Comics: The (Not Only) Visual Medium

by

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ABSTRACT

Comics studies tends to privilege the visual, and some scholars, like Scott McCloud believe that comics are solely visual. However, as Ian Hague has noted, the idea that comics are a solely visual medium is not only incomplete but does not align with what the sciences of perception and embodied cognition tell us. This paper seeks to build upon Hague’s work by calling attention to and analyzing comics which exist without or with little visual imagery. These comics can be sorted into two primary categories, audiocomics and tactile comics. As these comics were created for people who have partial or no sight, existing guidelines and standards for creating aural and tactile imagery for people with partial or no sight are used to analyze the comics’ success in achieving an experience that is easy to understand and also utilizes the medium’s strengths. The comics are then analyzed as a whole in order to determine areas for improvement and additional experimentation.

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This thesis is my first foray into writing about and analyzing materials meant for people who have partial or no sight, and this is my first, shallow dip into disability studies. I chose to use language like “people who have partial or no sight,” rather than “blind” or “visually impaired,” which is in keeping with the National Center on Disability and Journalism’s style guide. I adapted the AP style by removing the language of “loss.” When referring to people who do not have partial or no sight, I chose to use language like, “people with sight privilege.” Privilege, as I use it here, is defined as “a group of unearned cultural, legal, social, and institutional rights extended to a group based on their social group membership.” Some quotations may contain different terminology. I take full responsibility for any unknowingly ableist language or framing.

When referring to the “reader” or “listener,” I have elected to use the singular “they” in order to avoid gendering the subject.

This thesis does contain a few problematic generalizations. First and foremost, people with partial sight are grouped in with people who have no sight. This is a result of the available research and the framing of the comics themselves, which tend to treat the spectrum of sight as one group or to only focus on people who were born without sight. Additionally, this thesis does not directly address many other sight conditions, like colorblindness, which would also impact the consumption and creation of comics such as the ones featured here. There is much work to be done, and I hope this thesis represents a positive step in the right direction, even if it is a small one.

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List of Figures

The figures and illustrations used in this thesis belong to their creators, and I use them here under the terms of academic fair use, which is described here: https://libraries.mit.edu/scholarly/publishing/copyright-publishing-guide-for-students/reuse-of-figures-images-and-other-content-in-theses/?repeat=w3tc. All necessary citations are included with the figures, which are printed at the end of the chapter in which they are discussed.

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Introduction - Comics: A “Visual” Medium

In 2014, the North American market for comics and graphic novels reached $935 million, the highest level of sales the market has seen since the mid-1990s. Of that $935 million, $100 million were digital sales, which represented a growth rate of 11% over 2013. Additionally, the academic study of comics has continued to grow, leading to many new programs and journals and more widespread acceptance in a variety of disciplines within academia, as well as acceptance into many museums and art galleries. The resurgence of interest in comics that has occurred in recent years can be traced to no one cause, but rather is symptomatic of a variety of shifts in perception, availability, and scope of content. For example, the rise of the “graphic novel,” as well as the comics-to-movie trend like the Marvel Cinematic Universe, have led to increases in sales for the industry and to the mainstreaming of comics within popular culture and academic study alike. As comics become mainstream, their perception in North America is finally shifting away from the “low art” arguments that came about in large part from the moral panic in the 1950s and 1960s. With all of these statistics and developments in mind, as the project of rescuing comics from its low art status, or rather removing the problem of status

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4 Ibid. Statistic does not include subscription services like Marvel Unlimited. Additionally, the growth of digital sales is starting to approach the average growth rates for print comics. ICv2 suggests that this could be because the rush to build digital libraries after the availability of services like Comixology is starting to level out.

5 For a list of programs and resources, see Derik A. Badman’s “Comics Studies: Resources for scholarly research” at http://crln.acrl.org/content/70/10/574.full.

6 For more information about the moral panic, Frederick Wertham, and the Comics Code, see Seal of Approval: The History of the Comics Code by Amy Kiste Nyberg.
altogether, is finally coming to fruition, it is therefore not surprising that comics creators and academics have spent much of the last two decades asking philosophical questions about what a comic is, how it works, and what separates comics from other media in their attempts to make up for lost time and to justify comics as a valid art form worthy of critical analysis and acclaim.\footnote{Other media have gone through similar processes. For a discussion about the formation of film studies, see Inventing Film Studies, edited by Lee Grieveson, Haidee Wasson.}

One of the most well known and well read attempts to address the what, how, and why of the medium is Scott McCloud’s Understanding Comics: The Invisible Art, which is itself in comic form. This book was published in 1993, when comics were beginning to gain ground as a legitimate area of study, and it is still one of the most cited and most read books on the medium. McCloud’s definition of comics is an extension of Will Eisner’s definition of comics as “sequential art.”\footnote{Will Eisner, Comics and Sequential Art: Principles and Practices from the Legendary Cartoonist (New York: W. W. Norton and Company, 2008).} McCloud’s definition states that comics are “juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or produce an aesthetic response in the viewer.”\footnote{Scott McCloud, Understanding Comics (New York: William Morrow Paperbacks), 9.} McCloud clarifies “other images” as text, which he describes as a series of “static images.”\footnote{Ibid., 8.}

For McCloud, as well as many others in our society, “pictorial,” “images,” and other forms of those words are understood as inherently visual concepts. In fact, McCloud addresses comics and sight directly, claiming that “Comics is a sight-based medium,”\footnote{Ibid., 207.} which is proclaimed by a caricature of himself at the foot of a drawing of an interpretation of the Eye of

\footnote{\textsuperscript{7} Other media have gone through similar processes. For a discussion about the formation of film studies, see Inventing Film Studies, edited by Lee Grieveson, Haidee Wasson.}
\footnote{\textsuperscript{8} Will Eisner, Comics and Sequential Art: Principles and Practices from the Legendary Cartoonist (New York: W. W. Norton and Company, 2008).}
\footnote{\textsuperscript{9} Scott McCloud, Understanding Comics (New York: William Morrow Paperbacks), 9.}
\footnote{\textsuperscript{10} Ibid., 8.}
\footnote{\textsuperscript{11} Ibid., 207.}
Providence, one of the most iconic images in American history (figure 1). McCloud could have represented this idea in a number of ways, but he chose this one. This icon has long been used to represent divine providence, or the “all seeing eye of god.”\(^{12}\) In this depiction of the Eye of Providence, the eye’s iris contains the entire world, and it is looking down over a pyramid which includes McCloud’s characterization of the range of “visual iconography” used in art. Though he does not say it directly, for McCloud the reader is the one with the all seeing eye, and the eye is the means by which the entirety of a comic, or as depicted here the entirety of the world, is experienced and consumed.

McCloud’s places further emphasis on the reader’s eye in his discussion of the concept of “closure,” which he defines as, “observing the parts but perceiving the whole.”\(^{13}\) When describing closure as it works in comics, McCloud argues that closure is the means by which the “magic” happens in the gutter between panels, wherein readers fill in the information that is not shown and time and movement are constructed. McCloud cites closure as the means by which the comics medium holds a unique relationship with the reader. One “where the audience is a willing and conscious collaborator and closure is the agent of change, time and motion.”\(^{14}\) Further, he states that the reader is a “silent accomplice” and an “equal partner in crime,” and in his example of a character in the seconds before his head is chopped off, the act of which is not shown, he characterizes the reader as the one who “drops the ax.” He states further, “To kill a man between panels is to condemn him to a thousand deaths,” or in other words, every individual reader will cause the ax to fall (figure 2). Once more McCloud has positioned the reader, and


\(^{13}\) McCloud, Understanding Comics, 63.

\(^{14}\) Ibid. 65.
specifically the reader’s eye, as the primary agent of change, and in this case, the eye makes closure happen in the space between panels, and closure, by way of sight, leads to the construction of motion and time. In fact, he explicitly states this: “Comics is a mono-sensory medium. It relies on only one sense to convey a world of experience.”\textsuperscript{15} In other words, McCloud does not just believe that comics are a visual medium, but even further, he believes that the entire sensorium of the content of a comic is experienced via synesthesia with the reader’s eye as the organ of reception.

McCloud is not necessarily wrong in arguing that sight plays a role in all of the ways that he states, nor is he necessarily wrong that the reader plays an active role in constructing the comic and its contents as they read.\textsuperscript{16} Moreover, McCloud is not the only scholar to claim or assume that comics are a visual medium. In \textit{Comics and the Senses: A Multisensory Approach to Comics and Graphic Novels}, Ian Hague breaks down the definitional project that has taken up much space within comics studies for the last two decades into categories of definitions which range from formal to social to intentionally definitive to knowingly incomplete. Hague argues that these definitions, as varied as they are, do have one primary commonality, which is their perception of comics as a visual medium. Though most are less explicit about their ocularcentrism than McCloud is, the most common component of these definitions involves some version of “the interplay between image and text,” and when these definitions are operationalized within scholarship, image and text seem to mean image and text as conveyed by the sense of sight. Hague argues that this form of ocularcentrism is rampant within comics

\textsuperscript{15} Ibid., 89.

\textsuperscript{16} Nor is it the purpose of this paper to determine if that is the case or not. There is much debate about these ideas and how they may work within comics studies.
studies literature, even if it is not always explicit, and that it has created “blindspots” in the scholarship. Further, he argues that these blindspots have not helped the already fraught definitional project, and that focusing solely on the sense of sight leads to missed opportunities for a more cohesive understanding of comics and the senses and for innovative creative practices and analysis. To clarify, Hague does not argue that scholars should not study sight and visual imagery in comics, nor does he argue that comics are not visual at all. Instead, he posits that comics are not only visual.17

The Senses and the Act of Creating Comics

Interestingly, McCloud and many other comics scholars who also make comics are much less likely to privilege sight in comics when they discuss the nature of creating, rather than the ways in which existing comics work. For instance, in McCloud’s Making Comics: Storytelling Secrets of Comics, Manga, and Graphic Novels, the act of making comics is depicted with many scenes of McCloud’s caricature of himself at the drawing board and with many depictions of hands holding instruments (figures 3 and 4).18 Though he does not argue or imply that creating comics relies on particular senses, there have been other scholars and creators who have.

Lynda Barry, who is both a professor of comics and a cartoonist, is known for continually asking and attempting to answer the question, “What is an image?” in her work and in the classroom. She even went so far to say in an interview that this question has “directed [her]


entire life." In a presentation called, “The answer is in the picture,” Barry reveals that an influential professor asked her that question when she was nineteen. Her professor’s answer to that question was, “an image is the thing that is contained within anything that we call the arts, or in what kids call ‘play’ or ‘toys.’” To explain what her professor meant, Barry tells the story of a small child and her favorite stuffed animal, noting that the child was attached to the object because it “contain[ed] an image that [the child] put in there.” Barry is discussing “image” in a manner which relates it more strongly to a word that has a similar root, *imaginary*. Though Barry’s explanation is mostly anecdotal, her description of her thoughts about this question that has been the cornerstone of her work challenges the idea that a comic or a drawing or a child’s favorite object is constructed by sight alone.

In fact, Barry describes the act of creating comics as one which relies on making with the hands, relating the act of drawing and writing to the movement of the hand rather than reception from the eye. In a panel discussion with R. Crumb, Ivan Brunetti, and Gary Panter called “Lines and Paper,” Barry states, “[Drawing] has a biological function. I think these are the original digital devices [wiggles fingers]. Check them out. Wireless. Bio-fueled. Self-healing.” This conceptualization of the process of drawing comics supports Barry’s refrain that “anyone can

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21 Ibid. 6:16.

make comics,” because it removes the constraint of sight and describes drawing comics as an embodied experience.23

At the same conference, in a discussion with comics scholar Hillary Chute, Alison Bechdel described at length her process for creating *Fun Home*, which included posing her body and taking photographs before drawing specific panels, hand lettering segments of personal letters in her family members’ handwriting, and drawing copies of real photographs from her childhood. Bechdel described her relationship to drawing and lettering comics as follows:

“You know, I do think drawing is a form of touch for me. When you are drawing a figure, you know, you’re touching them. you’re creating this person’s body.

You’re outlining them, their face, their limbs, their clothes. It is very intimate....

And I am ultimately trying to touch the people reading it, or wanting them to touch me. They’re holding this story about me.”24

Just as Barry’s comments highlighted and situated the act of drawing as a biological function, one that for her lives in the digits, Bechdel’s comments associate the act of drawing and of reading comics with the whole of her body, and specifically with the sense of touch. Additionally, Bechdel talks about two different kinds of touching, one in which she is touching the image she is drawing and one in which she is touching, or “connecting,” with her audience. These two types of touching in the act of creation relate quite well to Barry’s professor’s definition of an image, which allows for the thing called an “image” to be simultaneously outside

23 Though for Barry and the other panelists, the hand becomes the symbol of that embodiment, there are other, even more inclusive ways in which the act of creating comics is understood as an experience that is not entirely based on sight. Locating drawing in the hand is its own form of ableism.

of the body and be connected to it or constructed within it. And it acknowledges that an image
does not exist in a vacuum, but rather that the reader also has a role in the construction of an
image.

Both Barry’s and Bechdel’s remarks are intriguing, because despite that fact that the
sense of sight is relied on quite heavily when many creators draw, the act and process of creating
is not described as one which relies on sight but rather as one that is grounded in the body as a
whole, with an emphasis on touch and movement. By removing the constraint of sight and
visuality on the definition of the image, both Barry and Bechdel present yet another line of
inquiry which challenges the idea that comics are solely a visual medium. Finally, to return to
McCloud’s illustrations of his creative process, by including images of himself actively using
more than just his sense of sight to construct comics, McCloud implicitly acknowledges that the
act of creation is not solely based on sight. So, if the reader is to be seen as “a willing and
conscious collaborator,” then surely the act of creation by the artist(s) and publishers must be the
other half of the collaboration, and therein the act of creation must also be considered in
philosophical conceptualizations about the ways in which the medium functions.

Imagery and People with Partial or No Sight

Comics studies is not the only discipline, and academia is not the only community, for
which ocularcentrism is common.25 Today, sight is treated as the primary sense in a hierarchy of

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25 In the last few decades, films studies has seen an increase in scholarship challenging the idea that film
is only visual. For examples, see Touch: Sensuous Theory and Multisensory Media by Laura U. Marks
and Film Theory: An Introduction through the Senses by Malte Hagener and Thomas Elsaesser.
the senses that stems far back into the history of philosophy. However, there have long been scholars who have refuted this hierarchy and hierarchization in general. Common knowledge of the five senses as it stands has been challenged and discussed contentiously for decades in scientific, cultural, and philosophical studies. Moreover, one of the most prevalent philosophical queries about visual perception has involved the Molyneux problem, which is as follows:

“Suppose a man born blind, and now an adult, is taught by his touch to distinguish between a cube and a sphere of the same metal. Suppose then the cube and the sphere were placed on a table, and the blind man to see: query, whether by his sight before he touched them, could he tell which was the globe and which the cube?”

As it turns out, the answer to Molyneux’s question is more complex than a simple yes or no. Hayhoe examines a variety of studies which both complement and contradict each other in their attempts to answer Molyneux’s problem, but ultimately, he argues that people who have partial or no sight are able to experience spatiality, and to answer Molyneux’s question, existing studies suggest that it depends on the individual subject’s particular capabilities for sight and for the time in which the subject lost some or all of their sense of sight. However, ultimately, the answer


27 The five senses, in their colloquial use, were first conceptualized by Aristotle, and the influence of his model is still felt within popular culture, colloquial language, and scholarship. For additional information, see The Senses: Classic and Contemporary Philosophical Perspectives and the SensoryStudies.org “Books of Note” list: http://www.sensorystudies.org/books-of-note/.


29 Ibid.
matters less when one considers the framing. This is an example of what Dominc M. McIver Lopes, professor of philosophy, calls “definition from disability.”30 Defining by disability overestimates and centralizes disability, and moreover, Lopes points out that this is a “sense datum fallacy,” or “The fallacy in assuming wrongly that the subjective sensations we have when perceiving the world are all that perception can represent.”31 This can also be applied to McCloud and other scholars’ privileging of sight. Ocularcentrism is a sense datum fallacy that has been engrained into philosophy as a discipline and therein into the philosophy of the comics medium.

Additionally, Hayhoe cites Kennedy who argues that spending time with young students who have partial or no sight confirms that, “by continued use of appropriate educational resources and the opportunity to discuss what they find people with partial or no sight can quickly appreciate the predicament of the sighted person, and become able to estimate their one-sided view.”32 Therefore, one does not have to see to understand what seeing means and how it works. Hayhoe’s ultimate conclusion is that these philosophical studies have, at their core, problematic assumptions, and that their emphasis on philosophy has contributed to the absence of psychological studies in the classroom. Existing studies are few in number and are out of date or are based upon studies which rely on the projection of blindfolded subjects with sight privilege.

31 Ibid. 182.
Hayhoe is not the only scholar to question this philosophical conceptualization and centralization of vision. People who have partial or no sight as well as scholars and activists who research partial or no sight have long argued against privileging sight, or at the very least privileging sight without accommodating other sensoria. Many scholars have yet to incorporate these perspectives into their own work. Comics studies would do well to answer Ian Hague’s call for a multisensory approach to scholarship, if not for the sake of a more accurate understanding of the ways in which perception and the senses function in relation to comics, for at least a more inclusive understanding of the medium and its capabilities, and what better way to do so than to build upon the work of scholars who study perception and the senses and creators who push the boundaries of sensorial definitions.

Due to theories of cognition, like dual-coding theory, the scholarly study imagery has also faced contention on the point of ocularcentrism. Dual-coding theory, first proposed by Paivio in 1971, maintains that human beings have two modes for forming mental images, verbal association and visual imagery. These two modes result in mental images being stored in two different locations in the brain, which increases the likelihood of recall. On the surface, this theory seems like a great way to explain why comics are unique as medium, because they often utilize both verbal and visual elements. However, dual-coding theory also falls prey to an ocularcentric understanding of imagery and the ways in which images are constructed.

Scholars who study partial or no sight contend that an image or picture does not have to be visual. Linda Pring and Alison Eardley, psychologists who study perception and partial or no sight, argue that images can be perceived and understood in ways that do not rely solely on vision. They suggest that visual imagery is not the only way to convey information and that other sensory experiences can be just as effective in communicating and understanding information.

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sight, address the question of “image” and visuality in “Cognitive Styles and Effective Presentation.” They argue that, “Imagery, as a term, describes a complex, interactive, and multimodal experience, one that relies on both perceptual and memory abilities.” Additionally, they argue that, in comparison to “visual” perception and images with ocularcentric notions, there has been little research into non-visual forms of imagery and the ways in which they are processed, especially without being studied in opposition to visual imagery. They build upon the work of another, quite renowned psychologist, Martin A. Heller, who has long argued that human beings do not need vision to make or interpret images. Heller’s multiple studies and hours of experience with students with partial or no sight have led him to conclude that, while constructing imagery without sight is indeed different in some ways, the idea that the absence of vision leads to the absence of imagery and spatial perception is a myth.

Part of the origins for this myth is a result of the privileging of and focus on perspective within art. For those who argue that perspective is uniquely visual and based on experience, Dominc M. McIver Lopes, professor of philosophy, argues that drawings by readers with partial or no sight, for they can and do draw, prove that perspective is not a solely visual phenomenon, and therefore, pictures and imagery are not either. John M. Kennedy argues that this perception and the lower rates of people with partial or no sight can be explained by how few teachers and parents encourage the children in their care to draw. And, as may be suspected in light of

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36 For examples of drawings by people who have partial or no sight, see pages 74-81 and 140-144 of Art Beyond Sight.

research already covered, children who have grown up with partial or no sight do use different
techniques for drawing imagery that the average person labels as visual. For example, these
children may draw a car reared up on its back wheels or from the top with all of its wheels lined
up evenly with the road and rounded spokes in order to represent motion.38

Kennedy also discusses what McCloud calls “closure,” which happens for people with all
ranges of sight. For example, when drawing a house, the children with partial or no sight in
Kennedy’s study often constructed houses with gaps between lines that are, according to their
referent, supposed to be connected. Of course, children who are sighted do this as well.
Additionally, when raised images have gaps, Kennedy’s students were able to recognize that
gaps in an illustration did not necessarily mean that there were gaps in the image or the referent.
For example, when Kennedy’s students and most children draw a house, they typically leave
gaps between the roof and the body of the house. Kennedy found that his students were able to
read this image as a drawing of a complete house, with roof and body attached. Kennedy also
argues that this is represented in braille as well, which consists of feeling a raised line of dots.
The sensorial information provided by touch is that these dots are part of a straight line, even
though there are gaps between the dots, just as sight bridges those gaps and constructs the
meaning from the whole.39

Language and imagery used within language are not only visual either. Elliot W. Eisner
states, “language as we normally use it is a symbolic device, and symbolic devices that do not
have referents do not symbolize. To symbolize, a symbol must be connected to a referent — that

39 Ibid.
is, to an array of qualities one can experience, or that one has experienced, or that one has imagined.” The important word here is “imagined.” Many definitions, perceptions, and opinions about imagery fail to account for the fact that an image is constructed by both experience and imagination. And it does not help that imagery has been labeled visual, because “Contrary to popular opinion, in the beginning there was the image. It is the image that gives meaning to the label. The information of the image is a cognitive event.” Eisner uses “cognitive” as Rudolf Arnheim described it in his own work, “By ‘cognitive’ I mean all mental operations involved in the receiving, storing, and processing of information: sensory perception, memory, thinking, and learning.” Therefore imagery is not simply a construction of something as it has been experienced by senses. It is much more complicated and encompasses the entirety of the human anatomy which drives these processes.

Additionally, Eisner cites Dewey who believed that, “perception ceases when recognition begins.” By labelling something as only visual, especially when it is recognized that “only visual” is not accurate, the ability for one to continue to form an understanding about that something, images included, is stunted. As a multitude of definitions of comics argue that they are inherently a combination of images and text, the idea that images and text do not have to be based on sight renders the idea that comics is a visual medium both limiting and simply

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41 Ibid. 63.

42 Ibid. 64.

43 Ibid.
incorrect. And if that is the case, it is especially limiting and incorrect to assume that comics are, as McCloud suggests, mono-sensory.

Research Questions, Methods, and Chapter Summary

This paper seeks to answer Ian Hague’s call for multisensory approaches to the study of the comics medium by examining closely comics which have been created for consumption in the absence of sight, or with limited emphasis on sight. With the state of the definitional project as it is, this paper will try to avoid the pitfalls of defining the medium, choosing instead to take a cue from Aaron Meskin who ended his discussion about the definition of the medium by stating, “Let’s get beyond the definitional project.” In order to get beyond definitions, the examples studied here will be treated as comics simply because they are labeled as comics or as interpretations of comics, because as Martin Barker states, “It is hard to state without sounding tautological: a comic is what has been produced under the definition of a ‘comic.’”

The comics analyzed here have been explicitly marketed as comics for people who have partial or no sight. The only exception, the GraphicAudio audiocomic in Chapter 2, is itself part of a decades long history of the creation of audiobooks for people who have partial or no sight. In addition to being left out of the definitional project, these comics have been understudied within the academy. Therefore, this paper also seeks to assist in the construction of a more inclusive alternative to the ocularcentric perception of comics, as a visual medium with a fixed

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and predictable sensorium, and to reveal opportunities for innovation for creators and scholars alike by addressing the following research questions:

- What techniques have been used to create comics for readers with partial or no sight, and what are the implications of those techniques on the comics medium?
- What do existing comics for readers with partial or no sight have to tell us about the comics medium and its orientation to the senses?

In order to address these questions, these comics will be placed within a longer history of media and visual imagery that have been adapted for people with partial or no sight. These techniques and standards for replacing and/or entirely doing without sight-based information will be summarized and used to analyze the design of existing comics for readers with partial or no sight. Chapter 1 is an examination of audioomics, which emphasize aural imagery in place of visual imagery and utilize techniques which include reading aloud, verbal description, and interpretive sound composition. Chapter 2 is an examination of tactile comics, which include tactile images, tactile text, or a mixture of the two in place of or in addition to visual imagery.

Due to the large body of existing research on mainstream comics, including Hague's own analysis of mainstream comics and the senses, they will not be addressed here for means of comparison.47

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47 For more information on multisensory approaches to studying mainstream comics, please see Ian Hague's *Comics and the Senses: A Multisensory Approach to Comics and Graphic Novels.*
Figure 2: McCloud’s caricature argues that the reader drops the axe. Source: Scott McCloud. Understanding Comics (New York: William Morrow Paperbacks, 1993), 68.
WHY PEOPLE CHOOSE THE TOOLS THEY DO TO CREATE THESE STORIES.

COMICS REQUIRE US TO MAKE A CONSTANT STREAM OF CHOICES REGARDING IMAGERY, PACING, DIALOGUE, COMPOSITION, GESTURE AND A TON OF OTHER OPTIONS.

Chapter 1 - Audiocomics

As mentioned in the introduction, the senses tend to be organized, implicitly or explicitly, into a hierarchy, where sight is perceived to give the most accurate information or is "all seeing" like McCloud's version of the Eye of Providence. When sight is not available, the next sense on the hierarchy is often the sense of hearing. Sound is thought to be almost as useful as sight, and a decent substitute, because it provides spatial information, including distance and depth, to a greater degree than the other of the remaining five senses within this conceptualization of perception. In comics studies, Ian Hauge notes that sound is also the second-most discussed sense. However, when it is discussed, the ocularcentric idea that sound is experienced through sight is ever present. For example, Hague discusses Scott McCloud's characterization of sound, as shown in figure 5, wherein McCloud asks the reader directly, "Do you hear what I'm saying? If you do, have your ears checked, because no one said a word." Once again, McCloud posits that the sound the reader perceives are experienced through the eye by synesthesia. Hague also cites Joost Pullman, who said, "... most comics are silent; perhaps the turning of their pages produces a whispering, but that's about it. In their own way, however, they can be quite noisy." Though Pullman at least acknowledges that comics, as objects, can make sounds, he states first and foremost that comics are silent. As Hague notes, Pullman supports the idea that comics are "noisy," he is referring to the onomatopoeia, word balloons, etc. that are present in most comics. Much like motion lines and gestures, the techniques for representing sound with lines on the

48 Danijela Kambaskovic's "The Senses in Philosophy and Science: From the Mobility of Sight to the Materialism of Touch."

49 McCloud, Understanding Comics, 25.

50 Hague, Comics and the Senses, 63. Cf. Joost Pollmann's "Shaping Sounds in Comics."
page has been written about by many creators and scholars, but these discussions too fall prey to ocularcentric perception.

There is a long history of media which take advantages of sound without requiring sight. These media include radio productions and podcasts, which includes content like news, commentary, music, radio plays, and more. Assistive technology, like closed captioning, notetakers, text-to-speech, etc. make media like film and television more accessible to those with partial or no sight. The written word is being adapted into audiobook form at an astounding rate during this time of increasing demand. Though there are far fewer examples and much less of an emphasis on or push for accessibility within the medium, comics are no exception.

This chapter is an examination of the few existing comics which emphasize aural imagery, through reading aloud, verbal description, and interpretive sound composition, in place of visual imagery. With the exception of comics created by Comics Empower, which are examined later in the chapter, sound-centered, original comics which do not rely on referent texts, were not found. The examples studied in this chapter will be referred to as “audiocomics” in order to keep confusion between terms at a minimum. First, in order to examine these comics, a brief history of existing techniques for translating sight-based imagery into aural imagery, including reading aloud in the form of audiobooks, verbal description, and interpretive sound composition, will be provided. Then, excerpts of example audiocomics will be analyzed in order to discern which techniques are used, and these techniques will be analyzed for their success in


52 Language can make use of visual imagery as well, though most of these examples do try to remove visual imagery as much as possible.
translating visual imagery in comparison to any original texts and to industry standards and research.

A Brief History of Audiobooks

“Audiobook” as a term was instituted by the industry in 1994.53 However, audiobooks, also known as books on tape, Talking Books, and even phonographic books, have existed long before that time. Though the idea for recorded literature had been around for longer, it was not until Thomas Edison’s invention of the phonograph in 1877, when recorded literature became technically possible. However, the phonograph relied on wax cylinders for capturing and playing back the sound vibrations, and these cylinders could not be mass-produced for commercial sale due to the machine’s ability to record only one cylinder at once. The performers being recorded would have to repeat their performance several times, even when multiple machines were used, and quick and easy duplication was not feasible. Edison, however, saw the potential in the phonograph and listed ten potential uses, including “phonographic books for the blind.”54

Edison explained his idea for phonographic books further in “The Phonograph and Its Future,” where he stated the following:

“Books may be read by the charitably-inclined professional reader, or by such readers employed for that purpose, and the record of [each] book used in the asylums of the blind, hospitals, and the sick-chamber, or even with great profits and amusement by lady or gentlemen whose eyes and hands may be otherwise employed; or, again, because of the greater enjoyment to be had from a book


when read by an elocutionist than when read by the average reader. The advantages of [phonographic] books over those printed are too readily seen to need mention. Such books would be listened to where now none are read. They would preserve more than the mental emanations of the brain of the author; and, as a bequest to future generations, they would be unequaled. For the preservation of languages they would be invaluable.”

As evidenced by this passage, Edison believed phonographic books would make literature more accessible, more enjoyable, more widely read, and would enable the creation of an archive for future generations, for people who could and could not see. Ultimately, all of these uses of recorded sound would come to pass. However, it would take many more years of technological development to make all of these uses feasible. In fact, it took a few years after the creation of the phonograph for recordings of short readings and recitations to begin to circulate non-commercially, and importantly, Edison’s vision for full length novels as phonographic books, available for use by readers who could not see, did not come to fruition until the next century due to the costs to create, duplicate, and distribute the recordings in addition to their weight and fragility.

A few decades later, after more technological innovation in recorded sound which was influenced by the gramophone, motion pictures, and radio, Edison’s vision for the prevalence of recorded books for people with partial or no sight came to fruition in the 1930s, when the

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56 Phonographic books were seen as the ultimate next step for literature by many, including those who could see. For more, see Matthew Rubery’s “Canned Literature: The Book after Edison.”

Carnegie Foundation gave the American Foundation for the Blind (AFB) funding to make audio recordings of books, which they called the Talking Books Project. The success of their efforts led the United States government to set aside funding in order to add Talking Books to the existing Library of Congress Books for the Blind program which already collected and distributed books in braille. However, at this point, Talking Books still faced challenges in cost, fragility, and accessibility. This began to change when, in 1948, the LP and the instrument used to play it were "perfected enough" to be sold commercially. Though the LP helped along the Talking Books project, the popularity of these recordings, in part due to the quality of the voice work, raised an intense debate about copyright, which, among other things, resulted in the legal ruling that Talking Books had to be labeled "solely for the use of the blind" and could not be sold to readers who did not have a documented need for them. This remained in place until 1972.\textsuperscript{58} This led to the popular perception that audiobooks are only for readers with partial or no sight, despite the fact that Edison's original conception of phonographic books included audiences who could see as well.

The cassette tape was invented in 1964, and by the 1970s, they were the format of choice for recorded books. This made them cheaper and more durable, which in turn allowed the libraries to take audiobooks into their collections. This is the period in which recorded books became known as "books on tape," and they were called that until 1994 when "audiobook" was named the industry standard. The preferable format of audiobooks became CDs in the early 2000s, and digital recordings became the preferred format in the late 2010s, though audiobooks

are still being produced on CDs too. Both CDs and digital recordings were steps toward easier accessibility and duplication, more availability, and less cost.\textsuperscript{59}

Recently, audiobooks, along with podcasts, have been growing steadily in popularity and availability in the last few years, and the Audio Publishers Association (APA) has the statistics to show it. In May of 2016, the APA released their annual sales survey for audiobooks, which showed growth in sales and number of titles. In 2015, audiobook sales totaled more than $1.77 billion, which was a 20.7\% increase over sales in 2014. Additionally, the number of audiobook titles has increased by 29,374 in the last five years. The content is overwhelmingly adult, 90.4\% to be exact, and mostly fictional, at 76.3\%. Importantly, the unabridged format, or recording of original text without editorial alteration, reigns at 96.3\%. Statistics for how many downloads are for readers with partial or no sight are not provided.\textsuperscript{60}

Aside from the format in which they are published and the higher quality of production, audiobooks have not changed much since they were created. They are, quite simply, recordings of someone reading. Almost all audiobooks are recorded readings of existing books in print, though there is beginning to be some experimentation with original content using a method similar to Netflix’s production company.\textsuperscript{61} As exemplified by the percentage rate of abridgment, the original text is rarely altered at all when recorded. Since most audiobooks are essentially readings of existing text, there is not much room for interpretation, except for the occasional audiobook which includes some soundtracks or sound effects. Abridged audiobooks are

\textsuperscript{59} "A History of Audiobooks."

\textsuperscript{60} "Another Banner Year of Robust Growth for the Audiobook Industry."

shortened versions of their print counterparts, designed by editors to maintain the essence of the original text. The prevalence, and preference for, unabridged audiobooks means that most audiobooks are several hours long. According to Voices.com, an employment and resource site for voice actors, the average audiobook is 100,000 words long, which equates to around eleven hours of audio and at least double that in time spent recording in the studio. Some of the missing information, even in unabridged audiobooks, is visual, including maps, photographs, and charts. For example, a recent popular audiobook, Aziz Ansari’s *Modern Romance*, comes with a warning from Ansari himself in the introduction to the audiobook, where he says, “You won’t see none of these charts, ’cause you got the audiobook. So, I’ll try to describe ’em or somethin’. But I don’t know. You may have screwed up. I mean, you get to hear my lovely voice, but no charts.” Though there are instances in which the absence of visual information does not equate to the absence of necessary information, like photographs used in a particular edition of a classic text that were not included in the original, the absence of these materials in nonfiction audiobooks like Ansari’s can lead to important information being lost due to the performer’s inability to describe the visual information adequately.

Today, the benefits of audiobooks for readers with partial or no sight are many. They are cheaper, more easily produced, more accessible, and there are more of them available today than ever before. Additionally, they require little additional training for readers with partial or no sight, unless of course they also have partial or no hearing. This is why audiobooks, during the

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phonographic and Talking Books eras and even now, bring up discussions about the death of the book or the obsolescence of braille texts. They are especially easy to use in comparison to braille text and tactile images, which require training and practice to master. However, in terms of literacy, readers with partial or no sight are likely to have a harder time understanding the ways in which languages function and do not have the same level of independence, in terms of both pacing and speed of reading, as readers who use braille text and/or tactile images. Though audiobooks are quite popular and provide excellent material for readers with partial or no sight, they do not provide all of the necessary material for literacy skills, nor do they always provide the printed, sight-based information that is available in the original text. And, most importantly, Audible and Audiobooks.com, the two largest and most popular outlets for digital audiobooks do not have audiobooks based on comics. Though the audiobook industry primarily focuses on adapting existing texts and rarely address pictures and charts at all, let alone comics, there have been attempts by other industries, including the art industry, to develop standards for interpreting visual information for people with partial or no sight. Their techniques tend to fall into one of two categories: verbal descriptions and interpretive sound compositions.

Visual Imagery and Verbal Description

Joel Snyder, one of the United States' leading verbal describers, defines verbal description as a “narrative technique that renders the visual images of theater, media, museum exhibitions, and other endeavors more accessible to people who are blind or have partial vision.

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The visual is made aural — and oral — by way of the spoken word.”

To the average person, the existence of verbal description is not a surprise, given that verbal description for people with all ranges of sight has been around as long as speech has. However, in order to provide educational and professional quality verbal description, people who have the privilege of sight must learn and adhere to a set of standards which are based upon existing research and practices from researchers and activists who work with people with partial or no sight. Snyder argues that verbal describers who have sight privilege “must learn to see again, to notice the visual world with a heightened sense of acuity, and to share those images… with users.” Snyder cites photographer John Schaefer who argues that this training is itself a different form of “visual literacy,” and that all visual literacy is taught.

Snyder argues that the visual literacy required by verbal description is built upon the foundation of four elements: observation, editing, language, and vocal skills. First, a describer must learn to observe using existing guidelines and standards for noticing important aspects of an image or event. Then the describer must edit their observations into a summary that is manageable in terms of both time and complexity. For example, people with partial or no sight do best with summaries which “proceed from the general to the specific, refer to color, include directional information, etc.” Next, the describer must learn to use their language precisely, trying to be objective, vivid, and clear while also avoiding metaphors and keeping their

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67 Ibid. 224.
68 Ibid. 224. Notice that he did not say that people with sight privilege should learn to see like those who cannot, for that would encourage projection.
69 Ibid. 226.
descriptions as simple as possible. Finally, describers must learn how to control their voice in
order to inflect meaning and speak clearly. These skills are similar to those learned by actors and
orators in the theater, whether their descriptions are recorded or performed for people with partial
or no sight.70 Art Education for the Blind has published a series of guidelines for verbal
description, which provides greater detail and a variety of techniques in a series of sixteen
detailed steps.71

As these guidelines were created for the creation of verbal description in the context of
the museum and art exhibitions, there are some steps which either do not apply to comics or
should be altered to fit the needs of the medium. However, there are many guidelines which are
already germane to comics. First, the guidelines suggest that describers should begin with
standard information about the object whose visual imagery is being described, including artist,
title, date of publication, dimensions, and if necessary, even some historical context. This could
be included by describing the dimensions and the information on the covers and potentially an
explanation of that comic’s place in a larger series if applicable. Second is to provide a general
overview of the subject, form, and color of the visual imagery being described, beginning with
the explicit subject and then providing a description of the composition and its overall
impression, including colors, and mood or atmosphere. It is important to note than many people
who have partial or no sight have memories of color, and those who have not seen color are
familiar with their uses in everyday conversation and even symbolism. Third, it is important to
provide orientation via directional descriptors, including locations of figures. The guide notes

70 Ibid. 225.

71 Elisabeth Salzhauer Axel, Virginia Hooper, Teresa Kardoulas, Sarah Stephenson Keyes, and Francesca
Rosenberg, “AEB’s Guidelines for Verbal Description” in Art Beyond Sight (New York: Art Education for
that a useful and common directional method is to use the positions of numbers on a clock face. For example, “in referring to a person’s face, you would describe the mouth as being at six o’clock.” Additionally, “left” and “right” should be qualified by additional information, including the position of the reader/listener and the left and right of the object or person being described. Third, describers should use specific, clear and precise language, and terminology should be defined, and the describer should be as vivid as possible. Finally, the guidelines promote a multisensory approach, arguing that verbal description is best understood in combination with information provided through other sensory means, including interpretive sound compositions and tactile text and images which will be discussed later in this paper.

As evidenced by these guidelines, verbal description requires a lot of effort and practiced skill. Though these techniques are the best way to verbally describe something for people who have partial or no sight, there are a few hurdles to these standards being applied to comics which utilize aural or tactile means of translating visual imagery and often are made to be mass produced and/or mass consumed. In order to determine the balance of accurate and necessary detail, comics need more creators and academics practicing these techniques, experimenting with the form, and working together to adapt these guidelines to this medium.

Visual Imagery and Interpretive Sound Compositions

Award-winning sound designer, Lou Giansante, who has created sound compositions for Art Education for the Blind, argues that despite the prevalence of verbal description it is important to remember that it is not the only means by which imagery can be interpreted through

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72 Ibid. 230.
73 Ibid.
sound for people with partial or no sight. Giansante’s approach is to create “interpretive sound compositions,” which involve translating emotional aesthetic responses into sound compositions which can include realistic or nonrealistic sounds, manipulated and fabricated effects, music, or all three. Rather than observing and interpreting visual information and intended emotion as objectively as possible, Giansante’s approach uses sound to translate visual style and to elicit feelings or the emotional essence of an artwork or aesthetic experience. Feelings which, he argues, can and often do occur instantly, before the viewer’s ability to verbalize them, in a manner similar to the ways in which experiencing them by sight. Importantly, Giansante notes that these interpretations can be and often are different from the experience a person with the privilege of sight would have, and the experience will not be the same for every listener with the privilege of sight or with partial or no sight. Moreover, he argues that, on both accounts, these experiences do not have to be the same.

When creating compositions for people with partial or no sight, Giansante points out that the technology used is highly influential on the composition. For instance, he only designs for headphones so that he can take advantage of stereo and biaural technology, which allow him to position sound around the listener, from left to right, near or far, above or below in order to convey depth and spatiality. Importantly, Giansante notes that interpretive sound compositions are not meant to stand alone. For example, interpretive sound compositions that are meant to translate an existing artwork should include context, like verbal description, narrated art history,

74 Most notably, Giansante helped to create the award winning Art History Through Touch and Sound.

75 Film and television viewers have experienced sound compositions with similar goals and intentions in the form of musical soundtracks, scores, and sound effects.

or tactile graphics. Giansante’s examples intentionally and precisely orchestrate a multisensory translation of the visual information and aesthetic experience elicited by an artwork: “For example, feeling a raised-line diagram of a Cubist painting, while listening to a ‘Cubist’ sound composition. Or feeling a diagram of a floor plan of a Romanesque church while hearing its dimensions and space through sound recorded in the church.”

Though Giansante’s primary mode is interpretive sound design, he utilizes as many types of sensory information as possible to convey the aesthetic nature of the work.

Once again, it is worth reiterating that these techniques also require a lot of training and practice and research, and that comics creators and academics who are invested in the form, need to experiment and construct guidelines which better suit the needs of this medium. That being said, a few creators are already using some of these techniques and experimenting with ways to construct comics using aural techniques. Some of their work is addressed in the next section.

Examples of Audiocomics

The few audiocomics for people with partial or no sight that exist now are made in the style of audiobooks or audio plays, wherein an existing text which includes visual imagery is translated into sound by being read aloud. The visual imagery is presented in a few different styles, but all of them include verbal description, interpretive sound compositions, or some combination of the two. Some audiocomics are translated panel by panel, others take a more interpretive approach and do not include references to panels and page layouts. Existing approaches vary in their success in interpreting imagery, and seemingly, the number of

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77 Ibid. 254.

78 Ibid.
audiocomics created as standalone comics, or comics created without reference to an existing text, is limited to the catalog of one production company, Comics Empower. Each of the following examples will include a brief overview of the audiocomic’s narrative, style, and the techniques used to translate visual imagery.

Marvel’s *Daredevil #1* Audio Edition (2011)

Matt Murdock, also known as Daredevil, is a Marvel character known for his extrasensory capabilities. Murdock was blinded as a boy by a radioactive substance which fell from a vehicle he jumped in front of to save a man’s life. Though the radioactive substance takes his sense of sight, his remaining senses are heightened to superhuman levels, and he develops “radar sense,” an ability similar to echolocation. Murdock becomes Daredevil to avenge the death of his father using his unique sensoria. Daredevil is an example of what, in disability studies, is called “supercrip,” which is defined as an:

“allegorical figure of disability…. The central feature of the supercrip is success at overcoming, at demonstrating ability beyond that which is commonly expected of disabled people. Such ability may be exhibited in many areas, but the most striking qualification for supercriphood, as well as the most problematic, is physical prowess.”

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The character's characteristics and the way he has been written have been criticized for encouraging and participating in narratives which suggest that people with physical limitations can only become “super” by overcoming or transforming their disability and for furthering the myth that the absence of a sense leads to the strengthening of all the others.

However, Daredevil is still one of the few characters whose content provides representation of life for the blind, and the various iterations of Daredevil stories across formats usually renew popular interest in accessibility by audiences and by the production companies themselves. For example, after pressure from viewers, Netflix made headlines when it provided verbal description for all of the episodes for their television adaptation of Daredevil and promised to do so for as many Netflix shows as possible.81 Though the Daredevil franchise is problematic in many ways, it does remain influential in calling attention to issues of representation and accessibility for readers and viewers who have partial or no sight. Letters from blind viewers also led Marvel to address accessibility in relation to their Daredevil comics series. In 2011, Marvel Senior Editor Steve Wacker decided to create and release an “impromptu” free audiocomic of the newest Daredevil Issue #1 with the series’ writer, Mark Waid, and other Marvel editors. The release statement said, “The Man Without Fear has been a Marvel stalwart for nearly 50 years as well as a representative of the visually-impaired in popular fiction, but up to this point, those deprived of sight themselves have had to rely on friends reading them copies of Daredevil in order to experience Matt Murdock's adventures.” With the

goal of creating a more accessible issue, for the first time in fifty years, and of giving readers
with the privilege of sight a “new take” on Daredevil.82

The audiocomic begins with an introduction to the process of making the audiobook, the
voice cast, and a short synopsis of Daredevil’s past. The reading of the comic begins with Mark
Waid, the writer, who starts by reading the panel descriptions from his script for page 1, panel 1,
followed by the editors’ dramatic reading of dialogue and exposition. For this sample, the editor
providing dialogue and exposition is Tom Brennan. The first few panels are described as follows:

Waid: “Page 1, Panel 1: It’s late afternoon, dusk. This entire first scene takes place at
The Cloisters, a beautiful NY building/garden/park made up of several
European medieval abbeys. It’s colorful and doesn’t look at all like the usual
Daredevil set piece. Let’s start with an establishing shot from whatever angle
you think is most beautiful.”

Brennan: “On the northern tip of Manhattan, overlooking the Hudson, is a branch of
the MET called The Cloisters. The main building is a meticulous reassembly
of five medieval European abbeys, every brick authentic while the
surrounding gardens are a marvel of landscaping and living tapestry of colors
and textures.”

Waid: “Panel 2: Daredevil, battle ready, billy club in hand and ready to pounce, his
senses at full alert, crouches in the shadows on a scenic rooftop.”

Brennan: “I’ll bet it’s a beautiful sight.”

Waid: “Panel 3: Super tight on Daredevil’s eyes, squinting a bit as he concentrates.
Eventually, we will come up with a less traditional visual for this, but this one
time, to fully make clear to the readers what’s going on, we see concentric
circles representing radar sense emanating from between his eyes.”

Brennan: “I wouldn’t know. A radioactive accident altered my senses when I was a
kid. So let me tell you what I ‘see.’”

Waid: “Page 2, Panel 1: Daredevil’s point of view as perceived by his radar sense. A
small wedding is about to take place in the garden below but to Daredevil it’s
all slightly fuzzy silhouettes.”

comics/16485/daredevil_1_audioEdition. They discuss the letter received by fans with partial or no sight
Brennan: “A courtyard filled with tuxedos, gowns, and folding chairs that creak like wooden ships.”

Waid: “Panel 2: A tight profile on Daredevil, closeup on his ears and on his mouth.”

Brennan: “The sound of happy laughter, and in the breeze, the salt taste of tears.”

Waid: “Panel 3: Tight on Daredevil’s hand, ungloved, as the tips of his first and second fingers touch an expensive wedding invitation, feeling the embossing as if reading it.”

Brennan: “Embossed linen pulp announcing the nuptials of Deborah Giacomo and Vict — no — Vincent Petrocelli.”

Waid: “Panel 4: Tight on Daredevil’s nose and, if you think it works, tight on his intrigued smile.”


(See figures 6 and 7 to compare the excerpt of the audiocomic to the original text.)

As shown here, Waid opens Issue 1 by directly addressing Daredevil’s senses, extrasensory capabilities, and his orientation to his senses. The first scene immediately reveals to the readers that Daredevil has partial vision, and constructs for the reader the ways in which Daredevil perceives the world. This sample prepares the reader with a pattern for the ways in which Daredevil’s perception will be addressed and that it will be addressed directly in a way that is not common to superheroes with sight. As exemplified by the sample and by its original text, much of the visual imagery in this sequence accentuates Daredevil’s body, with closeups on his nose, mouth, and hands depending upon the sense being discussed.84

Marvel’s attempt at an audiocomic is to proceed panel by panel and to provide the writer’s instructions for the illustrator, then narration, and then dialogue. This panel-by-panel approach falls into the category of verbal description, and in and of itself, the panel-by-panel

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84 Ibid.
approach provides opportunity for the reader to connect the imagery themselves. However, because this is one long, linear, audio recording, the reader is not given the space or control that traditional comics provide for readers with sight privilege. There is no audio equivalent here for the gutter. A potential solution is to include full page description and to possibly break up the audio somehow.\textsuperscript{85}

Additionally, listening to Waid’s script, which again was made for interpretation by an illustrator, is akin to listening to someone read a screenplay, rather than perform it. This approach is no substitute for verbal description that was created using existing standards and techniques and performed by trained describers. For example, Waid says, “Let’s start with an establishing shot from whatever angle you think is most beautiful” and “Tight on Daredevil’s nose and, if you think it works, tight on his intrigued smile.” Though some readers might want to have access to the Daredevil scripts, it is likely that many readers would rather have it separate from the audiocomic, because the description of the audiocomic gives the impression that is meant to be a translation of what is on the page. Importantly, Waid’s script was created, by nature of its purpose, before the final illustrations were drawn and edited. Therefore, his descriptions are less like the interpretation of the imagery on the page in the first place, but are instead more general descriptions of authorial intent. This comes to bear on page one, or figure 6, and directly lessens the effect of the panel-by-panel approach, wherein Daredevil is perched athletically outside of The Cloisters. The size of the panels and their relation to each other are not discussed, so the reader is not informed that panel two is the majority of the page, which places emphasis on Daredevil in the center. Though Waid’s script describes Daredevil as in the shadows on the roof, 

\textsuperscript{85} The difficulty of providing opportunities for closure in audiocomics is addressed further in the conclusion to this chapter.
it does not convey that the actual image emphasizes Daredevil’s body, on the outside looking in, which impacts the scene, its visual imagery, and its interpretation. In fact, in the final version, Daredevil is not even in the shadows. Finally, the description of the cover is also left out of the audiocomic, and the cover can provide important information.

Additionally, no interpretive sound compositions were created, and the voice cast were not trained vocalists. While that is an acceptable strategy with the goal to make a comic that does not require the reader’s acquaintance to read to them, the absence of additional sounds in combination with the confusing information for illustration from the script makes for a narrative that create confusion and removes focus from the story. Though this audiocomic is an acceptable first step in the direction of making Daredevil accessible to readers with partial or no sight who face a shortage in comics made available to them, the execution of the narration leaves much to be desired in terms of replicating the experience of reading a comic and in providing narration that actually provides necessary information in the most useful way. That is not to say that comics creators should not attempt to create audiocomics in these ways, nor to say that they must be perfect if they do. However, Marvel is an institution that should have the means to hire the services of trained professionals. Additionally, creators who who do not have the necessary training run the risk of falling prey to projection and creating an experience that ultimately is not usable to the audience they are trying to reach. The goal of this comic, as stated by the creators, was to enable readers with partial or no sight to experience the comic without having to ask for someone to read it to them. On that account, the audiocomic succeeds, but it really does only remove the need to find a friend to read it. Though it does provide access to the original scripts,

86 And they do allow professionals in later, which will be discussed in the next section.
which many fans enjoy reading, it does not provide an accurate representation of what is on the page. In order for it to be a more successful translation into audio form, the panel descriptions from Waid’s script would need to be replaced with verbal descriptions from a trained describer which addresses the actual illustrations made by the illustrator in order to avoid confusion and dissonance.

GraphicAudio’s *Daredevil: Guardian Devil (2015)*\(^87\)

Four years later, Marvel Comics sanctioned the release of another audiocomic of Daredevil, one based upon a different Daredevil series, called *Daredevil: Guardian Devil*, which was written by Kevin Smith, pencilled by Joe Quesada, and inked by Jimmy Palmiotti. This time, the audiocomic was produced by GraphicAudio, an audiobook publishing imprint of The Cutting Corporation which was established in 2004. They publish audiobooks of both novels and comics, of which they have published series from both Marvel and DC. To date, they have produced forty-four audiocomics, and their catalogue extends beyond Daredevil comics, though their Daredevil comic will be analyzed for the sake of comparison.\(^88\)

GraphicAudio’s tagline is "A Movie In Your Mind".\(^89\) With a tagline like that one, it is no surprise that GraphicAudio’s audiocomics tend toward the interpretive sound composition approach to translating comics already in print. They utilize vocal performers, soundtracks, and sound effects which make the comic feel like a theatrical production. Because the production

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\(^{89}\) Ibid.
company produces other kinds of audiobooks and has a long history of doing so, GraphicAudio audiocomics are similar in production to many other audiobooks. As one might expect, with a focus on interpretive sound composition, GraphicAudio’s audiobooks and audiocomics feel as though they are a step beyond someone simply reading aloud from the page.

The following is a short transcription of a sample from the very beginning of GraphicAudio’s *Daredevil: Guardian Devil*:

Unknown: “All it requires is a leap of faith.”
[sound of Daredevil jumping and flipping in the air]
Daredevil: “When I was a child I lost my sight, thanks largely to a good deed. Later in life I continued the trend by becoming 1) a lawyer by day and 2) a costumed crime fighter by night. From 9-5, my name is Matt Murdock. After that, I go by Daredevil. The same accident that took my sight more than compensated for it with what you might call preternatural enhancement of every other sense to the point where spatial perception isn’t a hinderance. It’s one of my greatest assets. For instance, I can hear on the street below. [sounds of person running and crying in fear] A girl with a baby in her arms being chased down by a large sedan. The arrogance of John Q. Average Thug never ceases to amaze me. Don’t these people read the papers, or watch the news, or even trade stories in a seedy bar somewhere.”
[sound of Daredevil jumping]
Daredevil: “How is it they’re never apprised of the fact that the Kitchen is under my protection?”
[glass crash] [car tires squealing]
Criminal: “Woah! Holy sh-!”
Daredevil: “The costume is lined with meticulously woven micro-mesh steel fiber. God bless Reed Richards.”
[jumping sound] [cars squealing] [car crashes] [music with electric guitar]
Daredevil: [sound of water from busted hydrant] “The hydrant the car crash burst open falls under the billion year insurance policy the city took out for these kind of damages. I brokered the deal last month, pro bono. More of
that Catholic guilt the padre was talking about. The adrenaline rush subsides once the threat is neutralized. [sigh] And I’m back to square one, battling that aching sense of morose solitude I woke up with. I thought a visit to church might alleviate it, like when I was a kid and I’d obsess over — No. Stay focused on the task at hand. First, clean up the mess.”

Daredevil: “One out cold. One subdued enough to leave in the hands of New York’s finest. That gives me a moment to concentrate on the object of their pursuit and find out why.”

[footsteps] [sound of broken car door opening] [person groaning]

Daredevil: “She’s gone! [sigh] Getting the truth out of the two jokers in the car is going to prove fruitless without her testimony, which means I’ll spend the next few minutes explaining to the police why I felt the need to put my fist through the windshield of a car and destroy city property. Thanks, little girl. You’ve just made my life incrementally more difficult.”

(The original pages for this scene are included as figures 8 and 9.)

Though this is where the audiocomic begins, the original text has ten pages which come before this scene. Three of the pages are the cover of the issue and one full spread splash page that encompasses pages eight and nine. It is not surprising that GraphicAudio chose not to include the cover and splash pages when creating an audiocomic based upon a volume of several issues such as this one, because with their goal of creating an interpretive, cinematic experience, doing so would create breaks in an otherwise seamless narrative. As is, GraphicAudio leave short, seconds long gaps with music between issues which function similarly to signals for scene changes in audiobooks.

Most interestingly, the other seven pages are full of details which set up the world, Daredevil’s place in it, and some character development for both Daredevil and the girl with the

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small child depicted in this scene. Pages one and two include a letter, overlaid onto a depiction of Matt Murdock asleep in his bed. The letter is to Murdock from someone named Karen who refers to their relationship which has ended. Page three depicts a maternity ward at a hospital, where a shadowed figure is shown leaving one of the rooms shortly before the nurse returns and screams. Pages four and five begin with the young girl running with her child past a newspaper dispenser with a newspaper which reads, “Hospital Tragedy.” The narrator reveals the girl is of high school age and that her Catholic parents were shocked when she announced she was four months pregnant. As she nears the church, the narrator reveals that she is running away after walking in on men who were beheading her mother over her father’s corpse. The page ends with Matt Murdock’s hand holding a crucifix as he is prompted to confess. Pages six and seven depict Daredevil in the confessional confessing to a priest, while also having to deal with the fact that he can sense a young girl running while carrying a child in his vicinity.91 Additionally, the pages are riddled with visual imagery which introduce some of the symbolism that will be used throughout the text and some of the necessary details for the plot among other things. This summary of those pages is of course lacking much of the detail put into them by the creators and is itself not intended to be a legitimate description on par with a trained verbal describer. However, it will suffice for sake of comparison to the audiocomic, which in contrast, provides little context, save for a brief description in the first paragraph of Daredevil’s monologue, which includes a summary of his powers and the fact that he senses the girl’s presence. The decision to remove these pages could be one of managing the complexity or length of the narrative.

However, whatever the reason, these pages are full of detail and context that is not provided in the audiocomic.

In the first scene of the audiobook, or pages ten and eleven of the original text, most of the illustrations are translated into interpretive sounds. First, the reader hears the sound of Daredevil flipping through the air, though that is not exactly shown on the page. Next, there is the sound of glass crashing from Daredevil’s arm punching through the window of the car, the sound of which is represented on the printed pages in onomatopoeic form, or “KRRKSHH.” The audiocomic does not make it clear that Daredevil put his fist through the front window until the end of the scene during his exposition, but the inclusion of grunts from Daredevil and glass breaking provide enough detail for the reader to understand that Daredevil stopped the car himself by causing it to crash.

In this instance, the audiocomic is following the original text and illustrations quite closely with sound interpretations. The dialogue is mostly unaltered, save for an added line from the criminal. The criminal’s vocal reaction to Daredevil’s interference and, later in the scene, their groans of pain are not present in the original text. This gives them more of a presence in the audiocomic. Without these short moments of sound, their presence would be assumed, but not felt. The girl is represented by the sound of running, breathing, and fearful noises, but she is not given dialogue. This matches the original scene in tone, as she is only shown momentarily before being cast into shadow and then disappearing from the scene altogether.

These two Daredevil audiocomics represent two markedly different techniques for using aural imagery. The first uses a panel-by-panel approach with verbal description, and this one uses an interpretive sound composition approach which feels similar to a film or radio play. Though
the first may not be the best example of verbal description, it does attempt to provide access to the entirety of the original text. Whereas the interpretive approach, by nature, necessitates some editorial control, like abridged audiobooks. However, as evidenced by the sample, there are moments when interpretive approaches leave out information that is seemingly necessary in favor of keeping an experience at a shorter length.

There is one notable exception to this trend. An audiocomic adaptation of the award-winning comics series *Locke & Key* by Joe Hill and Gabriel Rodriguez, labeled an “audio play,” was created and recently released by audiocomicscompany.\(^92\) This audiocomic utilizes an interpretive sound composition approach similar to GraphicAudio and similarly has a catalog of audiocomics to offer. However in this case, the entirety of the *Locke & Key* series is included as one audiocomic, covering more than thirty-five issues with thirteen and a half hours of audio. With that much material to deal with, editorial decisions likely had to be made in ways that are similar to adapting books to film as well. Audiocomics which are based upon an already existing texts must face these issues at a higher rate than audiocomics made to be an audiocomic from the beginning.

Comics Empower’s *Bakasura #1* (2016)\(^93\)

Comics Empower is a venture dedicated to selling and creating comics for people with partial or no sight. The project was started by Guy Hasson, a science fiction writer with sight privilege. Most of Comics Empower’s audiocomics are original productions of comics made to


be audiocomics, though some do have accompanying print and digital texts. They are all voiced by the same person, professional voice actor Gabriella Lewis, who alters her voice to perform all of the parts. The Comics Empower approach is similar to GraphicAudio, except the production quality is likely much cheaper because Comics Empower has only one voice actor and one sound artist. Lower production costs allow the issues to be priced similarly to print issues, with the average audiocomic priced at $3.00. Also, in contrast to GraphicAudio, Comics Empower is marketed to readers with partial or no sight only. In fact, the website recently went dark so that visitors with sight privilege must use assistive technology to experience the content on the site. The only page available for readers with sight privilege is one which includes a brief description of the store and how readers with sight privilege might use assistive technology to read the site. The team also produces a podcast, called “Blind Panels,” which includes interviews with creators and musings on the nature of comics. Additionally, Hasson also started a competition for creators with partial or no sight. The winners get to have their comics produced by Comics Empower while maintaining the rights to their work. This initiative exemplifies Comics Empower’s mission both to make comics more accessible and to increase the number of comics creators and readers who have partial or no sight.

Though it is not clear whether Hasson and his team have studied aural techniques for representing visual imagery to readers with partial or no sight, Hasson does mention that his primary goal was to create comics which felt like comics while also being easily understood. In a press release for Comics Empower, Hasson stated that he has “found a way to describe the pictures in a way that doesn’t slow down the story and at the same time conveys everything in
the comic.”\textsuperscript{94} The Comics Empower approach is described in “The First Timer’s Ultimate Guide to Comics,” a recording which includes verbal descriptions of the environment of comic book stores, the average design of a printed comic, the ways in which series are organized, and how panels and their contents typically function. The recording ends with an overview of the Comics Empower approach and how to use the store and website. The mp3 is free when readers sign up for the site’s mailing list. For example, the recording includes an overview of Comics Empower’s techniques for creating these audiocomics. Here is a sample:

“In Comics Empower, each twenty-two to twenty-four pages translates to about twenty-five to thirty-five minutes of audio, depending upon how full the comic is with words or events that need describing. In Comics Empower, descriptions of the panels vary. We only describe the visual aspect that is important to the story or the mood in each panel. We do not over-describe in order since we would like to move the plot along. Everything you need to know will be in the description and no more. The drawing style or the colors used are not mentioned unless they are pertinent to the storytelling. For example, if a character has blue eyes, and it is relevant to the story, we will mention them, but we will not mention the eye color of every character just because they can be seen on the page.”\textsuperscript{95}

This description of the comics experience is limited in its scope, but Comics Empower acknowledges that within the audio. This is a great way to assist readers who may have had no experience with comics prior to this format. The verbal description included is less detailed than


some of the examples provided in the guidelines for verbal description of artworks, but it is high
quality and achieves a balance between simple and complicated which leads to less confusion.

The first contest for comics creators with partial or no sight resulted in a tie. One of the
winning artists, Pranav Lal, created Bakasura, of which the first issue was released earlier this
year. Bakasura is described as follows: “A mysterious demon, Bakasura, controls an Indian
village. What is the demon really? What does it want? Can the villagers break free? Can
superpowered humans save them?”\(^{96}\) The following is a short sample of Bakasura #1:

[intro music with choir]
“The cover: A tall humanoid creature stands on a flat plane. It has a triangular
head with white horns. It’s massive arms are akimbo. The arms resemble tree
trunks. The mouth is large, and it’s large teeth are visible. It’s body is hairy and
round.
Page 1, Panel 1: A number of small children, ages 5-12, work in a stone quarry.
An 8 year old boy, Ramu, is also working. He is thin and 4 feet tall. Ramu thinks,
“All I do is work, work, and work. No time for play. And how do I take out this
big stone?”
Panel 2: George, a boy taller than Ramu and just as thin, is working beside him.
George thinks, “To hell with undercover missions. I much preferred working on
the farm. Why do I have to do this using my hands? One nice mind-grab and
these stones would be separated.
Panel 3: Ramu tugs at a stone, pulling it apart from the quarry. Ramu says,
grunting sounds.
Panel 4: The stone falls on his left hand, crushing it. Ramu screams.\(^ {97}\)
Panel 5: George runs towards Ramu.
Panel 6: George looks intently at the stone, and it begins to float towards him.
Panel 7: George looks at Ramu’s mangled hand. There is blood all over.
Page 2, Panel 1: George carries Ramu out of the quarry, carrying him over his
shoulder.

\(^ {96}\) Lal. “Sample,” *Bakasura #1*. Audio.

\(^ {97}\) Interestingly, no audio of Ramu screaming is provided.
Panel 2: George brings Ramu to the medical station, which is a large tree just outside the mine. An old man sits underneath the tree.

Panel 3: The old man looks at Ramu’s hand with dead eyes and a flicker of pity. The old man says, “I will do what I can. Leave him here.” George says, “But I must take him to the hospital.” The old man says, “Finish your work. This is not the first time I have seen this kind of injury.”

Panel 4: George continues looking back as he walks back to the quarry. He looks at the other children. Everyone is busy working as if no one has noticed. George thinks, “Damn it. I don’t want to do this mission. I am sure there must be another way to find the demon.”

Like the first Daredevil audiocomic, this audiocomic, and Comics Empower in general, uses the panel-by-panel approach. However, this attempt is much more successful, because what is usually visual imagery has been created aurally in a way which is simple enough to enable readers to construct the imagery for themselves but interesting enough to move the narrative along. Also, because the writer himself has partial or no sight, there are no awkward moments of dissonance wherein a term is used that is not easily understood by readers with partial or no sight.

Additionally, this audiocomic represents competent verbal description, because it gives the reader a sense of exactly what is happening without frivolous detail. Also, these audiocomics include references to the cover page and its details, and they include letter pages at the end of every comic making the experience more akin to reading a comic with illustrations which require sight. Interestingly, no interpretive sound composition is used. It is unclear whether this is due to the small team, production costs, or some other cause. By sticking to a panel-by-panel approach and by providing imagery that is not confusing, this comic seemingly combines the most

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recognized characteristics of the comics medium with techniques which uphold the standards of 
verbal description discussed earlier in the chapter. Overall, these audiocomics are a good primer 
to using verbal description in audiocomics, and Bakasura seems to adhere to the most basic of 
the guidelines discussed earlier in the chapter. However, in order to be sure of its helpfulness, 
readers with partial or no sight would need to be interviewed.

Conclusions

Aural imagery has a rich history of being used to translate inaccessible visual imagery for 
people who have partial or no sight, as exemplified by the detailed guidelines that already exist within the art industry. However, there are only a few publishers and production companies who have attempted to use aural imagery in order to create audiocomics. Those who have done so tend to create these audiocomics with readers with partial or no sight in mind. The only company who does not explicitly state this is GraphicAudio, a studio that produces more traditional audiobooks as well. Most existing audiocomics are also based upon and adapted from existing comics, with the exception some of Comics Empower’s catalog. As audiobooks have become more mainstream, the popular perception that they are only for people who are have partial or no sight is changing, which ideally means that audiocomics might have a larger following if more were produced and they were marketed to the general public in larger markets like Audible and Audiobooks.com.

As exhibited by these examples, sound can be a great way to provide imagery for comics, because it does enable creators to depict depth and distance more easily. However, using aural imagery alone does have some downsides. The most difficult one to overcome is how much detail to include. Finding a balance between simplicity and detail is made difficult because of the
linearity and passivity that audio recordings, at least these audio recordings, require. The reader can pause and rewind or fast forward, however there is, as of yet, no auditory equivalent for seeing the entirety of a page or a two page spread, which can represent past, present, and future time and for moving at one’s own pace through the detailed imagery and narrative. Brief pauses when transitioning between issues or scenes can be helpful for giving the reader space to construct the imagery themselves, but it really is not enough to give the reader agency over their time and attention to detail. Also, the panel-by-panel approach as iterated by Comics Empower gives some space for doing so in the short moments when panel numbers and page transitions are announced. However, even with these elements, there is really no room for what McCloud calls “closure,” which is basically just giving the reader agency to connect the dots of the imagery themselves, to place the imagery in accordance with the dialogue and narration spatially and simultaneously, and to control the pace in terms of speed, narrative time, and close inspection of detail.

That is not to say that there are no solutions to these problems. Comics creators and academics alike need to analyze, utilize, and build upon existing guidelines for aural imagery for people who are partially-sighted or blind. Though the example provided tended to either use verbal description or interpretive sound composition, audiocomics might be better suited with a combination of the two, but that remains for further experimentation. As mentioned in the guidelines addressed at the beginning of this chapter, aural imagery is best used in combination with other forms of imagery, be they visual, tactile, or otherwise. These audiocomics attempt to replace visual imagery with aural imagery as much as possible, rather than approaching these comics from a perspective which takes all varieties of imagery into account. If the project of
making comics accessible to all sensoria is to continue, future attempts should utilize as many forms of imagery as possible as simply as possible.
Figure 5: McCloud’s caricature discusses the nature of imagery on the comics page, which he believes is experienced only by sight. Source: Scott McCloud. Understanding Comics (New York: William Morrow Paperbacks, 1993), 25.
On the northern tip of Manhattan, overlooking the Hudson, is a branch of the Met called The Cloisters.

The main building is a meticulous reassembly of five medieval European abbeys, even bricks authentic, while the surrounding gardens are a marvel of landscaping, a living tapestry of colors and textures.

—I'll bet it's a beautiful sight.

I wouldn't know. A radioactive accident altered my senses when I was a kid. So let me tell you what I see.

A courtyard filled with tuxedos, gowns, and folding chairs that creak like wooden ships.

The sound of happy laughter and, in the breeze...

Embroidered linen-purp announcing the nuptials of Deborah Giacomo and Vic-

And in the very back, a bride who smells like jasmine, cardamom, carnation and...


I'm staring at the wedding getting two of New York's biggest crime families because there's a rumor in the wind that a file is planned.

And as I once more ask myself who'd be idiot enough to draw a gun in this crowd and hope to walk away...

there's an almost imperceptible shift to the echo of the organ music...

Chapter 2 - Tactile Comics

In the philosophical hierarchy of the senses, touch is often placed at the bottom along with taste and smell. Due to the sense of touch being treated as though it is more corporeal than sight or sound, it has often been labeled “dirty” or “taboo.”\(^{99}\) The sense of touch has been mostly ignored in comics studies. Ian Hague notes that most of the work which addresses the sense of touch and comics directly has been on the subject of readers who find touching the actual comics object to be a taboo or fetishistic act. Moreover, when touch is discussed in this way, it is typically only mentioned when comics “are undergoing a process of change or are believed to be in jeopardy, usually through processes of technological development,” like digital comics.\(^{100}\) Additionally, touch has been discussed briefly in terms of pain and how it is represented within the medium, but pain is not always thought to be perceived by the sense of touch.\(^{101}\) As exhibited by Hague’s chapter on the sense of touch, there is much work to be done to incorporate the sense of touch within comics studies.

This chapter attempts to begin this work by examining existing comics which utilize tactile text and imagery in place of visual imagery, or in complement to it, that is inaccessible to readers with partial or no sight. In contract to the audiocomics in Chapter 1, the majority of these tactile comic were created as original, standalone works. First, in order to examine these comics, a brief history of tactile text, tactile images, and the problem of projection will be provided, and incorporated within those sections will be a summary of existing techniques for translating visual

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\(^{99}\) Kambaskovic, “The Senses in Philosophy and Science: From the Mobility of Sight to the Materialism of Touch.”

\(^{100}\) Hague, *Comics and the Senses*, 95.

\(^{101}\) Ibid. 95.
imagery into tactile imagery. Then, example tactile comics will be analyzed within the context of the provided industry standards and research. Of these example comics, most focus primarily on the combination of tactile images and tactile text, however two of the examples incorporate other sensorial imagery in addition to tactility.

Making Text Tactile: Moon type and braille

Though braille is the most widely known tactile text system, there have been other attempts to create such a system. Predating braille by a few years, Moon type is a tactile text system which relies upon simplified versions of existing latin script and retains partial outlines of each letter. Moon type was the first system to be adapted internationally, but it was soon replaced by braille because of ease-of-use and cost. However, it is still in use today by some readers, and it is the only tactile writing system based on Latin scripts which is still in use today. The few readers who do use Moon tend to be people who lost vision later in life.\(^{102}\)

Louis Braille got the idea for his system of tactile text after hearing Charles Barbier de la Serre describe his system called “night writing,” which he created for soldiers to send and receive messages on the battlefield at night without having to strike a match and give up their position. Night writing was based upon a system of raised dots which were pierced through cardboard with a stylus. The dots on the page were used to represented syllables. Braille’s idea was to construct an alternative system in which dots represented alphanumeric characters which in turn were represented by fewer dots so that the text could be read with the fingertips rather than having to be traced. In fact, braille relies upon a series of six dots with two vertical columns

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of three rows each. The number and arrangement of these dots distinguish one character from another. Braille perfected the system by the age of twenty, and his system allowed for student with partial or no sight to read, write, and share information that was previously harder to obtain due to the high costs of embossed books.103

By 1869, braille reached the United States but was not officially adopted as the standard until 1932. At its highest point in history, braille was used by 50-60% of people with partial or no sight.104 Since then, braille systems for music and mathematics and other alphabets have been created. However, that number is nowhere near as high today with current figures showing that only ten percent of the 1.3 million people in the United States who are legally blind can read braille.105 These low numbers are particularly shocking in light of surveys like the one by The National Federation of the Blind Jernigan Institute, which found a correlation between reading braille and “a higher educational level, a higher likelihood of employment, and a higher income.”106 Additionally, 70% of legally blind adults are unemployed.107

Literacy rates for people with partial or no sight are dropping, and so is the prevalence of braille readers and educators. This can be traced to many causes, including the negative perception of braille and disabilities of all kinds, the absence of certified teachers, and the perception that adaptive technology is enough. If provided with the appropriate training and mentorship, the braille writing system is reported to be one of the best pathways to literacy.

104 Ibid. 1.
105 Ibid. 8.
106 Ibid. 3.
107 Ibid. 1.
available for people with partial or no sight. Additionally, today there are a number of resources for braille texts, but these resources can only achieve maximum impact if they have readers to use their resources.\textsuperscript{108} With all of this in mind, then, it is important that literacy rates be taken into account when choosing when and how to use braille in tactile comics.

A Brief History of Tactile Images and the Problem of Projection

According to Yvonne Eriksson, tactile images, also known as tactile graphics, tactile pictures, typhlographics, relief pictures, and embossed pictures, are “images that can be scanned with the fingertips” and are “executed in relief.”\textsuperscript{109} They can be traced back to the 19th century, when the tactile representation of objects became popular for use in the classroom at specialized institutions at the height of the popularity of “object-lessons.” The first tactile images were representations of specimens of plants for use in science classrooms. Thus, tactile images were originally created for students with the privilege of sight.\textsuperscript{110} Eriksson cites \textit{A Peep into the Menagerie of Birds}, published in 1841, as one of the first tactile books. This book consists of images of birds in relief on embossed paper. Though these books were created for readers with sight privilege, their techniques were later used for the production of tactile images for people with partial or no sight. In the early 1920s, there was a surge in tactile picture books for “war blind” soldiers, which also assisted in the movement to accept braille as a standardized writing system in the next decade. With this audience in mind, there was a surge of production of film

\textsuperscript{108} Ibid.


with audio description and picture books. The majority of tactile images are still used for educational purposes today, and many are tactile maps.\footnote{Eriksson, “Tactile Pictures: Pictorial Representations for the Blind 1784-1940.”}

As mentioned in Eriksson’s definition, tactile images are presented in relief, or raised off of a solid background. An image in relief can be created using a variety of techniques and can take several different forms, but for tactile images, the most important criterion, the primary standard, is that the image is simple. With too much detail and complexity, an image is rendered confusing or incalculable by the touch of the finger.\footnote{Though the finger is most often used to interpret tactile images and text, it should be noted that it is of course not the only way to perceive by touch.} Eriksson argues that perception by the sense of touch means “feeling the shape, surface and size of an object…. assuming, of course, that you can touch the object and that it is not too big to be comprehended by touch.”\footnote{Eriksson, “How to make tactile pictures understandable to the blind reader.” 1.} Of these characteristics of an object, shape is the most important for object recognition, and a shape is conveyed by touch via its outline and its texture. A shape cannot overlap with another image or be partial in its outline, because this can create ambiguity. For this reason, shadows also can generate confusion, and objects should not be drawn in perspective, but instead from the front, side, or top. In order to achieve three-dimensionality in relief, creators should show multiple perspectives, i.e. more than one view of each object in separate images. Though the eye can distinguish between a multitude of textures, the finger can only distinguish between a few. Therefore, again, simplicity is key. The finger’s limited capacity for distinguishing between
textures means that there are a limited number of textures and symbols that can be used in tactile images.\textsuperscript{114}

However, there is a lot which tactile imagery can convey. Most often tactile images consist of textures and symbols intended to convey visual information represented in or “translated” into tactile form. As mentioned before, tactile images are often made by designers who have not lost any of their sight. In their qualitative research with readers with partial or no sight, Darras and Valente found that readers often reported a “mismatch” between the content represented in these images and their direct experience of the world. Darras and Valente argue this mismatch is likely caused by “projection,” a process by which designers with sight privilege attempt to embody the perspective of a person with partial or no sight in hopes of understanding their lived experience. Darras and Valente argue that this process is inherently flawed, because “To choose their strategies to cope with haptic communication, they must constantly navigate between two cultures and two different semiotic worlds: a sighted world which they are ‘spontaneously’ used to and a visually impaired world which they try to imagine or experiment with by closing their eyes and exploring through touch.”\textsuperscript{115} Therefore, creators of tactile images have developed many standards for conveying visual information by tactile means, but there are still moments and assumptions based upon projection. Specifically, there is room for more inclusion and study of the lived experiences of people with partial or no sight which hinges upon needs rather than abstract philosophical ideas.\textsuperscript{116}

\textsuperscript{114} Ibid. 2. For more guidelines for constructing tactile diagrams and maps for educational purposes, please see the Braille Authority of North America’s “Guidelines and Standards for Tactile Graphics.”


\textsuperscript{116} Ibid.
Eriksson addresses this issue similarly, claiming “Perception of shape, surface and size is not the same thing as being able to tell what objects represent.... In order to be able to identify something, you must have had previous experience of the object itself or something like it.”117 As cited in the introduction, Elliot W. Eisner argues that that “something like it” is imagination.118 Furthermore, the representation of the object must be one which fits your embodied experience and thus is not represented purely by semiotic systems and metaphors focused primarily on modes of sight. As Dannyelle Valente states, “The problem is that visual images made tactile are based on the [ocularcentric] assumption that ‘the fingers are the eyes of the visually impaired’ and that the ‘eyes at the fingertips’ are the most natural way to understand images and drawings.”119 Valente cites Y. Hatwell who argues that haptic illustrations are an alternative, wherein haptic illustrations are “grounded in the bodily actions and experiences that are common to the sighted and the visually impaired [like] walking up the stairs, swimming in a pool, riding a bike.”120 Simply put, as other researchers cited in this paper support, Eriksson also states, images should be thought of as modes of “knowing” rather than “seeing,” and all modes of knowing are taught.121

Valente notes that the difference between tactile images as described above and haptic illustrations as conceived by Hatwell is that haptic illustrations utilize “haptic icons,” i.e. icons

117 Eriksson, “How to make tactile pictures understandable to the blind reader,” 1.
118 Eisner, “The Misunderstood Role of the Arts in Human Development.”
120 Ibid. 3.
121 Eriksson, “Tactile Pictures: Pictorial Representations for the Blind 1784-1940.”
that allude to the “cognitive rendering of the world explored through the body, the entire range of muscles and skin.” Valente’s example lies in the icons used to represent a house. When asked to draw the most simple version of a house, most would utilize a visual icon people who have sight privilege are familiar with, wherein a house is represented by a triangular roof and a square base with a rectangular door. In contrast, Hatwell’s haptic illustrations instead would represent a house by a rectangular door and with doorknob that can actually be pulled outward from the page to represent the opening of a door. The haptic illustration provides an icon, which is a manifestation of an action, “coming home” and “opening the door.” These representations can also be complemented by sound, like the creak of a hinge, in order to increase the speed and likelihood with which the intended information is conveyed. Sound can be provided via recordings or by contact with the materials used to make the tactile image.

Valente also discusses Hatwell’s notion of the haptic illustration in relation to the issue of bimodality, i.e. being accessible to people with sight privilege and to people with partial or no sight. The goal of most tactile images is to be bimodal, but as evidenced by the problems of ocularcentrism, they often fail at that task. Hatwell believes that haptic illustrations are more likely to be successful because the metaphors used in them are once which are common to people with all types of vision. However, there remains a another option, which is the possibility for a

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123 Ibid.

124 Ibid. Bimodal implies that there are two modalities in relation to sight, but there are many different modalities and orientations to sight. Despite this generalization, Hatwell’s point is that metaphors are best used when they can be understood by as many people as possible, and that is a potential solution to the problem of projection. Additionally, as evidenced by the work of Heller and Kennedy discussed in the Introduction, people who were born without sight can and do draw like the house made of a triangle and square.

125 Ibid.
body of metaphors or signs which are designed to appeal solely to the experiences of people with partial or no sight. In addition to problems of semiotic systems, metaphors, and embodied perspectives, people with sight privilege scan images differently than people with partial or no sight. Beatrice Christensen Sköld states:

“The sighted person sees the whole picture, as well as the details, at once, and can make the mental leap as to understanding what the picture is about. When touching a tactile picture it is the other way around. First the details are felt, then the whole picture. Piece by piece and section by section, the picture comes together until at last there is an understanding of the whole picture. However, in order to fully understand a tactile picture - if you are not an experienced picture reader - you must know what the picture represents.”

Therefore, when constructing a tactile images specifically for people with partial or no sight, creators must be aware that the details will be perceived and analyzed first. This can completely change the way in which a tactile image is constructed.

Examples of Tactile Comics

The following examples utilize tactile images or both tactile images and braille in order to make a comic for people with partial or no sight. As they utilize tactile images and braille, these tactile comics have to contend with the complex histories and varied opinions and

126 See the section on Ilan Manouach’s Shapereader.


128 Ibid.
approaches to both systems. Each of the following examples will include a brief overview of the tactile comic’s narrative, style, and the techniques used to construct imagery and opportunities for closure. In contrast to audiocomics, none of the following examples are based upon existing texts. Instead, and possibly because of this, these examples all have wildly different approaches to emphasizing tactile imagery within the comics medium.

Philipp Meyer’s *Life* (2013)\(^{129}\)

*Life* is a tactile comic which recently made headlines for being “the first comic for the blind.”\(^{130}\) As evidenced by the examples in this paper alone, it is not the first attempt to do so. However, it is the only existing tactile comic, to the knowledge of the author, which relies only on tactile images for the narrative and is the only one which has a narrative that is simple enough to grasp in a matter of minutes. Philipp Meyer created *Life* for a course on interaction design. In his quest to create a tactile comic as a sighted designer, Meyer sought to avoid potential issues with his own projection and to learn about the perspective of people who have and about existing technologies for tactile stories. To do so, he sought the help of Nota, an organization which promotes literacy for people with partial or no sight and develops print and digital materials in braille. Meyer conducted in depth research on existing tactile images and techniques, and he interviewed and tested his materials with visitors at Nota who have partial or no sight.\(^{131}\)


To create *Life*, Meyer used one of Nota’s embossing printers, which required thicker paper, and he adapted his existing digital design using the software provided with the printer. The printer had a resolution of 20 DPI and was therefore unable to produce perfectly round circles. Meyer then had to experiment with different heights of embossment, of which Nota’s printer had eight, in order to create circles which made sense as circles and were distinguishable from each other. Different heights were also used at the end of the narrative to create the fadeaway effect. Meyer also had to experiment with size and format of the printing. His original idea was to fit all of the panels onto one page, but with the final version at twenty-four panels, he could not. Instead, he had to adapt the existing panels into a multi-page flow, which in comics must be done so carefully and with intention in order to make easy transitions from page to page. His first printing of the multi-page comic was in the format of a hand-bound book. The panels were only produced on the right side of the page, but Meyer found that his test readers would try to read the indentations left by the embossing on the left sides of the paper, leading to some confusion. To remedy all of these problems, Meyer’s final solution was to use the leporello technique, which consists of folding one long page into an accordion style (figure 10). The folds separate the long print into smaller pages, and the way they are folded ensures that the reader only sees the intended prints and not the indentations on the back of the page, which lowers the likelihood of confusion or reading out of order. The final product is 8x5 inches and includes one cover page and seven pages of content with four panels each.\(^{132}\)

The source of the comic’s simplicity emanates from Meyer’s choice to represent objects symbolically rather than to rely on complex imagery and language in the form of braille. In fact,

\(^{132}\) Ibid.
the only braille present in *Life* is the title, a reference to Nota, and a short introduction which states, “Every page has 4 frames. In each frame a situation is depicted. Numerics in the first 4 frames indicate the reading direction” (figure 11). Additionally, all of this information is provided in latin script in English for sighted readers, though the numbers within the first four panels are not. The reading direction is only provided in braille in the bottom right of the panels. Indicating reading order is most helpful for readers who have never read a comic of any kind before. Even though Meyer created this tactile comic specifically for people with partial or no sight, it can be read by readers with sight privilege as well because of its simplicity and the absence of tactile text. Also, as mentioned earlier in the chapter, braille and tactile images are not ubiquitous within communities of people with partial or no sight. This approach avoids many of the potential challenges of literacy in both areas because of its simplicity and relative ease of use.

This tactile comic is a story about, as its title suggests, a life. A main character is first represented by five dots, which over three panels grows into a solid circle. In the fourth panel, another character, represented by just an outline of a circle, enters the panel, and over the course of four panels, it moves toward and rotates around the main character until coming to rest close at the side of the main circle. On page three, panel one, they merge, and in the next panel are side-by side once more. Over the next three panels a new circle forms between the them, beginning as five dots like the main circle in the first panel on page one. On page four, the middle circle is the same size as the first two circles, and this circle is half solid and half empty.

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134 Meyer, “Tactile Storytelling.”
Over the next three panels, the middle circle leaves the first two, until once more on page five, they are alone. Then, the second circle begins to fade over three panels until there is nothing left. Finally, on the last page, the original circle begins to fade until there is nothing left but an empty panel.135

When testing with readers, Meyer was surprised to find that most came up with a similar story of relationship, birth, and death. Though some readers embellished the stories differently, the title in combination with the symbolic figures enabled most of them to come out of it with the same basic understanding of the narrative. For example, Meyer quotes one of his test readers named Elina, who said, “In the beginning they’re checking each other out. Then they get a child which grows up and leaves home, it detaches from the family. Then they’re some years together but not as close as they were in the beginning. Then one gets ill and dies, the same happens to the other one as well.”136 All of the circles were read as people. Circles moving into or out of frame were read as coming and going, whereas circles fading away and blank panels were read as death.137

As Meyer also states, this sort of meaning-making from the simplest of figures exemplifies the power of the comics medium.138 He is not wrong in claiming this, because comics scholars have long cited panels as a central tool in the tool belt of the comics creator.139


137 Ibid.

138 Ibid.

139 For example, Scott McCloud relies on and believes strongly in the panel as the means by which comics are sequential. The gutter is created between panels of content, and therefore, McCloud’s theories about closure necessitate panels and pages with gaps in between them.
Specifically, panels have long been regarded to be the primary means by which most comics construct time and motion. Life is basically a series of dots inside boxes made of dots, but due to the average human brain’s ability to connect different images and to attach symbolism to the simplest of things, these dots turn into a narrative about life.

Unlike some of the audiocomics in Chapter 1, Life’s use of tactile panels on the printed page allows for a comics experience more closely aligned with the comics experience as popularly conceived, because the reader can conceivably see, both by sight and by touch, past, present, and future time in addition to being able to get a grasp of the layout of the full page, while focusing on the details first (figure 12). This allows for some of the more commonly used and accepted techniques for constructing comics to be more easily adapted to an experience with less of a focus on sight. Tactile panels also allow for more freedom in constructing and controlling time and motion. The creator can provide more detail and even do so nonlinearly, though this comics is quite linear. Also, importantly, readers have more control over pace and speed, which again align more closely to the ways in which the comics medium is characterized by scholars.

Philipp Meyer’s work on Life also reveals that existing printing technologies can be used to construct tactile comics. Nota’s printer is likely not available to everyone cheaply, but personal braille typewriters, like the Perkins Brailler, and embossing printers are. However, even though they are cheaper than the large ones used by most presses, embossing printers and Braille devices are still an investment, with personal embossing printers ranging from $1,000-6,000 and Braille...
costing around $700 minimum.\textsuperscript{141} Therefore, making a simple comic like this for many braille readers and writers or comics creators in general may not be as hard as one might think, though it is still too expensive for some to try. Granted, those who want to experiment with these technologies in order to create comics would need to learn about how panels work and how to construct narratives that make sense using the technology.

Due to \textit{Life}'s publicity in publications like Wired and Fast Company, Meyer’s work did catch the eye of some comics scholars, including Jakob Dittmar who wrote about \textit{Life} for the International Journal for Comics Art. Dittmar claims Meyer has “invented a new form of literature for the blind, a new format of comics whose potential promises to be big” by using a symbolic approach to tactile imagery.\textsuperscript{142} Dittmar even goes so far as to acknowledge audiocomics. However, he argues they are like “all other recorded readings of literature.”\textsuperscript{143} Moreover, Dittmar’s perspective does not allow for the existence of audiocomics like Comics Empower’s which are a step away from traditional recorded literature and a step closer to a more comics-like experience. He even discusses the characteristics and constraints of braille and tactile images, including the difficulty of translating some visual concepts for readers who have not seen at all. However, for example, he frames a discussion about translating visual concepts by saying “The aesthetic values ascribed to specific perspectives and pictorial traditions are firmly based on the visual experience of the world.” Though Dittmar adeptly acknowledges the challenges of translating some visual imagery, his framing implicitly supports the ocularcentric


\textsuperscript{143} Ibid. 479.
idea that aesthetic values and pictorial imagery are only visual, which in turn implies that imagery is only formed based upon one's own experience.

Dittmar does acknowledge that people with partial or no sight can and do understand cultural significance and popular use of visual concepts, but with that ocularcentric framing in place, his arguments fall in line with the false idea that there is such a thing as even two people with sight privilege coming away with the same imagery and experience. Additionally, this framing, accompanied by his focus on the symbolic nature of Meyer's work, seems to suggest, intentionally or not, that a tactile comic which relies on more representative figures would not be as successful. Last but not least, Dittmar's work supports the idea that comics are, or must be, sequential, and though *Life* is sequential, sequentiality should not be assumed as a characteristic of comics in general, nor of tactile comics. Dittmar's proposed solution to some of these problems is for comics creators to use a layered approach, i.e. create comics on layers of paper for each page with each layer focusing on a particular aspect of the comics. Though this might be something to consider, it is likely that it falls prey to projection in that having multiple layers of separated imagery would likely lead to illustrations that are too complex to read and understand quickly. However, that would need to be experimented with and tested with readers.

Ilan Manouach's Shapereader and *The Arctic Circle* (2014)

Ilan Manouach, an artist and comics creator who pushes the boundaries of the medium and is known for playing with form, created a new tactile text called Shapereader. Manouach describes Shapereader as "a repertoire of forms and patterns that constitute an attempt to

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translate words and meanings into tactile formations.” Essentially, Shapereader is a language which is currently based upon 210 original tactile images intended for the construction and consumption comics by people with partial or no sight, but Manouach acknowledges that people with sight privilege can also use it. Each image is a shape, or “tactigram,” which is meant to embody or imply “characters, props, settings, actions, affections as well as graphic and textual devices.” In order to orient the reader to the system, Manouach constructed six “communication boards” with all of the “tactigrams” and their potential meanings (figure 13).

Manouach’s tactile language is one which relates words to symbols that in some way reflect their affect. For example, Manouach also created a story of his own, called Arctic Circle (figure 14). Arctic Circle is the story of two climatologists digging in the North Pole searching for patterns of climatic change inscribed on ice columns. Created to be an art object for exhibition rather than mass production, Arctic Circle consists of fifty-seven wooden plates which use a total of 6,000 patterns of shapes and which weights ninety-five kilograms. In Arctic Circle anxiety is represented by a series of wavy lines that are placed next to, or are attached to, the subjects and verbs causing that anxiety (figure 15). If a situation causes more anxiety than another, it is exemplified by a symbol of wavy lines with larger peaks and valleys (labeled “anxiety ++” in figure 16). As exemplified by Arctic Circle, the Shapereader’s tactigrams are highly symbolic. Manouach’s reasoning for leaning toward abstract symbolism was to counter the myriad of existing approaches to tactile image construction which rely on representational

145 Manouach, “Shapereader.”
146 Ibid.
147 Ibid.
148 Manouach, Arctic Circle.
and concrete relationships between a tactile image and its referent due to the fact that they are most often used for educational and informative uses. Additionally, Shapereader is intended to grow with more tactigrams as needs arise.\footnote{149} Accompanying the tactigrams are bits of dialogue in braille, which also requires training to read. Having finished Shapereader, Manouach thinks he is the first to have “attempt[ed] to create an all-tactile narrative work.”\footnote{150} As shown by \textit{Life}, he is not. However, he is the first to create a tactile language whose intent is to be used to function as a comic.\footnote{151}

The design of Shapereader is unique in its complexity and its use of tactile symbols as symbolic language, and as the tactigrams are well-made, the examples do seem to belong in a museum. However, this system, just like any other system which relies on symbols, must be learned. Not to mention, Shapereader is not readily available for users to learn its symbols or make their own stories. Manouach has proposed a series of workshops with people of all types of vision, wherein participants are given access to a collection of shapes from Shapereader to turn into a story. Though Manouach’s focus on exhibition and community workshops is not necessarily a poor choice for his goals, it does limit the reach and adaptability of Shapereader as an actual means of communication. For it to be adopted by an audience beyond museum galleries, it would have to be made lighter, smaller, and cheaper and instructional materials would need to be developed. However, Manouach does not seem concerned with mass adoption

\footnote{149} Manouach, “Shapreader.”

\footnote{150} Ibid.

\footnote{151} He is also not the first to construct a tactile language that is not printed using traditional means. For example, American Sign Language is tactile, and even tough ASL is not accessible to all people with partial or no sight, it is possible for some to learn and communicate with others by holding the hand of the person who is signing to them or teaching them how to sign.
or with making it easy to understand, because in an interview, he said he wanted Shapereader to create the “sensuous pleasure of cognizance, and the particular gratification that derives from the awareness of subtleties and nuance.” So, Manouach intended for Shapereader to have a learning curve in hopes that the reader would appreciate the experience of learning how to use it more as a work of art, and as such Manouach likely did not aim to create a tactile language to be read by anyone. However, Manouach’s approach provides much opportunity for discerning the applicability of a tactile language of its type, and he has made some interesting choices in the construction of Shapereader and Arctic Circle which can only add to the conversation about comics as a “not only” visual medium.


_Sensus_ is a three issue comics series which was funded by the National Monte de Piedad in Mexico to raise awareness for people, particularly children, with partial or no sight. With every issue sold, the National Monte de Piedad pledged to give a pair of glasses to a child in need in hopes to decrease the number of children have to leave school because their families cannot afford their glasses. This goal is central to the theme and the execution of the comic, for Sensus incorporates illustrations alongside braille with the goal of creating awareness among people with sight privilege and to give people with partial or no sight an opportunity to experience the comics medium.

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154 To the knowledge of the author, this is the only tactile comic in Spanish.
The three issues of Sensus, written by Jorge Grajales and illustrated by Bernardo “Bef” Fernández, each take a different approach to the medium. The first issue, “El Universo en Sus Ojos,” or “The Universe in His Eyes,” is the story of an astronaut who crash-lands his ship on an unknown and unfamiliar planet. Slowly, the astronaut begins to lose his sense of sight due to something in the atmosphere of the planet, and a resident of the planet helps him to understand what is happening. This comic actually has three total stories. One story is told from the perspective of the alien, and it is provided in braille on the left pages. The braille narrative is organized into a series of panels which are solid black and are not raised from the page (figure 17). Another story is told from the astronaut’s perspective, which is shown in illustrations on the right pages of the comic (figure 18). The final story, or the whole story, can only be understood if readers who can see the illustrations use the guide in the back to learn braille or if they read the comic with a person who has partial or no sight, who as it were would also learn the other side of the story from the reader who can see the illustrations.155 This comic adeptly utilizes a combination of modes that are easy to understand and appealing to multiple senses.

The other two issues use different approaches to constructing the narrative, and both approaches are relevant to their respective storylines and characters. Issue 2 is called “El Misterio en Sus Ojos,” or “The Mystery in His Eyes.” This time the braille overlaps the illustrations in each panel. The reader embodies the perspective of the main character who is losing his sight to macular degeneration. As the issue progresses, the illustrations begin to morph so that readers who can see can experience the character’s symptoms with him. For example,

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faces become blurred, and thus more like the horror characters that occupy his work.\footnote{156}{Jorge Grajales and Bernardo “Bef” Fernández, \textit{Sensus #2: El Misterio en Sus Ojos} (Mexico, Organismo Mexicano Promotor del Desarrollo Integral de las Personas con Discapacidad Visual, 2014).}

Issue 3, called “El Heroísmo en Sus Ojos,” or “The Heroism in Her Eyes,” is presented as a double-sided book wherein one side presents a story in braille and the other, discovered by flipping the book, relies on illustrations. The illustrated side is the story of “el ataque de los jitomates asesinos,” or “the attack of the assassin tomatoes.”\footnote{157}{Ibid. 2.} The main character cannot see, but when she taps a special stick on the ground, a Mayan demon gives her the powers of both sight and sound, to become a superhero which she uses to fight genetically modified tomato assassins. In keeping with Issue #1, Issues #2 and #3 provide “the other side of the story” using braille separated into small segments that are printed onto solid black panel that are not raised from the surface.\footnote{158}{Jorge Grajales and Bernardo “Bef” Fernández, \textit{Sensus #3: El Heroísmo en Sus Ojos} (Mexico, Organismo Mexicano Promotor del Desarrollo Integral de las Personas con Discapacidad Visual, 2014).}

All of these approaches and the stories they are used to tell represent excellent understanding and use of imagery working together in multiple formats. The illustrations and the braille text work together to form a rich, cohesive narrative. However, getting to that point was likely not an easy process. For example, when interviewed about the making of the braille sections of the comics, the writer, Jorge Grajales said, “It was like writing tweets, at most each bullet must have 160 characters to be written in braille, besides the description of the colors was also very important and difficult, but we with the help of many... I myself learned a little braille for the correct translation of the story.”\footnote{159}{“Sensus: The First Latin American Comic Book Written in Braille,” \textit{lainfo.es}, January, 27, 2015, \url{http://lainfo.es/en/2015/01/27/sensus-the-first-latin-american-comic-book-written-in-braille/}.} Condensing a lot of detail into short bursts of braille
can be difficult, especially when manufacturing it to resonate with the illustrations and vice versa, but as evidenced by the success of Sensus, it can be done and done well. Additionally, printing issues like Sensus is not a cheap endeavor, so this option may not be open to every creator in terms of finances and technological access. However, by sharing resources, this approach, both in its construction and in the way in which that construction relates to the narrative and its goals, has led to the creation of a comics experience that is easy to read and is quite enjoyable in its execution. Additionally, the series was popular with its intended audience, because each issue sold out of its 1,000 print run.\footnote{Sensus is a tactile comic which utilizes traditional comics illustration. Though that seems to go against the goal of creating comics which can be understood by people who cannot see, the creators of this comic did so intentionally in order to encourage conversation and interaction between readers who can and cannot see. In doing so, they provided instructions which explained the nature of the format, and their marketing materials encouraged people to read the comics socially. Sensus shows that illustrations which rely on sight can be brought back into a comics project intended for people who cannot see, but it also shows that doing so requires a lot of additional thought and care so that the final experience is not confusing.}

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\footnote{\textit{Sensus} is not the first comic to use braille and illustrations together, though it is unique in its approach. In 2010, Komiks Braillem, a Polish project created for comics in braille, released “Stad do wolności,” or “From Here to Freedom,” which created for a comic competition about the Warsaw Uprising for the Museum of the Warsaw Uprising. However, unlike \textit{Sensus}, this comic included verbal description of the illustrations. For more information see: \url{http://www.boredpanda.com/polish-artist-creates-unique-comic-books-for-the-sighted-and-the-blind/}.}
“Comic-Album” by Dannyelle Valente (2015)\(^{162}\)

*Sensus* is not the only tactile comic which utilizes other senses, rather than merely using tactility to replace visual information. Dannyelle Valente, whose scholarly work was discussed in Chapter 2, put her ideas about tactile imagery to the test as part of a research and development project on new varieties of prototypes for tactile books for children.\(^{163}\) For one of the prototypes, Valente created a tactile comic, which she called a “comic album,” using a Velcro board with moveable panels. Readers were given the task of creating a story using two characters and five panels. The readers could create characters from different textures of fabric, and they could choose between different “rail systems,” which are Valente’s tactile solution to motion lines, wherein characters could be physically manipulated and moved from one specified location to another specified location by sliding their bodies across a slit in the paper. For example, Valente created a tactile comic interpretation of “Ma Dalton” in *Lucky Luke* (figures 18 and 19). In order for the reader to understand how to interact with the comic and to understand the narrative, instructions were provided via audio recordings. First, readers were given an audio recording of a sample of Ma Dalton’s story, and then they were guided panel by panel through the tactile comic. With each panel, readers hear instructions for what is on the page and how it is to be manipulated, which can be sliding a character or moving a panel entirely, as well as narrative descriptions and sounds.\(^{164}\)

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\(^{162}\) Dannyelle Valente. “Haptic Books for Blind Children: A Design for All Approach.”

\(^{163}\) Ibid.

\(^{164}\) Ibid.
Valente provides an transcription of a portion of the recording, which has been reproduced below:

“Plin! (acoustic signal)
Narrator’s voice: Once again, you can hear the little sound meaning you have to switch boxes. Remember how to read the comics: from left to right and from top to bottom. Now you can move to the box below.
At this stage, you’ll see that this box is way bigger than the previous ones. This one illustrates the scene when Lucky Luke and Ma Dalton are crossing the street. This sequence lasts longer than the other ones. It lasts 30 seconds. Let’s imagine this box as a street to cross. When the time’s right, in the next audio sample, you’ll have to move our two heroes from the left to the right.
Are you ready?
Yes?
Let’s go:
Audio story: An old lady shows him the other side of the street: “It’s a pleasure young man. I’m going to the butcher’s on the other side.” Lucky Luke holds her by the shoulders and they begin to cross the street [Pacing sound].
Narrator’s voice: Here you are?
Congratulations! They are now on the other side of the street!”

This comic is unique in that the reader is actually touching and manipulating the comic while hearing verbal descriptions and instructions. Instead of being the only source of information, the audio is provided here to guide the reader, which is an experience many children with partial or no sight are familiar with because young readers often have sighted teachers or parents who translate visual images for them. Only here, the reader is reading the comic by touch and actually participating in the narrative by manipulating the characters across the page. In order to keep time with the audio recording, pauses for action are built in, but if that time is not enough, the

\[165\] Ibid. 10.
reader can simply pause the recording.\textsuperscript{166} In contrast to the audiocomics in Chapter 1, this approach seems to take better advantage of the affordances of verbal description while avoiding some of the pitfalls of linearity and pace with audio recordings. However, despite being used in a way which gives the reader more control and space to fill in the gaps between imagery, these recordings still fall prey to linearity. Also, in this case, the tactile imagery must contend with this problem as well, because it is so tied to the progression of the recording and to the manipulation of the figures within a specified span of time.

The reader is given the ability to construct the motion of the characters on the page on their own, which mimics closure through physical action. Interestingly, due to the fact that this tactile comic necessitates actual manipulation of the panels and of the characters, it would have to be reassembled and prepared before it could be read again. Additionally, in the “build your own narrative” version of Valente’s prototype, the reader gets to become the creator, though they are constrained by the materials available and the instructions of the assignment.\textsuperscript{167}

Though the reader gets to participate in the construction of narrative of this comic, most of narrative of “Ma Dalton” is being provided primarily by the narrator in the recording. The narrator also provides instructions for how to read the comic, including reminders about how comics function, like the fact that they are read from left to right and top to bottom. As Valente is well versed in techniques for creating educational materials for students with partial or no sight, the combination of touch and sound based experiences might be one that is the easiest to pick up and understand. As Philipp Meyer mentioned when discussing the results of \textit{Life} with readers

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with partial or no sight, he found that some still did not get the story he intended.\textsuperscript{168} Whereas Meyer was fine with that so long as the experience brought about some kind of narrative for the reader, creators with goals similar to Valente’s, wherein it is imperative that the intended narrative is conveyed for educational purposes, the use of verbal description and instruction wards against misunderstanding, but does require the reader to give up some freedom in pacing and interpretation.\textsuperscript{169}

The audio recordings also utilize some basic interpretive sound composition. For example, “Plin” is used to signify a sound which seems to be made every time the reader is supposed to transition a new panel, and other sounds, like the sound of a person pacing, are provided when the narrative calls for them. This could be an interesting evolution of the use of onomatopoeia in comics and could incorporate interpretive sound composition without those elements overpowering the other imagery in the work. Additionally, the recording states, “This sequence lasts longer than the other ones. It lasts 30 seconds.”\textsuperscript{170} Though the reader could potentially pause the audio, the way this experience is constructed means that doing so would be to experience the comic without necessary narrative and instructional information, requiring the reader to rewind if something was missed, which would take them out of the experience and could lead to confusion and the loss of place and pacing. The notifications of completed tasks, like “They are now on the other side of the road,” and encouragement like “Congratulations” serve to make the experience of reading comics, which is going to be new to most readers, less

\textsuperscript{168} Meyer, “Tactile Storytelling.”

\textsuperscript{169} Valente. “Haptic Books for Blind Children: A Design for All Approach.”

\textsuperscript{170} Ibid. 10.
daunting, especially for the young reader. However, they might feel out of place for experiences designed more for adults and for entertainment. If a comic were to deal with dark subjects and the audio was then to say “Congratulations!” the tonal shift might feel out of place. This prototype is an excellent representation of the standards and research which inform the use of these materials for educational purpose, and it exemplifies the clarity that can be achieved when multiple senses are taken into account when constructing comics for those who cannot see. However, this comic is only a prototype. In order to discern its success, it must be tested thoroughly with readers, and the usefulness of its techniques for more detailed, full length, non-educational comics remains to be seen.

Robert Lancefield’s 3D Printed Braille Comic (2015)

As mentioned earlier in the chapter, many existing tactile images and tactile stories are intended to be picture books for the entertainment or education of children. A recent trend in these kinds of tactile books is to print figures in 3D on the page to create more dynamic images like those at The Tactile Book Project. Robert Lancefield had a similar idea for his Comics and Medicine course. Lancefield developed a prototype of a 3D printed comic that tells the story of

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171 Ibid. 10.


173 The relationship and distinction between picture books and comics, when discussed, is not always clear. For more information, Charles Hatfield and Craig Svonkin’s “Why Comics Are and Art Not Picture Books,” which address this distinction and attempts to bridge the gap between the study of children’s literature and comics.

174 For more information, see http://tactilepicturebooks.org. The Tactile Book Project has also experimented with tactile comics. However, their current iteration is a relief image of an existing Peanuts comic strip. As discussed earlier in the chapter, images whose outlines are adapted into relief without editing can be confusing.
two doctors with no sight who are practicing psychiatrists today, and one doctor, Dr. Jacob Bolotin, who was the first doctor who could not see to practice medicine. Lancefield intends to make the comic and his process for creating it open source, and he intends to print a 2D version for people who have sight privilege.

Lancefield’s prototype consists of one page, with figures outlined in relief, as well as panels, braille, and speech bubbles all raised from the page (figure 20). The most intriguing component of Lancefield’s prototype is the 3D printed face of one of the characters, just as some might do to memorize a friend’s face. Readers can feel the characteristics that Lancefield drew, including nose, mouth, chin, and even eyes. This experience aligns more closely with the museum industry’s touch tours, wherein visitors with partial or no sight are given permission to touch sculptures.175 If this technique were to test well with readers, this might be an avenue for creating characters that are more easily and quickly recognized, which could only help with clarity and could allow readers to pick up the pace.

Using the standards discussed earlier in this chapter, it is likely that Lancefield’s current prototype has too much information condensed into its current page size, and the figures in relief in panel one are likely hard to distinguish as people as they are drawn close tighter in relief and they are all positioned at different angles from the reader’s perspective. However, Lancefield’s ideas are unique, and they should be examined further and tested with readers of all vision types. For people with partial or no sight, testing is especially important, because existing research has not addressed 3D printing techniques which use this sort of approach. Though one may suspect that 3D printed faces may be a great way for readers to learn to identify characters, just as they

175 For more on touch tours, see Art Beyond Sight.
may learn about sculpture in museums which allow touch tours, that remains to be seen without further testing and experimentation, and testing must be done to ensure that this concept is actually useful to readers rather than simply being a product of projection.\footnote{In fact, Lancefield is looking to develop the prototype further and is seeking others who are interested in joining the project.}

Conclusions

Once again, tactile comics, alongside the audiocomics of Chapter 2, have shown that not only are comics more than a sight-based medium, but they can also be made without relying on the sense of sight at all. The tactile comics shown here build upon the centuries long history of tactile texts and tactile images in order to create comics which convey the mixture of imagery and language which is thought to be the cornerstone of the medium. However, by using these techniques, these creators inherit the difficulties with tactile images and tactile texts that have existed since their inception, and therefore must be diligent in avoiding projection and in adhering to the standards put forth by researchers and educators who have worked with tactile images and texts and the audience of people with partial or no sight for which they are intended.

In comparison to the audiocomics in Chapter 1, these tactile comics are able to replicate many of the existing characteristics of the comics medium as recognized by the industry and discipline, like the use of panels, representations of time and motion, and the ability to experience the comics page as a whole. However, as noted by Beatrice Christensen Sköld, reading with one’s fingers necessitates discerning the details and then the whole picture, rather than experiencing the whole and then the details as one typically does with the sense of sight. Therefore, despite the fact that these tactile comics can functionally represent much of what is
lauded about the medium, comics creators and scholars need to be aware of this shift and other
c Characteristics of these formats in order to best take advantage of their affordances and to ward
against confusion and information overload.

Finally, as with the audiocomics in Chapter 1, some of these tactile comics also
emphasize one sense in place of another. Though these comics work well and represent many
innovative ideas for the medium, they do not utilize multiple types of imagery. In doing so, many
of these comics have limited their audience to readers who already have training or literacy in
these forms of text and imagery. Though comics like Life are seemingly simple enough to be
understood without much additional training, comics like Arctic Circle which utilizes the
Shapereader tactigrams would require training in braille and tactile images in addition to the
specific training for Shapereader in order to be understood and used properly. The most apparent
solution to these issues is to create comics which distribute the necessary imagery and text across
different sensorial avenues in the simplest manner possible which requires the least amount of
training, like Dannyelle Valente’s “Comic-Album.” Though, again, much work and
experimentation is to be done.


Figure 17. Page 6 of *Sensus #1*. Source: Jorge Grajales and Bernardo "Bef" Fernández, *Sensus #1: El Universo en Sus Ojos* (Mexico, Organismo Mexicano Promotor del Desarrollo Integral de las Personas con Discapacidad Visual, 2014).
Figure 18. Page 7 of Sensus #1. Source: Jorge Grajales and Bernardo "Bef" Fernández, Sensus #1: El Universo en Sus Ojos (Mexico, Organismo Mexicano Promotor del Desarrollo Integral de las Personas con Discapacidad Visual, 2014).

Conclusion

The definitional project for the comics medium has produced definitions that vary widely and often only serve to create more discussion about definitions. However, as evidenced by Ian Hague's work and the comics presented here, there is one thing about the definitional project that is certain. The implicit, and sometimes explicit, claim that comics are purely visual is wrong. Comics are not only a visual medium, because no matter their format, they do not contain only visual imagery, nor are they synesthetic creations which are only consumed through the eye. Theories of embodied cognition and perception have long acknowledged that human beings’ ability to process its environment through sensory perception cannot be adequately separated into demarcated senses, and sensory perception itself cannot be so easily separated from other cognitive processes like memory. Granted, in order for scholarship to move forward, the scope of academic projects must be limited in some ways. However, it is long past time for scholars to make a conscious effort to move past ocularcentrism, especially when it comes to media and comics studies in particular. Scholars and creators must avoid sense datum fallacies at all costs. The idea that there is one sensorium for the comics medium, and that everyone interprets and understands comics through that same sensorium, is not only faulty and limiting but also exclusionary for people whose sensorium does not consist of the assumed neutral. That neutral, the ability to perceive and interpret using the “five senses,” is of course a construction in the first place, but the assumed neutral does have real implications for the future of a medium and for people who have partial or no sight.
The creators of the comics analyzed here sought to create for an audience that is often overlooked within the medium. The audiocomics in Chapter 1 utilized verbal description, interpretive sound composition, or a mixture of the two to adapt existing comics, replacing visual imagery with aural imagery. The Comics Empower production company took it upon themselves to translate the entirety of the comics experience for readers who are entirely unfamiliar with comics, and Comics Empower constructed a unique, panel-by-panel approach to creating stand-alone works. Some of which are made by people with partial or no sight themselves. Though some were more successful than others at achieving their goal, they, at the very least, prove that audiocomics are a feasible avenue from which to provide comics experiences for people who have partial or no sight. However, as exemplified by moments of disconnect, audiocomics do face certain limitations to constructing an experience that aligns as closely as possible to reading print comics, including forced linearity, problems of pacing, and relative absence of opportunities for closure. The tactile comics in Chapter 2 are far more varied in their approach, with some using only tactile images, others using a combination of tactile text and tactile images, and others using aural and visual imagery in combination with tactile imagery. Philipp Meyer’s Life shows that, within a few short pages and only twenty-four panels of simple tactile images, a tactile comic can tell the story of a life. Sensus reveals that visual and tactile imagery can work together to create an experience for readers with all ranges of sight. Dannyelle Valente’s “Comics-Album” exemplifies that tactile and aural imagery can be used together to ensure clarity for comics that are intended for developmental or educational aims.

Though these comics represent a group of creators pushing the boundaries of the medium, there are still many issues to consider. First and foremost, tactile imagery and braille are
facing a literacy problem. In order for these comics to have the desired reach, or to be understood at all, they must keep this in mind and prioritize simplicity over detail. Second, the technology used to create many these comics is, as of yet, not readily available in terms of accessibility and cost to many comics creators. However, the prices for these technologies will likely continue to evolve and decrease in size and price. Finally, though these comics use new approaches to utilizing sound and touch to create comics, there are many opportunities for further experimentation, including digital experimentation. The audiocomics examined here use digital audio, and some of the tactile comics utilize software and 3D printing. However, comics for the web browser and for interactive tablets are also in the midst of a large volume of experimentation. Existing adaptive technology for the browser could present opportunities for creating webcomics which do not rely the sense of sight alone, and despite their ocularcentric construction, tablets emphasize touch in a manner that is conducive to the types of experiences created here. Additionally, some new braille tablets are being released, including BlīTab, which the developers call “the iPad for the blind.” BlīTab includes two screens, one which is the traditional tablet screen with touch sensitivity and the other is uses liquid-based technology to make and remake braille text in relief. As this liquid technology can create braille in relief, it is not a stretch to think that someday it might be used to construct tactile images in relief as well. Though the product is still in development, this technology could create many opportunities for building off of the examples and research presented in this paper in order to construct digital comics.177

Importantly, many of the creators of the comics presented here think they have made the first comic for people with partial or no sight. However, clearly, they are not the only people who are thinking about comics as a “not only” visual medium. The fact that they think they are the first speaks to the need for creators and scholars to connect, share ideas, and experiment with these concepts and ideas. These conversations need to happen within comics scholarship and outside of it in order for these comics and the techniques used to create them to get the attention they deserve and need.

All of the examples in this paper, save for GraphicAudio’s Daredevil: Guardian Devil which is itself part of a long history of audiobooks for people who cannot see, have created and marketed their comics to people with partial or no sight. Though the goal to provide comics experiences for people who cannot see is not necessarily wrong, it is important that these creators, and scholars too, be wary of projection and of creating “definition from disability” for “not only” visual comics. Both acts are ocularcentric and ableist at their core, because they uphold an assumed neutral or “normal.” This paper was framed to avoid projection and defining by disability as much as possible by focusing on existing standards and their insights into decisions being made by the creators of the comics examine here. Even though a few examples, like Meyer’s Life, were created with direct input from the intended audience, the majority of the examples were not. Further research and experimentation absolutely must involve readers with partial or no sight, and if avoiding definition by disability is to be successful, these “not only” visual comics should be created for and tested with readers of all ranges of sight. For these comics too create new possibilities for every reader, creator, and scholar of comics.
Bibliography


