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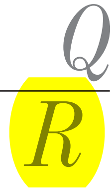

Comics-based research: The affordances of comics for research across disciplines

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Paul J Kuttner

University of Utah, USA

Marcus B Weaver-Hightower
University of North Dakota, USA

Nick Sousanis
San Francisco State University, USA

Abstract
Comics have long been a focus of scholarly inquiry. In recent years, this interest has taken a methodological turn, with scholars integrating comics creation into the research process itself. In this article, the authors begin to define and document this emerging, interdisciplinary field of methodological practice. They lay out key affordances that comics offers researchers across the disciplines, arguing that certain characteristics—multimodality, blending of sequential and simultaneous communication, emphasis on creator voice—afford powerful tools for inquiry. The authors finish by offering some questions and challenges for the field as it matures.

Keywords
Arts-based research, visual research, comic books, comics-based research, affordances, multimodality

Since they first emerged as a major cultural force in the 1930s, comics have fascinated scholars. While some railed against their supposed deleterious effects on children's morality (e.g., Wertham, 1954), others were quick to see their potential for communication and education. In 1944, the *Journal of Educational Sociology* published a special issue devoted entirely to comics. In one article, professor of education W. W. D. Sones (1944) stated that:

Corresponding author:
Paul J Kuttner, Ed.D., University of Utah, 1060 S 900 W, Salt Lake City, UT 84104, USA.
Email: paul.kuttner@partners.utah.edu

> Since 1935, the birth year of the comic magazine. . .Comics have evoked more than a hundred critical articles in education and nonprofessional periodicals. Most of these have dealt with the sociology of the comics; that is, problems of ethics or problems of taste under the guise of ethics. But in the last three years there has appeared an increasing volume of literature dealing with the relations of the comics to educational method. (p. 232)

In that same issue, Gruenberg (1944) wrote that using comics for education and communication had already moved beyond schoolchildren. The Congress of Industrial Organizations, for example, was replacing some of its labor organizing pamphlets with comics. 'There is hardly a subject that does not lend itself to presentation through this medium' (p. 213).

Fast-forward three quarters of a century, we are in the midst of a resurgence of scholarly interest in comics. A substantial body of research has built up around comics' semiotic structure (e.g., Cohn, 2013; McCloud, 1993), cultural significance (e.g., Bongco, 2000; Wright, 2001), and effectiveness in promoting literacy (e.g., Monnin, 2010; Syma and Weiner, 2013). We also see an increasing amount of research being carried out *with* comics, that is, creating comics as an integral part of the research process. Researchers in numerous disciplines and fields are using comics to enhance their scholarly inquiry: documenting and eliciting data (e.g., Galman, 2009; Ramos, 2004), scaffolding analysis (e.g., Flowers, 2017; Jones and Woglom, 2013a), and disseminating findings to academic and nonacademic audiences (e.g., Sousanis, 2015; Getz and Clarke, 2016). These researchers are coming together with increasing frequency through conferences, symposia, special issues, book series, and other venues, forming the foundation for an emerging field of practice that we call *comics-based research* (CBR).

This article is the first to look across disciplines and methodologies to begin defining and documenting this emerging field of practice. We start off defining what we mean by CBR and reviewing the field's growth. Next, we look at why and how comics are being used in scholarship by exploring what the comics form 'affords' (Chemero, 2003) researchers across the disciplines. We argue that certain characteristics of comics—its highly multimodal nature, its combination of sequence and simultaneity, its emphasis on creator style—offer powerful tools for scholarly inquiry. CBR shares strengths with other visual, narrative, and arts-based research methods. For example, it shares other visual methods' facility with interrogating our increasingly image-based modern world (Pink, 2006); narrative methods' ability to tap into human processes of (co)creating meeting (Lawrence-Lightfoot and Davis, 1997); and the power of arts-based methods to engage people's emotion and empathy (Leavy, 2019), just to name a few. At the same time, the comics form offers a unique set of cognitive frameworks through which researchers and their audiences can engage with research. We close our article by outlining some of the key issues facing this field of practice as it continues to grow and mature.[1]

Defining comics-based research

We use *comics-based research* (CBR) to refer to research that integrates the comics form into one or more steps of the inquiry process, as outlined in detail below.[2] CBR is neither a research methodology (a broad conceptualization of how to approach

research) nor a method (a specific practice conducted during research). Rather, it is an emerging *field of practice* (Salem et al., 1996) that attracts researchers with diverse disciplinary and epistemological commitments. These researchers may go about research in quite different ways, but they share an interest in the unique semiotic, narrative, communicative, and educative properties of the comics form for their participants, their audiences, and themselves.

Comics can be defined in multiple ways. On the one hand, comics can be defined in an inclusive manner, delineating only the most basic components. Will Eisner (1985) famously defined comics as 'sequential art', or 'the arrangement of pictures or images and words to narrate a story or dramatize an idea' (p. 5). Scott McCloud (1993) built on this definition, positing that 'comics are juxtaposed pictorial and other images in a deliberate sequence, intended to convey information and/or produce an aesthetic response in the viewer' (p. 9). These and other expansive definitions (e.g., Abel and Madden, 2008) link comics with long traditions of visual storytelling and open the door what comics *could be*. At the same time, they do little to help us understand the world of comics in all its complexity. As Jacobs (2013) puts it, 'As cultural artifacts, sites of literacy, means of communication, discursive events and practices, sites of imaginative interplay, and tools for literacy sponsorship, comics are far more than simply "sequential art"' (p. 5).

A complementary way in which comics can be defined is through a sociological lens. Comics developed in particular cultural and historical contexts, and this has left its mark on the form. The term 'comics' reflects this cultural specificity, harkening back to the humorous one-panel cartoons that helped spawn the comics industry we know today (Harvey, 2009). Comics came of age as a popular form using cheap reproduction techniques, which influenced many of the conventions associated with comics, such as the use of cartooning for visual representation. Over time comics have developed particular languages and a basic set of semiotic resources: speech bubbles, thought bubbles, text boxes, and frames around images with 'gutters' in between, just to name a few (McCloud, 1993; Varnum and Gibbons, 2001; Walker, 2000). Not all comics use all of these semiotic resources, but if too many are taken away it may not be read as a comic. Comics also carry cultural baggage with them. In North America, for example, this baggage includes the idea that comics are 'for kids'; a history of racial, ethnic, and gender stereotyping; and the dominance of the superhero genre (Singer, 2002; Van Lente, 2012). Despite this baggage, we prefer the term 'comics' over more recently crafted alternatives because it is more recognizable than some terms (like sequential art), does not confuse form with length or packaging as other terms do (like graphic novels) and avoids a falsely clear distinction between 'highbrow' and 'lowbrow' comics (Wolk, 2007).

Our focus here is not on defining what comics are, but rather on exploring the resources and opportunities that the form *affords* researchers. The concept of 'affordances' comes from ecological psychology, where it is used to understand interactions between animals and their environments. As originally coined by James Gibson (1979), 'The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill' (p. 127). Affordances are not inherent to the environment; rather, they are relational. They come into being when a particular characteristic or

feature of the environment (e.g., a plant that is edible) meets an animal that can both act on this feature (e.g., that can digest the plant) and that can perceive its utility (e.g., that sees the plant as something it can eat) (Chemero, 2003). Following other methodologists like Jordan et al. (2009), we find this concept of affordances helpful in delineating the potential efficacy of research approaches.

An emerging field of practice

When we first began exploring CBR in our individual scholarship, most examples of published CBR came from the realm of graphic history (Buhle, 2007). These included first-person accounts and oral histories (Okubo, 1946; Satrapi, 2007; Spiegelman, 1986), as well as comics based on more traditional archival research (Buhle and Schulman, 2005) and adaptations of existing historical texts (Zinn et al., 2008). There were also a few available examples from the field of anthropology, connected to the long but marginalized tradition of ethnographic drawing (Afonso and Ramos, 2004; Causey, 2016; Crowther, 1990; Newman, 1998).

Over the last dozen years, however, there has been a significant increase in scholars using comics as a part of their craft. Many of these researchers work in the discipline of anthropology, creating comics as part of a phenomenological exploration of social and cultural life (Atkins, n.d.; Bartoszko et al., 2011; Boudreault-Fournier, 2015; Hajská et al., 2010; Hamdy et al., 2017; Wadle, 2012). A thriving community of comics-based researchers can be found in health fields, working at the intersection of medicine and personal narrative under the label *graphic medicine* (Al-Jawad, 2015; Czerwiec et al., 2015; Green and Rieck, 2013). History continues to be a highly productive arena of CBR, breathing new life into our understanding of everything from individual biographies to the broad sweep of national change (Lewis et al., 2013; Mizuki and Davisson, 2013). The field of education has produced an array of comics-based scholars with roots in diverse disciplines (Ayers and Alexander-Tanner, 2010; Flowers, 2017; Galman, 2009; Jones and Woglom, 2013a, 2013b; Sousanis, 2015;Wallner, 2017; Weaver-Hightower, 2017). Other comics-based researchers are scattered across the academic landscape, including humanities scholars (Dolan, 2017; Helms, 2017); 'graphic social science' groups (Carrigan, 2017); textbooks in fields as diverse as management (Short et al., 2010) and rhetoric (Losh et al., 2014); and scholars creating 'data comics' in the physical and environmental sciences (Bach et al., 2018).

Many of these scholars came to CBR in relative isolation, but a field of practice has begun to coalesce around them. Some researchers have published about their CBR methodologies (Flowers, 2017; Jones and Woglom, 2013a; Kuttner et al., 2017; Laurier, 2014; Weaver-Hightower, 2013; Williams, 2012). The organization Graphic Medicine has been running conferences discussing topics at the intersection of health care and graphic storytelling since 2010, and symposia on CBR are put on each year at the annual meeting of the American Educational Research Association. University of Toronto Press and Penn State University Press have launched book series on graphic ethnography (https://utorontopress.com/ca/books/by-series/ethnographic) and graphic medicine (http://www.psupress.org/books/series/book_SeriesGM.html), respectively. *Digital Humanities Quarterly* published a special issue on 'comics as scholarship'

(Whitson and Salter, 2015) and, more recently, the online journal *Sequentials* (sequentialsjournal.net) was launched as a venue for scholarly work presented in comics form.

Comics-based researchers have used comics to collect and elicit data, to analyze data, and to disseminate findings to various audiences. First, researchers have used comic art as part of the data generation process. Anthropologists Crowther (1990) and Ramos (2004), and ethnographer Flowers (2017), for instance, draw comics as field-notes, capturing visual, sensory, and embodied elements of their fieldwork. According to Causey (2016), drawing during fieldwork can help anthropologists enhance their visual engagement with the world and their ability to 'see' what is around them. Ramos (2004) suggests that sketching is also 'an important and creative tool for interacting with and relating to human beings. . .being a source of interaction that helps to humanize me in other people's eyes' (p. 149). Williams (2012) and Afonso and Ramos (2004) sketch during and after qualitative interviews. Sketches can be presented to interviewees, sparking deeper and more thorough conversations (Afonso and Ramos, 2004; Wadle, 2012).

Another way in which researchers use comics to generate data is through participant-created or co-created comics (Flowers, 2017). Galman (2009), in her study of identity among pre-service teachers, asked participants to create 'graphic novels' based on the narratives they shared in the interviews, either on their own or in conjunction with the researcher. Galman writes:

> The strengths of the graphic novel as a research tool lie in its richly textured snapshot of participant experience, its possibilities for collaboration and its acknowledgement that participant stories go beyond the margins of the text and that stories themselves are more than the single dimension of monologue can adequately reproduce. (p. 213)

These methods have similarities with other efforts to use drawing as a form of data elicitation (Theron, 2011).

Data in comics form can be analyzed similarly to other forms of visual data like photographs (Ball and Smith, 1992; Pink, 2006). Additionally, the very act of creating comics can be a process of analysis. Sketching, drawing, redrawing, and inking are processes of refinement and choice. As Jones and Woglom (2013a) put it,

> Much like the standard writing process, cartooning is a means of refining and discovering what you want to express through the process of drafting and editing a text. Our own understanding of knowledge, being, and even Truth emerge through the act of making. (p. 184)

Analyzing through comics can draw the researcher's attention to aspects of a phenomenon that are more visual and more difficult to capture in words, can inspire unexpected insights, and can force the researcher to slow down and notice (Causey, 2016). Flowers (2017), for example, has written about her 'reflective and productive form of multimodal analysis' (p. 37), which included expanding on field notes through iterative drawing and writing exercises, transcribing audio recordings in a blend of text, drawings, and comics; and translating participants' written work into comics.

Finally, the comics form has been an effective way to disseminate research. Williams (2012), studying the experiences of imprisoned women, uses comics to

portray a rich, multisensory experience and research context. Jones and Woglom (2013a) use comics to capture the physical, embodied aspects of feminist pedagogy, and to represent multiple perspectives. Sousanis (2015) communicates big ideas through symbol and metaphor, exploiting the multimodality of comics to break down 'flat', simplistic views of knowledge. Getz and Clarke (2016) combine textual and visual data to capture the broad scope of Ghanaian history and the up-close experiences of individuals. Laurier (2014) uses comics to present visual and aural data from video-based research through 'graphic transcripts'. In other words, CBR practitioners across disciplines draw on the unique affordances of comics to address diverse representational needs.

By disseminating research as comics, many CBR practitioners seek to communicate findings in a more accessible manner. Research suggests that presenting scientific information through comics can increase interest and motivation among readers while communicating an equal amount of information as text (Farinella, 2018; Lin et al., 2015), and that comics can be effective teaching tools in K–12 classrooms, higher education, business, the military, and other learning spaces (Short et al., 2010; Syma and Weiner, 2013; Tilley et al. 2017). As Western comics court a wider, more diverse audience (Andrews, 2016), and as Japanese manga continues its global spread (Jozuka, 2019), CBR practitioners can potentially reach readers beyond the often-impermeable walls of the academy.

Affordances of comics for research

The growth of CBR does not come from a sense of novelty or fashion. Rather, comics offer cognitive and representational features that make it uniquely effective for research. In this section, we lay out three of these key features of the comics medium—multimodality, sequence/simultaneity, and style and voice—exploring what these features afford researchers working in different methodological and epistemological domains. This is not meant to be a comprehensive survey of affordances; many others exist. These three, however, have been shown to be particularly powerful tools in the CBR toolbox.

Multimodality

Comics are highly, and very consciously, multimodal (Jacobs, 2013; Kress and van Leeuwen, 2001; Lemke, 2002), with the primary semiotic modes being *image* and *writing*. While some comics eschew one or the other, the vast majority combine both visuals and text. Images and words in comics not only mean different things, they also 'mean differently' (Kress, 2004). They offer distinct meaning-making tools, what the New London Group (1996) refers to as *visual* meaning and *linguistic* meaning. Written text dominates academic production, but scholars in fields like visual anthropology and visual sociology have long argued that images communicate aspects of research that words cannot (and vice versa), and that images are particularly important in our increasingly visual society (Bateson and Mead, 1942; Collier, 1967; Curry and Clark, 1977; Pink, 2006). With comics, scholars are able to move quickly between the modes of writing and images as it suits their needs.

Comics really shine, though, in the interaction between words and pictures. Pictures and words in comics function interdependently (Harvey, 1979). As Lewis (2001) writes of children's books, the two modes 'interanimate' each other. McCloud (1993) compares them to 'partners in a dance' who 'take turns leading' and supporting one another's strengths (p. 156). He argues that the number of word–image relationships in comics are 'virtually unlimited' (p. 152), including where words lead and pictures follow, where pictures lead and words follow, where the two reinforce one another, where they parallel one another, and where they are fully interdependent. The comics reader moves back and forth between seeing and reading in a cyclical process, with text informing image and image informing text.

It is in this complex arena of word–picture interaction—what Hatfield (2005) calls 'code vs. code'—that we find powerful affordances for researchers. This relationship affords opportunities for simultaneously presenting data and analysis, theory and practice, the concrete and the subjective, or the official story and the counterstory. Researchers can combine mutually reinforcing data from different modes, effectively using the panels as spaces of data triangulation (Oliver-Hoyo and Allen, 2006). Or, by creating purposeful tension between the images and words, researchers can highlight ambiguity, uncertainty, and multiple perspectives—aspects that are often underplayed in the seeming certainty of academic prose. For example, in his biography of anti-slavery rebellion leader Nat Turner, Kyle Baker (2008) prints text from Turner's pre-trial confession (as written by Thomas Gray) alongside images that draw from Turner's story and from research into the lives and experiences of enslaved Africans at the time. The images sometimes amplify, sometimes expand on, and sometimes challenge the written narrative, creating an opening for new interpretations and critical analysis (The Free Library, 2014).

In addition to visual and linguistic meaning, comics creators can explore modes such as *gesture, spatial relationships*, and even, in a partial way, modalities like *smell* and *sound*. This last part is achieved through the use of visual conventions like *emanata*, a term—coined in a tongue-in-cheek manner by Beetle Bailey creator Mort Walker (2000)—to describe shorthand symbols that show action or emotion in a comic (e.g., wavy stink lines) (Abel and Madden, 2008: 8). But perhaps the most prominent of these conventions is the word balloon, which Eisner (1985) described as a 'desperation device' meant to 'capture and make visible an ethereal element: sound' (p. 26). Not only does the presence of a word balloon signal that there is sound, also by changing how balloons and text within them are drawn (e.g., fonts, font sizes, balloon shape) readers can get a sense of the quality of those sounds including volume, tone, and emotion (Jacobs, 2013). In this way, words are not treated as a separate mode but, rather, are often 'drawn' as an integral part of the image.

Comics, then, give researchers access to what the New London Group (1996) calls *multimodal design*. This complex communication system affords opportunities for researchers to more fully present the 'multimodal ensembles' that individuals orchestrate in real-life interactions (Bezemer and Jewitt, 2010), and the ways in which people make meaning of their lives through multiple modes of communication (Flowers, 2017). For example, Williams (2012), in her work with women in prison, explains how 'this way of presenting experiences also allows me to succinctly share the sounds, sights, and even

smells of prison, as well as the conversations and body language' (p. 6). In her 'Basic Anatomy of a Comic' (Figure 1), Williams (2012) breaks down how a panel can coherently present multiple forms of data and analysis: the words spoken, the thoughts of the researcher at the time, the embodied aspects of participants, the overarching narrative, and so on. In this way, comics affords researchers a strong platform for 'thick description' (Geertz, 1970), a chance to simultaneously explore the surface interactions and the multiple layers of meaning behind them.

Sequence and simultaneity

As Eisner (1985) recognized in his original definition of comics—sequential art—the concept of sequence is an important aspect of the form. Like the written word, comics panels are generally meant to be 'read' in order, with each panel leading to the next. The reader, in a gestalt process, mentally connects the images together, giving it a sense of continuity (McCloud, 1993). Unless given other information, we read a panel as proceeding from the one before in a linear flow of time, and we make causal links between panels. This active engagement of the reader relies on conventions of the genre and people's tendency to read narratives into even loosely connected images (Abbot, 1986).

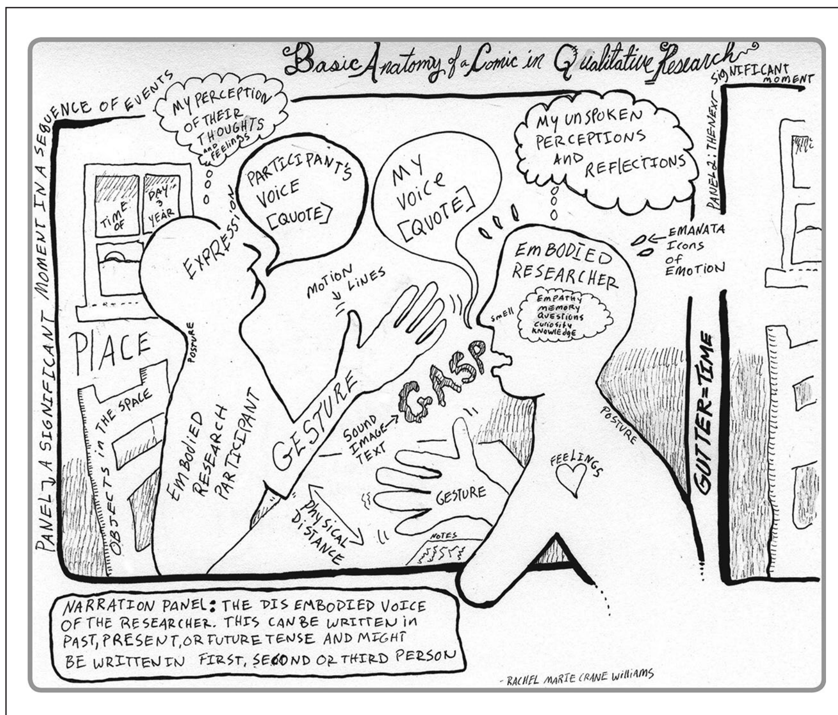

Figure 1. Basic Anatomy of a Comic by Rachel Marie-Crane Williams (2012).

The sequential nature of comics makes it ideal for presenting *narratives* and *processes*. Narrative has been at the heart of comics from the beginning. In fact, some argue that narrative is definitional to the form (Abbott, 1986; Abel and Madden, 2008). While there are plenty of non-narrative comics, they are the exception rather than the rule in a format dominated by popular storytelling. It is not surprising, then, that CBR has grown most rapidly in fields where constructing narratives is already a core practice, such as history and anthropology. Even when the findings presented are not narrative in nature, CBR practitioners often build a narrative frame around them; for example, Bartoszko et al. (2011) used findings from a survey of technology and space use at Oslo University to create a series of short comics narratives. Many nonfiction comics use a narrator character—frequently the author herself or himself—as a sort of tour guide or storyteller, tying concepts together into a narrative (e.g., Ayers and Alexander-Tanner, 2010; Gladstone and Neufeld, 2011).

Indeed, comics afford researchers access to a plethora of traditional narrative techniques. Books on comics creation are filled with ways to establish setting, characters, visual themes, narration, and plot (e.g., Abel and Madden, 2008; McCloud, 2006). Perhaps most intriguing, creators can use the sequential nature of comics to manipulate time and pacing. Panels can capture a single moment, the time it takes to read a speech bubble, or combine multiple events into a single panel (Hatfield, 2005). Panel-to-panel closure can jump from second to second or span centuries. And, as Williams (2012) explains, comics afford researchers a way to communicate the pauses and silences of real-life conversations (often through repeated panels or dialogue-free panels), which can be difficult to communicate in text alone.

In addition to narratives, creators often use comics to communicate processes, be they mechanical, scientific, or otherwise. Will Eisner was famously hired by the US Military to produce comics-based manuals (e.g., Eisner, 2011), including instructions to help soldiers safely use and clean their new M16. Losh et al. (2014), as another example, produced an entire rhetoric textbook that breaks down writing processes, from gathering sources to critical reading, all in comics form. Comics' facility with process affords researchers across the disciplines an opportunity to explore scientific, mechanical, biological, social, or other processes in clear and understandable ways, including to readers without significant technical knowledge of the topic.

For example, in Losing Thomas and Ella: A Father's Story, Weaver-Hightower (2017) leverages the narrative affordances of comics to 're-story' an interview with a father who experienced the perinatal loss of twins. Weaver-Hightower uses the tools and conventions of comics to piece together a coherent narrative, with particular attention to the flow of time, and also to explore the step-by-step processes of childbirth and grieving from both a medical and a social standpoint (Figure 2).

While narrative in comics moves from panel to panel in sequence, comics are usually experienced as complete pages, or spreads of two contiguous pages. This opens up another affordance of the comics form: simultaneity. Relationships between panels, the shape and orientation of panels, how colors or images are repeated across pages, and the overall composition of the page can all be used as meaning-making tools by the comics-based researcher (Miller, 2007; Postema, 2013; Sousanis, 2015). Groensteen (2007) coined the term 'braiding' for the way that, through visual repetition across panels, additional layers of meaning can be added to a narrative.

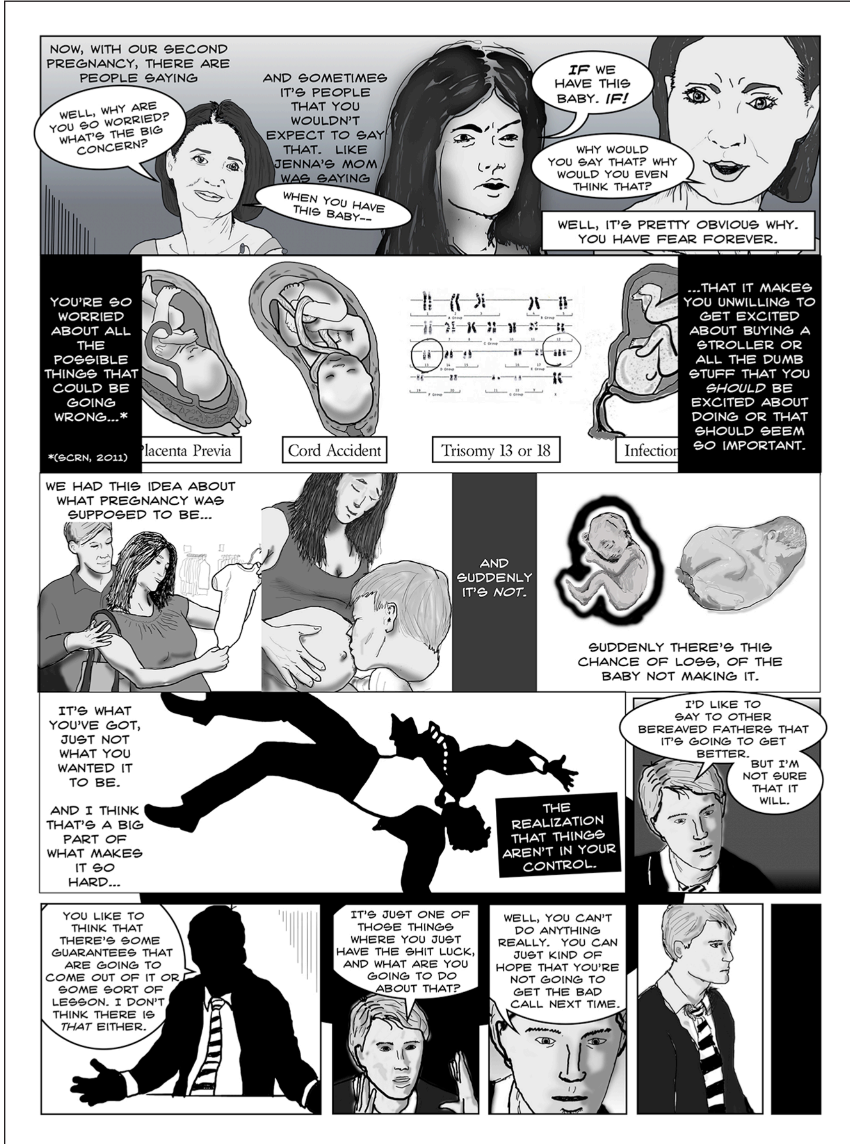

Figure 2. Page from Losing Thomas and Ella: A Father's Story by Marcus Weaver-Hightower (2017).

> Braiding thus manifests into consciousness the notion that the panels of a comic constitute a network, and even a system. To the syntagmatic logic of the sequence, it imposes another logic, the associative. (p. 158)

Other metaphors used to describe this cross-panel meaning-making include architecture (Cohn, 2014), music (Ware, 2012), a network (Groensteen, 2007), a rhizome

(Sousanis, 2015), and the 'fourth dimension' (Bernard and Carter, 2004). Simultaneity allows a researcher to move beyond the linear, left-right carriage returns of text. It opens up opportunities to take analysis in divergent directions, to build up multiple layers of meaning, and to explore themes that don't necessarily fall into a traditional model of causality.

This sphere of associative meaning-making can, but need not, be integrated into a more traditional narrative structure. For example, Sousanis—creator of the 2015 philosophical study of the comics form, Unflattening—often leaves behind linear narrative for a more multidirectional exploration of core concepts. In his piece Against the Flow, shown in Figure 3, a traditional left–right sequence leads into a mash-up of contrasting directions—a flowing river representing entropy and a spiral representing life in its struggle against entropy. It is through repeating symbols (e.g., spiral as coffee, galaxy, and DNA) and the overall design of the page that the full meaning is communicated.

The affordance of simultaneity can support analysis and communication of research findings. During analysis, for example, the creation of page spreads affords a chance to lay out diverse pieces of data from across a study—for example, drawings from field notes, participant-created images, photographs, quantitative data—in one place. This can be used to explore similarities, contrasts, patterns, and an overall intuitive sense of what is emerging from the research. When it comes to presenting findings, page composition can be used to achieve levels of analytical complexity that can be difficult in the linearity of traditional prose. A researcher might, for example, use their layout to simultaneously present multiple perspectives on a topic or experience, to highlight connections across seemingly disparate contexts, or to spread the evidence for an argument out before a reader for them to make their own decisions. A change in page design from one page to the next can be employed to shift across contexts or analytical levels in a way that can't be accomplished with the autoflow of paragraphs.

Style and voice

Comics are unabashedly subjective. The creator's presence is felt in the very lines on the page, whether they come in a brush stroke, a digital vector, or a pen line. Over time, comics artists develop their own unique styles, and it is often enough to glance at a page to identify the artist. According to comics critic Wolk (2007), 'cartooning is, inescapably, a metaphor for the subjectivity of perception. No two people experience the world the same way; no two cartoonists draw it the same way, and the way they draw it is the closest a reader can come to experiencing it through their eyes' (p. 21). In visual research methodology texts, authors commonly make clear that photos and video are not merely objective views of the world; rather, visuals are shaped by researcher choices and the social and technical conventions of photography and film (Banks, 2007; Pink, 2006). No such caveats are necessary for comics; drawn cartoons are culturally understood by readers as subjective messages rather than objective information (Chute, 2016; Williams, 2005). Many nonfiction comics creators have embraced the inherently subjective nature of comic narratives and taken it a step further by integrating themselves as characters in their work (Ayers and Alexander-Tanner, 2010; Gladstone and Neufeld, 2011) much as do anthropologists like Behar (1996), or sociologists like Lawrence-Lightfoot (1988).

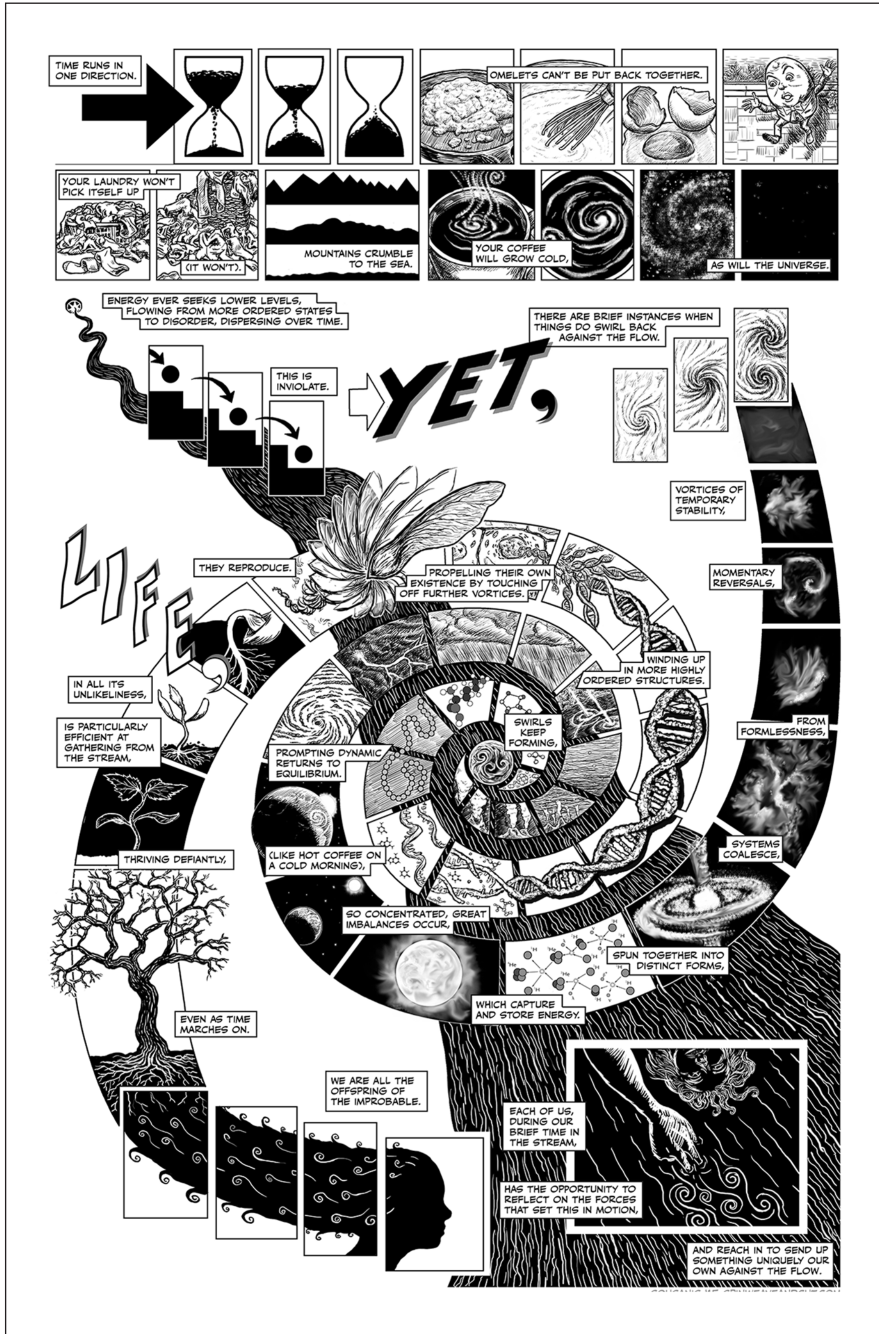

Figure 3. Against the Flow by Nick Sousanis, originally printed in the Boston Globe, 3 October 2015.

This blatant subjectivity and authorial presence afford CBR practitioners a valuable method for exploring researcher subjectivity. As Wadle (2012) writes of CBR in anthropology:

> The authenticity of comics ethnography lies in the fact that the author and artist cannot hide behind a camera and behind his data, but that he is openly in charge of choosing what fragments of his fieldwork he animates and how to address the reader, to represent the voices of his informants. (para. 18)

Some of the best examples of using comics to explore researcher subjectivity come from comics journalists like Sacco and Rall. Sacco (2001, 2012) draws himself into his books, so we see not only the results of his reporting but his process of interviewing, observing, and thinking. Sacco draws on his background in underground, autobiographical comics to caricature himself (Woo, 2010). He exaggerates some of his own perceived shortcomings, visually communicating his worries, biases, awkwardness, and emotions and presenting himself as 'a fallible human being, vulnerable to bias and ignorance and error' (Williams, 2005: 7). In this way, Sacco reflects his own role in constructing the narrative, and encourages the audience to critically analyze what they are seeing (Rosenblatt and Lunsford, 2010; Williams, 2005).

Flowers (2017) takes this subjective insertion to another level, exploring how comics creators 'inhabit' the comic and the research participants within. She describes how she and others imagine themselves into their characters, in all their physicality and affect, even to the extent of mimicking their movements and physicalizing their emotions as part of their analysis.

> While drawing and making comics during my research, I moved and contorted my body to gain a literal and tangible sense of abstracted phrases and words I heard while in the field. . . Inhabitation extended my analysis to include sharing in the production of corporeal forms of agency that emerged during fieldwork. . .Comics making was an explicit means for me to show and experience these more tacit ways of knowing about complex terms like agency, identity, and meaning-making. (p. 32)

This affordance also offers creators of CBR new outlets for creativity and self-expression through their research. For researchers yearning to find such joys in their academic pursuits—as they often do in their lives outside of scholarship—this provides yet more impetus for engaging in CBR.

The challenges and future of comics-based research

As we have demonstrated in this article, CBR is transitioning from scattered efforts into what we can comfortably call an emerging field of practice (Salem et al., 1996). For some years now, researchers have been building communities of practice within their particular disciplines (e.g., graphic medicine, graphic anthropology, data comics in the sciences and engineering). At the same time, these scholars have drawn from a shared core literature in comics studies, and they have begun to read and cite one another across

disciplines. They are connecting with each other in formal and informal gatherings or simply finding one another online to share tips and drafts. With the launch of Sequentials (sequentialjournal.net), this emerging field of practice has its first generalist, interdisciplinary journal of comics scholarship.

So far, much of the writing about CBR methodologies has focused on explanation and advocacy, demonstrating what a particular form of CBR is and why it is valuable. This makes sense given the emergent and marginal nature of this practice. As the field continues to mature, however, it will have to wrestle with more difficult questions, particularly those related to *quality* and *ethics*.

As CBR projects increase in number and journals like Sequentials emerge, the field will increasingly be faced with questions about what makes for good (or bad) CBR. By what yardsticks should CBR be measured? To a significant extent, the answers to this question will depend on the disciplines within which scholars work: comics anthropologists and comics historians, for example, will be responding to very different demands of traditions, epistemologies, and audiences. But the answers will also be shaped by the comics form itself, and experienced comics practitioners will need to contribute to clarifying what a 'good' research comic or CBR process looks like. The affordances that we lay out in this article could serve as an initial framework for exploring this issue. For example, the multimodality of comics will require approaches to accuracy or fidelity that take into account both visual and textual representation. Similarly, the emphasis of comics on creator style and voice will demand in-depth exploration of how researcher subjectivity plays into the validity of CBR (complicated, in this case, by the practice of researchers and comics artists partnering to create products).

A mature field of practice must also include a healthy dialogue about ethics, a topic barely touched on in the CBR literature so far. Many of the traditional ethical concerns of research apply to CBR, such as informed consent and the responsibility to maximize benefit and minimize risk. At the same time, there are ethical questions to be raised particular to the comics form. First of all, the highly visual nature of comics, combined with the heavy hand that creators have in developing the visuals, opens up a wide space for issues of visual (mis)representation. This raises questions like: How do researchers who publish comics protect the identities of participants—and those around them—while maintaining the validity of visual data? And how do we respect different cultural mores about what can and cannot be put into an image, like pictures of the dead or of religious figures? Second of all, the way comics are understood across cultures varies, and often carry some negative connotations. For example, participants may view comics as not a 'serious' scholarship or they may be aware of how comics have often been spaces for sexist and racist representations. Informed consent, then, must include a discussion of the form that research products will take and the contexts in which it will be disseminated. In the realm of research ethics, the goal is not necessarily universal agreement but rather a healthy culture of accountability and critical dialogue. The fields we cite in this article—such as arts-based research, visual research, and narrative research—can offer useful concepts and examples upon which to build in terms of both quality and ethics.

CBR is still very young in most disciplines, and it has much room to grow and evolve. One area that deserves more exploration is the integration of comics into all stages of a research project. For many published CBR projects, comics are used purely for

presenting research that was otherwise carried out in a traditional manner. As some of the scholars cited in this article have shown, comics can do much more. The field would benefit from more experimentation and writing about how comics are integrated into research design, data collection, and analysis. Another area where CBR should push itself as a field is in the form that research comics take. Many have defaulted to drawing the author into the comic as a narrator. This 'sage on the stage' format can be effective, but it mirrors the more traditional authorial voice in research articles and may limit our imagination of what CBR can look like. Finally, we suggest that the CBR practitioners would do well to continue increasing the ways they connect and share across disciplines and fields. Speaking to our own disciplines about the potential of CBR is important, but we also have much to learn from one another in interdisciplinary spaces as we build up the maturity and complexity of our field of practice. We look forward to CBR, over time, becoming as diverse and multifaceted as comics themselves.

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ORCID iD

Paul J Kuttner https://orcid.org/0000-0002-4739-1358

Notes

1. This article is aimed at documenting and defining the emerging field of CBR. For those interested in how to practice CBR, see our earlier piece (Kuttner et al., 2017), which includes extended examples and tools.
2. We distinguish CBR, in which comics are created as part of the research process, from the related fields of comics studies (in which research is conducted *on* comics, including their aesthetics, history, and social context) and research into how comics are used as educational and communication tools. However, we recognize there are areas of overlap (e.g., Sousanis, 2015; Wallner, 2017).

References

Abbott LL (1986) Comic art: characteristics and potentialities of a narrative medium. *Journal of Popular Culture* 19(4): 155–176.

Abel J and Madden M (2008) *Drawing Words & Writing Pictures*. New York: First Second.

Afonso AI and Ramos MJ (2004) New graphics for old stories: representation of local memories through drawings. In: Pink S, Kürti L and Afonso AI (eds) *Working Images: Visual Research and Representation in Ethnography*. New York: Routledge, 72–89.

Al-Jawad M (2015) Comics are research: graphic narratives as a new way of seeing clinical practice. *Journal of Medical Humanities* 36(4): 369–374.

Andrews TM (2016, July 12) The resurgence of comic books: the industry has its best-selling month in nearly two decades. *The Washington Post*. Available at: https://www.washingtonpost.com/

news/morning-mix/wp/2016/07/12/the-resurgence-of-comic-books-the-industry-has-its-best-selling-month-in-nearly-two-decades/ (accessed 14 March 2020).

Atkins M (n.d.) The dark side of the village. Available at: http://comicsforum.files.wordpress.com/2012/02/dark-side-of-the-village.pdf (accessed 1 December 2018).

Ayers W and Alexander-Tanner R (2010) *To Teach: The Journey in Comics*. New York: Teachers College Press.

Bach B, Wang Z, Farinella M et al. (2018) Design patterns for data comics. In: *CHI* 2018, Montréal, QC, Canada, 21–26 April 2018.

Baker K (2008) *Nat Turner*. New York: Abrams.

Ball MS and Smith GW (1992) *Analyzing Visual Data* (Vol. 24). London: Sage.

Banks M (2007) *Using Visual Data in Qualitative Research*. London: Sage Publications.

Bartoszko A, Leseth AB and Ponomarew M (2011) Public space, information, accessibility, technology, and diversity at Oslo University College. Available at: http://anthrocomics.wordpress.com (accessed 1 December 2018).

Bateson G and Mead M (1942) *Balinese Character: A Photographic Analysis*. New York: The New York Academy of Sciences.

Behar R (1996) *The Vulnerable Observer: Anthropology That Breaks Your Heart*. Boston, MA: Beacon Press.

Bernard M and Carter JB (2004) Alan Moore and the graphic novel: confronting the fourth dimension. *ImageTexT: Interdisciplinary Comics Studies* 1(2). Available at: http://www.english.ufl.edu/imagetext/archives/v1_2/carter/

Bezemer J and Jewitt C (2010) Multimodal analysis: key issues. In: Litosseliti L (ed.), *Research Methods in Linguistics*. London: Continuum, 180–197.

Bongco M (2000) *Reading Comics: Language, Culture, and the Concept of the Superhero in Comic Books*. New York: Routledge.

Boudreault-Fournier A (2015) *'Making' Graphic Novels as Creative Practice in Anthropology: Learning Outcomes from the Classroom*. Available at: http://imaginativeethnography.org/wp-content/uploads/2016/01/Boudreault-Fournier-CIE-Blog-Jan10.pdf

Buhle P (2007) History and comics. *Reviews in American History* 35(2): 315–323.

Buhle P and Schulman N (2005) *Wobblies!: A Graphic History of the Industrial Workers of the World*. London: Verso.

Carrigan M (2017) What is graphic social science? Available at: https://markcarrigan.net/2017/06/21/what-is-graphic-social-science/

Causey A (2016) *Drawn to See: Drawing as an Ethnographic Method*. Toronto, ON: University of Toronto Press.

Chemero A (2003) An outline of a theory of affordances. *Ecological Psychology* 15(2): 181–195.

Chute HL (2016) *Disaster Drawn: Visual Witness, Comics, and Documentary Form*. Cambridge, MA: Harvard University Press.

Cohn N (2013) *The Visual Language of Comics*. London: Bloomsbury.

Cohn N (2014) The architecture of visual narrative comprehension: the interaction of narrative structure and page layout in understanding comics. *Frontiers in Psychology* 5(680) 1–9. DOI: 10.3389/fpsyg.2014.00680

Collier J (1967) *Visual Anthropology: Photography as a Research Method*. New York: Holt, Rinehart and Winston.

Crowther G (1990) Fieldwork cartoons. *Cambridge Anthropology* 14(2): 57–68.

Curry TJ and Clarke AC (1977) *Introducing Visual Sociology*. Dubuque, IA: Kendall/Hunt.

Czerwiec MK, Williams I, Squier M, et al. (2015) *Graphic Medicine Manifesto*. University Park: Pennsylvania State University Press.

Dolan E (2017) How Wimmelbooks work: a snail's guide. *Sequentials* 1(1). Available at: http://www.sequentialsjournal.net/dolan.html

Eisner W (1985) *Comics and Sequential Art*. Tamarac, FL: Poorhouse Press.

Eisner W (2011) *PS Magazine: The Best of Preventative Maintenance Monthly*. New York: Abrams ComicArts.

Farinella M (2018) The potential of comics in science communication. *Journal of Science Communication* 17(1): 1–17. DOI: 10.22323/2.17010401

Flowers E (2017) Experimenting with comics making as inquiry. *Visual Arts Research* 43(2): 21–57.

Galman SAC (2009) The truthful messenger: visual methods and representation in qualitative research in education. *Qualitative Research* 9(2): 197–217.

Geertz C (1970) Thick description: toward an interpretive theory of culture. In: Geertz C (ed.), *The Interpretation of Cultures: Selected Essays*. New York: Basic Books, 3–30.

Getz TR and Clarke L (2016) *Abina and the Important Men: A Graphic History*. New York: Oxford University Press.

Gibson JJ (1979) *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin.

Gladstone B and Neufeld J (2011) *The Influencing Machine: Brooke Gladstone on the Media*. New York: Norton.

Green MJ and Rieck R (2013) Missed it. *Annals of Internal Medicine* 158(5): 357–361.

Groensteen T (2007) *The System of Comics* (Beaty B and Nguyen N, Translator). Jackson, MS: University Press of Mississippi.

Gruenberg SM (1944) The comics as a social force. *The Journal of Educational Sociology* 18(4): 204–213.

Hajská M, Bořkovcová M and Mašek V (2010) *O Přibjehi*. Poland: Lipnik.

Hamdy S, Nye C, Bao S, et al. (2017) *Lissa: A Story about Medical Promise, Friendship, and Revolution*. Toronto, ON: University of Toronto Press.

Harvey RC (1979) The aesthetics of the Comic strip. *Journal of Popular Culture* XII(4): 640–652.

Harvey RC (2009) How comics came to be: through the juncture of word and image from magazine gag cartoons to newspaper strips, tools for critical appreciation plus rare seldom witnessed historical facts. In: Heer J and Worcester K (eds) *A Comics Studies Reader*. Jackson, MS: University Press of Mississippi, 25–45.

Hatfield C (2005) *Alternative Comics: An Emerging Literature*. Jackson, MS: University Press of Mississippi.

Helms J (2017) *Rhizcomics: Rhetoric, Technology, and New Media Composition*. Ann Arbor, MI: University of Michigan Press. Available at: http://www.digitalrhetoriccollaborative.org/rhizcomics/index.html

Jacobs D (2013) *Graphic Encounters: Comics and the Sponsorship of Multimodal Literacy*. New York: Bloomsbury Publishing.

Jones S and Woglom JF (2013a) Graphica: comics arts-based educational research. *Harvard Educational Review* 83(1): 168–189.

Jones S and Woglom JF (2013b) Teaching bodies in place. *Teachers College Record* 115(8): 1–29.

Jordan S, Adams R, Pawley A, et al. (2009) The affordances of photo elicitation as a research and pedagogical method. In: 39th *IEEE Frontiers in Education Conference*, San Antonio, TX, 18–21 October 2009.

Jozuka E (2019, July) Japanese anime: from 'Disney of the East' to a global industry worth billions. *CNN*. Available at: https://www.cnn.com/style/article/japan-anime-global-identity-hnk-intl/index.html (accessed 13 March 2020).

Kress G (2004) Reading images: multimodality, representation and new media. *Information Design Journal* 12(2): 110–119.

Kress G and Van Leeuwen T (2001) *Multimodal Discourse*. London: Bloomsbury Academic.

Kuttner P, Sousanis N and Weaver-Hightower MB (2017) How to draw comics the scholarly way: Creating comics-based research in the academy. In: Leavy P (ed.) *Handbook of Arts-Based Research*. New York: Guilford Press, 396–422.

Laurier E (2014) The graphic transcript: poaching comic book grammar for inscribing the visual, spatial and temporal aspects of action. *Geography Compass* 8(4): 235–248.

Lawrence-Lightfoot S (1988) *Balm in Gilead: Journey of a Healer*. Reading, MA: Addison-Wesley.

Lawrence-Lightfoot S and Davis JH (1997) *The Art and Science of Portraiture*. San Francisco, CA: Jossey-Bass.

Leavy P (2019) *Handbook of Arts-Based Research*. New York: Guilford Press.

Lemke JL (2002) Travels in hypermodality. *Visual Communication* 1(3): 299–325.

Lewis D (2001) *Reading Contemporary Picturebooks: Picturing Text*. London: RoutledgeFalmer.

Lewis J, Aydin A and Powell N (2013) *March, Book 1*. Marietta, GA: Top Shelf.

Lin S-F, Lin H-S, Lee L, et al. (2015) Are science comics a good medium for science communication? The case for public learning of nanotechnology. *International Journal of Science Education, Part B* 5(3): 276–294. DOI: 10.1080/21548455.2014.941040

Losh E, Alexander J, Cannon K, et al. (2014) *Understanding Rhetoric: A Graphic Guide to Writing*. Boston, MA: Bedford/St. Martin's.

McCloud S (1993) *Understanding Comics*. Northampton, MA: Kitchen Sink Press.

McCloud S (2006) *Making Comics: Storytelling Secrets of Comics, Manga and Graphic Novels*. New York: William Morrow Paperbacks.

Miller A (2007) *Reading Bande Dessinée: Critical Approaches to French-Language Comic Strip*. Chicago: Intellect.

Mizuki S and Davisson Z (2013) *Showa 1926–1939: A History of Japan*. Montreal: Drawn and Quarterly.

Monnin K (2010) *Teaching Graphic Novels: Practical Strategies for the Secondary ELA Classroom*. Gainesville, FL: Maupin House Publishing.

Newman D (1998) Prophecies, police reports, cartoons and other ethnographic rumors in Addis Ababa. *Etnofoor* 11(2): 83–110.

Okubo M (1946) *Citizen 13660*. New York: Columbia University Press.

Oliver-Hoyo M and Allen D (2006) The use of triangulation methods in qualitative educational research. *Journal of College Science Teaching* 35(4): 42–47.

Pink S (2006) *Doing Visual Ethnography* (2nd edn.). London: Sage.

Postema B (2013) *Narrative Structure in Comics*. Rochester, NY: RIT Press.

Ramos MJ (2004) Drawing the lines: the limitations of intercultural ekphrasis. In: Pink S, Kürti L and Afonso AI (eds) *Working Images: Visual Research and Representation in Ethnography*. New York: Routledge, 147–156.

Rosenblatt A and Lunsford AA (2010) Critique, caricature and compulsion in Joe Sacco's comics journalism. In: Williams P and Lyons J (eds) *The Rise of the American Comics Artist: Creators and Contexts*. Jackson, MI: UP.

Sacco J (2001) *Palestine*. Seattle, WA: Fantagraphic Books.

Sacco J (2012) *Journalism*. New York: Metropolitan Books.

Salem P, Schepard A and Schlissel SW (1996) Parent education as a distinct field of practice. *Family Court Review* 34(1): 9–22.

Satrapi M (2007) *The Complete Persepolis*. New York: Pantheon Books.

Short J, Bauer T, Simon L, et al. (2010) *Atlas Black: Managing to Succeed*. Nyack, NY: Flat World Knowledge.

Singer M (2002) “Black skins” and white masks: comic books and the secret of race. *African American Review* 36(1): 107–119.
Sones WWD (1944) The comics and instructional method. *Journal of Educational Sociology* 18(4): 232–240.
Sousanis N (2015) *Unflattening*. Cambridge, MA: Harvard University Press.
Spiegelman A (1986) *Maus: A Survivor’s Tale*. New York: Pantheon.
Syma CK and Weiner RG (2013) *Graphic Novels and Comics in the Classroom: Essays on the Educational Power of SequentialAart*. Jefferson, SC: McFarland.
The New London Group (1996) A pedagogy of multi-literacies: designing social futures. *Harvard Educational Review* 66(1): 60–92.
The Free Library (2014) Intertextuality and the historical graphic narrative: Kyle Baker’s Nat Turner and the Styron controversy. Available at: https://www.thefreelibrary.com/Intertextuality+and+the+historical+graphic+narrative%3a+Kyle+Baker%27s. . .-a0262046172 (accessed 1 December 2019).
Theron L (2011) *Picturing Research: Drawing as Visual Methodology*. Rotterdam: Sense Publishers.
Tilley CL, Robert G and Weiner (2017) Teaching and learning with comics. In: Bramlett F, Cook RT and Meskin A (eds), *The Routledge Companion to Comics*. New York & London: Routledge, 358–366.
Van Lente F (2012) *Comic Book History of Comics*. San Diego, CA: IDW Publishing.
Varnum R and Gibbons CT (2001) *The Language of Comics: Word and Image*. Jackson, MI: University Press of Mississippi.
Wadle H (2012) Anthropology goes comic. In: *Comics Forum*. Available at: http://comicsforum.org/2012/02/03/anthropology-goes-comics-by-hannah-wadle/ (accessed 02 October 2018).
Wallner L (2017) Speak of the bubble: constructing Comic Book Bubbles as Literary Devices in a Primary School Classroom. *Journal of Graphic Novels and Comics* 8(2): 173–192. doi:10.1080/21504857.2016.1270221
Walker M (2000) *The Lexicon of Comicana*. Lincoln, NE: iUniverse.com
Ware C (2012) *Building Stories*. New York: Pantheon.
Weaver-Hightower M (2013) Sequential art for qualitative research: Making comics to make meaning of the social world. In: Syma C & Weiner R (eds) *Graphic Novels, Comics, and Education*. Jefferson, NC: McFarland, 260–273.
Weaver-Hightower M (2017) Losing Thomas and Ella: a father’s story. *Journal of Medical Humanities* 38(3): 215–230.
Wertham F (1954) *Seduction of the Innocent*. New York: Rinehart.
Whitson R and Salter A (2015) Comics as scholarship. *Digital Humanities Quarterly* 9(4). Available at: www.digitalhumanities.org/dhq/vol/9/4/index.html
Williams K (2005) The case for comics journalism: artist-reporters leap tall conventions in a single bound. *Columbia Journalism Review* 43(6): 51.
Williams RM-C (2012) Can you picture this? Activism, art, and public scholarship. *Visual Arts Research* 38(2): 87–98.
Wolk D (2007) *Reading Comics: How Graphic Novels Work and What they Mean*. Cambridge, MA: Da Capo Press.
Woo B (2010) Reconsidering comics journalism. In Goggin J and Hassler-Forest D (eds) *The Rise and Reason of Comics and Ggraphic Literature: Critical Essays on the Form*. Jefferson, NC: McFarland, 166–177.
Wright BW (2001) *Comic Book Nation: The Transformation of Youth Culture in America*. Baltimore, MD: JHU Press.
Zinn H, Konopacki M and Buhle P (2008) *A People’s History of American Empire: A Graphic Adaptation*. New York: Metropolitan Books.

Author biographies

Paul J Kuttner is a qualitative researcher and ethnographer, committed to engaged scholarship that is conducted in partnership with youth and communities. Paul's research focuses on the interconnections between educational institutions and communities that have been marginalized by the education system, including family engagement, education organizing, university-community partnerships, and the role of culture in education and social change. Paul is co-author, with Karen Mapp, of *Partners in Education: A Dual Capacity Building Framework for Family-School Partnerships*, and a co-editor of *Disrupting the School-to-Prison Pipeline* (HER, 2012). His work has been published in both academic and popular venues, including *Harvard Educational Review, Teachers College Record, and Curriculum Inquiry*. Paul is Associate Director at University Neighborhood Partners, University of Utah, where be builds university-community partnerships that promote educational equity, access, and justice for young people while producing valuable knowledge to advance scholarship and social change.

Marcus B Weaver-Hightower is Professor of Foundations of Education at Virginia Tech, and formerly Professor of Educational Foundations and Research at the University of North Dakota. His research focuses on qualitative methods, comics and graphic novels in research and in classrooms, boys and masculinity, food politics, and the politics and sociology of education policy. He the author of *How to Write Qualitative Research, The Politics of Policy in Boys' Education: Getting Boys "Right*," and numerous other articles and collections.

Nick Sousanis is an Eisner Award-winning [the comics' world's equivalent of the Oscars] comics author and an Associate Professor in Humanities and Liberal Studies at San Francisco State University, where runs an interdisciplinary Comics Studies program. He is the author of *Unflattening*, originally his doctoral dissertation, which he wrote and drew entirely in comics form. Published by Harvard University Press in 2015, *Unflattening* received the 2016 American Publishers Association Humanities Award for Scholarly Excellence and the 2016 Lynd Ward prize for Best Graphic Novel. Sousanis's comics have appeared in *Nature, The Boston Globe, and Columbia Magazine*. More at www.spinweaveandcut.com