to render complex multimodal data and visual compositions analyzable across scales and thus make them open to further empirical validation. The socio-affective multimodal approach I have described provides one such example, indicating opportunities for

mixed-method research initiatives that examine the communicative and affective effects of digital media through qualitative and quantitative data.

At the Game Developers Conference, Roberts (2018) articulated several aspects of the concept and entity of the “frame,” which guides his design process of *Gorogoa*. For him, a frame is at once poignant, affectionate, a source of tension, and a curation practice. These evocative descriptions resonate with the analytical vocabulary and orientation of multimodality. In its socio-semiotic dimension, the field likewise considers aspects of meaning making, such as materiality, salience, framing, and semiotic labor, in relation to design, contexts, and power. This indicates an overlap in subjects of interest, and more importantly, complementarities among art, design, technology, and research. To harness such complementarities for future designs and experimentations, a just understanding of how media mean matters, with building the appropriate methodologies and systematic research practices as important aspects. Aligned with the underlying focus on empirical work of this chapter, it is crucial to emphasize that in any media encounters there remain elements that we are still pursuing to capture, articulate, and empirically examine. A critically playful attitude thus similarly contributes to the experience and research of such evolving media as digital games and comics. Akin to how ludic strategies mobilize interacting dynamics between aesthetic and narrative strategies, incorporating ludicity in research invites the necessary openness toward engaging with how media function and what they may develop to be. Instead of seeking fixed answers, this openness revolves around navigating what is ambiguous and yet to be known. At once critical and playful in contrast with the overused descriptor “hybridity,” this curiosity potentially offers more analytical guidance and possibilities for inquiries into emerging forms of visual narratives, digital games, and artifacts. It opens up further questions about meaning, affect, and how trajectories of digital media and interfaces increasingly affect our ways of being in the mediatized historical present.

Notes

- 1 A recurrent motif on aesthetic experimentation concerns abstraction and nostalgia. The cell-shading visuality of *XIII* (2003), for instance, contributes to a visual experience distinct from current, digitally produced comics.
- 2 Materiality entails a historical dimension: Forms of meaning making (from drawing, language, and music to dance) arise from use, interpretations, designs, and conventions within particular communities of sign makers. Likewise, in transmedial artifacts and performances, historical factors extend across production and consumption. For example, the transmedia franchise based on *The LEGO Movie* (2014) adopts a cartoon aesthetic reminiscent of television series in the 1960s. Its divergence from the aesthetics of recent comic books or games on Batman (a character in the film series) is, within reason, seen as a commercial or artistic decision motivated by interacting contextual factors, for which historical components may play a role.

- 3 While the application of multimodality to game studies signals the analytical strength of the field, problematic notions such as the “procedural mode” and characterizing interactivity as a semiotic mode have surfaced (Chew and Mitchell 2019; Hawreliak 2018, 2019). These notions rightly observe the communicative capacities and effects of gameplay mechanics and interactivity, but they muddle a number of fundamental concepts, specifically semiotic modes and affordances. For detailed and accurate conceptual distinctions, see Bateman et al. 2017b.
- 4 Later re-released as part of *Metal Gear Solid: The Legacy Collection* (2013).
- 5 The progenitor title *Metal Gear* was released solely in Japan in 1987. The franchise has since developed to include 12 games, graphic novels (and their digital adaptations), novels, various merchandise, and a film adaptation in production.
- 6 My earlier work (Ng 2017, chapter 2) details both digital and manual multimodal annotation of digital games, with selected sequences and split screens from the videogame *Metal Gear Solid 4: Guns of the Patriots* (2008) as examples. For details on the software-assisted annotation of dynamic audiovisual media, as well as an overview of linguistics-inspired methods and tools, see Bateman et al. 2017b, chapter 5.
- 7 Hybridity in media is a function of technological development; it carries a historical dimension. An example would be the development of CD-ROMs, which enabled the integration of full-motion video into computer games. Constructive discussions of relations among medial logics and progress in technology and science can be found in, for example, foundational readings by Manovich (2001) and Murray (1998), as well as Thimm et al. (2017) on the relationship among media technologies, institutions, power, and social change.

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