Between and Within the Pictures: Gaps and Imagination in Comprehending Wordless Books

Rong Zhang, Mengying Xue, and Judith Lysaker

Historically, wordless books have been studied as contexts in which young readers build a repertoire of habits, processes and strategies that will serve them later as mature readers. Wordless books have been important to literacy researchers for their potential as instructional tools, and their impact on young children's literate development (Crawford & Hade, 2000), particularly their interpretive capacities and comprehension (Arzipe, 2003; Lysaker, 2018). In addition to studying what readers do with wordless books, wordless books have been examined and analyzed in terms of their features, resulting in the identification of several characteristics and affordances attributed to their image-based nature (Lysaker & Miller, 2013; Serafini, 2014a). For example, ambiguity, image framing, the use of vectors, positioning, and color are recognized as important features of wordless texts and other image-dominant genre like comic books and graphic novels (Lysaker & Miller, 2013; Kress, & van Leeuwen, 2020; Painter, Martin, & Unsworth, 2013; Serafini, 2014b). Wordless picture books have long been recognized as a medium for development of emergent literacy (e.g., Crawford, & Hade, 2000; Jalongo, Dragich, Conrad, & Zhang, 2002; Lysaker, 2018). Prior to learning and mastering language, children's views and

comprehension of their surroundings are based on their observations and perceptions of the visual world (Terrusi, 2018). Therefore, wordless picture books that use visual texts to reconstruct and restore the world young readers live and observe are more likely to evoke active transactions with the text, engaging their personal experiences and cultural and linguistic backgrounds to interpret and construct meaning (Lysaker, 2018).

Previous studies in which we observed children reading wordless books brought us into close contact with the ways in which they made sense of these visual texts and caused us to consider the unique semiotic landscapes they offer young readers (Lysaker, 2018; Lysaker & Miller, 2013; Lysaker & Hopper, 2015). We are particularly interested in the visual narrative techniques used in such picture books - they are designed as a series of individual illustrations that require readers to fill in the different narrative gaps that exist between each illustration and with each page turn in order to make sense of the whole story. The presence of such narrative gaps adds complexity, dramatic quality, and playfulness to the reading (Arizpe & Styles, 2016). However, few studies have examined how the visual text of such picture

Rong Zhang is a Ph.D. candidate of Literacy and Language Education at Purdue University. Her research is focused on wordless book reading of young children and family literacies and language policy of bilingual families. **Mengying Xue** is a Ph.D. candidate of Literacy and Language Education at Purdue University. Her research is focused on developing visual literacy skills through children's picture books.

Judith Lysaker is a Professor of Literacy and Language Education at Purdue University. Her research interests include an interdisciplinary exploration of reading as relational and imaginative activity and the importance of reading for children's well-being.

books creates different types of gaps, and what potential effects these gaps may have on young readers' reading responses.

We argue that gaps in wordless books is a prominent and important quality of such books, and that few studies have explored how gaps in visual texts of such genre contribute to challenge readers to move beyond the role of being readers to that of co-authors through imaginative sense making. Thus, in this study, we used textual analysis to examine the gaps in three wordless books. We also drew on theoretical lenses of landscape of consciousness and action (Bruner, 1986) and Vygotsky's (2004) and Bakhtin's (1981) constructs of imagination and dialogue to ask: What kinds of gaps exist in these three wordless books and how do they contribute to the imagination as part of children's reading of these visual texts?

Theoretical Perspective and Relevant Literature Wordless Books and Gaps

Scholars¹ generally concur that wordless books, by definition, are books without words relying solely on illustrations to tell a story. The dominant status of images in wordless books makes their role drastically different from the ones in picture books. Kress and van Leeuwen (2020) describe the meanings which are communicated and perceived through qualities of image, like color, line, and shape, as an entirely different grammar. Images represent meaning in non-linear and supple ways, standing in contrast to the strict linearity of the written word. One of the goals of written text in picturebooks is to provide transitions, details, and information that go beyond illustrations, to help readers "bridge" the natural gaps of narrative. Wordless books rely solely on images, requiring readers to stitch together meanings during reading without the aid of words, enhancing what is represented in image through imagination, so that sense making can occur fluidly. This sense-making activity of bridging meanings between images helps readers overcome what Iser (1972) calls indeterminacies and breakpoints. The indeterminacies of text make spaces for readers to bring themselves to the text and build relationships with books during meaning making in particularly agentive ways as they make choices and decisions about the meaning of the narrative they are reading. Thus, readers become coauthors.

According to Iser (2005), gaps are inevitable, as "no tale can ever be told in its entirety" (p. 55). Gaps occur in a variety of ways and can occur in both narrative "landscapes" described by Bruner — those of action and consciousness (Bruner, 1986). In the landscape of action, gaps occur in the passage of time and the setting of the narrative. The absence of written text to provide transitions through temporal markers like "in the morning," or "after school" or space markers, like "in the park", or "at home" enhances the presence of what might be considered common narrative gaps. In the landscape of consciousness, gaps are created by the absences of description about what is happening in characters' inner worlds, their thoughts, feelings, intentions, and beliefs. Not only are these descriptions missing but the connections between thought and action are also unexplained. Without written text, and the use of causal markers like "because" (He went out the door in a hurry because he was frightened) information about characters' motivations is absent. In addition to these somewhat pronounced gaps, we noted subtler gaps that occurred as a function of the passage of narrative time. When time progresses in image-only text, readers are challenged to understand the gaps between these singular moments without the familiar linguistic expressions like "the next day" or "later." In a similar way, the relationships between characters develop in visual snapshots. Readers must imagine what happens in the gaps between these snapshots to create relationships between characters.

In addition to the gaps in the flow of narrative images, there are gaps beyond images. Turning pages while reading produces an obvious gap when readers must follow narratives across the actual break of word and image. Bader (1976) notes that the gaps created

¹ Wordlessness has a range of meanings for different scholars. Some include books that contain minimal words with images, while others consider wordless books to be those in which the narrative is told in images only. We concur with the latter definition, because the presence of any words within the narrative seems to influence how young children go about reading them.

by page turns in picturebooks are often purposely designed to increase the drama of the story and build anticipation in readers. Page turns can disrupt readers since breaks in the narrative occur in real time and space rather than narrative space and time, which can momentarily divorce readers from the story world as eyes leave one page opening and move to another. The moment of page turns creates gaps of narratives for readers to imagine the plots that may be left out by the book authors. Framing images is another way gaps are created in picturebooks and particularly in wordless books. Frames, as Nikolajeva and Scott (2013) discuss, separate images, making them distinct meaning units and breaking the narrative flow. Readers are challenged to re-build narratives to achieve the fluent flow of meaning across images. In addition, gaps can also occur over the gutter in a page opening. Beyond these various locations of gaps, the number and "size" of gaps, and how gaps are designed can change across the course of the book. This variety in placement and size of gaps makes wordless books complex texts that challenge readers' meaning making capacities and prompts the use of imagination. Multiple gaps in wordless texts, without the mediation of printed words, heighten the role of imagination in reading and comprehending these texts.

imagination are relevant to understanding its role of imagination in reading. To make sense of narrative worlds that are beyond readers' present realities, readers create connections between those actual realities and the ones that exist in text². Creating these connections between actual and narrative worlds makes imagination critical to the exploration of the different kinds of reality represented in stories. Creating connections also demands moving beyond the here and now, and as Green (2005) suggest, asks readers to mentally transcend time and space to be transported to narrative worlds. In this way, as Zittoun (2017) puts it, imagination is an "excursion" and the expansion of experience (p. 305). When we think about this in terms of reading, the function of gaps deepens. Gaps invite readers into the process of expanding their experience into, and subsequently of, storied worlds through imagination, and in this way working through gaps goes beyond simply "filling" specific perceived gaps with predictable content.

Understanding how gaps invite readers into this imaginative process is critical to understand how readers understand and interpret visual texts. We use Bakhtin's (1986) concept of addressivity as our theoretical framework, arguing that visual texts with provocative gaps in wordless picture books call out

Gaps invite readers into the process of expanding their experience into, and subsequently of, storied worlds through imagination, and in this way working through gaps goes beyond simply "filling" specific perceived gaps with predictable content.

Imagination and Comprehension

Rather than a way to create the fantastical, Lev Vygotsky (2004) argues that imagination is a means of making sense of reality. Peleprat and Cole (2011) extend this idea to describe imagination as a "process through which the world is made and at the same time through which the self emerges to experience that world" (p. 399). For Peleprat and Cole, imagination is a process that human beings use to make sense of the gaps that occur in everyday experiences. They argue that imaginative sense making necessitates the movement of self into the world. These ideas about

to readers, "addressing" them and "turning" them to respond. In other words, unlike abstract linguistic texts, the features of pictorial texts are more readily accepted and recognized by young readers, inviting them to interact actively with the text, thus the reading process is like an ongoing dialogue between the text and the reader (Lysaker, 2018). The rendering of narrative in

² This is consistent with Tania Zittoun (2017), who makes the case that imagination is necessary for bridging personal and cultural representations of meaning. See, *Symbolic Resources and Sense-Making in Learning and Instruction, in the European Journal of Psychological Education*, vol. 32, p. 1-20.

image only has the effect of enhancing the addressivity of texts, particularly for children, because characters are made more present as human beings; they have physical appearances like size, shape and color that can be recognized in people in the actual world (Lysaker, 2018). When young readers make "eye contact" with visual texts, it can enrich and enliven their relationships with text making it easier to connect with characters and achieve what Bertau calls describing connections in actual relationships, "sensitive contact" (Bertau, 2014, p.1).

Thus, understanding the significance of gaps in wordless picture books is key to understanding how young readers make sense of visual narratives. We hope that analyzing the characteristics of gaps in such books will help teachers, preservice teachers, and stakeholders further understand their potential as pedagogical tools, especially the potential of such picture book to invite young readers to actively engage in dialogues with the text, which is critical to the development of emerging literacy skills.

Method

This study is designed as a qualitative study with textual analysis, Multimodal Content Analysis (MCA) in specific, to examine the gaps embedded in three wordless books (Float by Daniel Miyares, Bee and Me by Alison Jay, and The Red Book by Barbara Lehman) that challenge young readers to actively engage in imaginative comprehending activities. Textual analysis allows researchers to gain information from various types of texts, including visual, written or spoken texts to explore how meaning is constructed through languages, symbols and visual elements, and interpretation of the text (Allen, 2017; Frey et al., 1999). In this study, the visual elements presented on book pages and visual designs are analyzed to see how narrative meaning is constructed and inherently interact with potential young readers.

MCA, developed by Serafini and Reid (2019), goes beyond the limitations of traditional quantitative content analysis, which relies on predetermined category and frequency counts as the primary focus of analysis, instead focuses on the subjective interpretation of content of a text by establishing a systematic classification process that encodes and identifies themes or patterns (Serafini, 2019). Furthermore, MCA expands the boundaries of the qualitative content analysis framework from focusing only on the meaning potential of individual mode, such as linguistic mode, to considering the complex relationships between modes present in multiple modal assemblages (e.g., visual, typographic) (Serafini, 2019).

MCA consists of a systematic classification process including:

(1) Recognizing an Area of Interest; (2) Developing Initial Research Questions; (3) Constructing the Data Corpus; (4) Defining the Object of Study; (5) Developing Initial Categories; (6) Developing the Analytical Template; (7) Testing the Analytical Template; (8) Applying the Analytical Template to the Data Corpus; (9) Constructing Potential Themes; (10) implications of the analysis; and (11) Dissemination of Findings. (Serafini & Reid, 2019, p.9)

At the outset of this study, all authors were engaged in reading and studying wordless books as part of an ongoing project. Adhering to the MCA procedure, the first author presented the research interests and set the initial research questions. Then, the first author identified six kinds of gaps through reading a set of 33 wordless books that are accessible from local libraries. The six types of gaps were the initial categories of the study based on theoretical perspectives. All authors had multiple meetings to discuss the initial categories, developed a question template guiding further observations and analysis. After that, four books were randomly selected from the 33 books to test the analytical template. Each author read the books using the template, writing research memos and answering the template questions. Then all researchers came together and compared template responses and reader responses, refined the definitions and functions of each type of gap. Finally, through the re-occurring discussions, we refined the initial six categories into two, and reapplied the two categories into analyzing a new wordless book. With a high agreement rate of analyzing the new book, the two finalized categories

were determined as the themes of this study.

Because of space limitations, we only included analyses of three of the books as three cases in this article. They are, Float, (Miyares, 2015) Bee & Me (Jay, 2017) and The Red Book (Lehman, 2004). Each of these three books has unique and illustrative examples demonstrating the two types of gaps. The book Float has multiple gaps examples using depictions of character's facial and body actions to invite readers to explore characters' inner world. Bee and Me has time and space gaps that are embedded in the interactions of two main characters within a single storyline. The Red Book has examples of using vectors in book images as a way of inviting readers to infer characters' inner world. In addition, *The Red Book* also has gaps of time and space when presenting two storylines at the same time. Float by Daniel Miyares (Miyares, 2015) is a story about a boy's adventure with his paper boat on a rainy day in the neighborhood, during which he lost his paper boat. The book provides detailed description through images of the boy's joy when playing with the boat, his thrill when chasing the boat, and his sorrow when losing his boat. Bee & Me by Alison Jay (2017), is the story of a young girl and her adventures with a bee that she met on a summer day. The bee has human characteristics which are important to the story, as it is the young girl's relationship with the bee, and her growing sensitivity to the bee's vulnerability in the city environment that drives the story. The Red Book by Barbara Lehman (Lehman, 2004), is a fantasy story about a girl who gets lost in a magical red book that takes her across cities and oceans to meet a mysterious new friend, a boy. The two main characters live far away from each other at the beginning of the story and end up being together and becoming friends. Using specific page openings to illustrate our analysis, we provide detailed examples of gaps in knowledge about characters' inner worlds and gaps in space and time in the next section. Because we are ultimately interested in readers' interaction with these books. We infer the ways in which gaps function as influences on readers' uses of imagination as part of comprehension.

Result

Our reading and analysis of these three books led us to identify two themes of gaps. These gaps occurred in each book, though articulated differently by their authors. Readers of *Float*, *Bee & Me* and *The Red Book*, encounter gaps in each of Bruner's landscapes, that of action and of consciousness (Bruner, 1986). In the landscape of action, gaps include changes in time and space that without the explanation of written text are disconnected, unexplained and indetermined. In the landscape consciousness, gaps occur in accounting for characters's inner worlds, their thoughts, feelings, belief, intentions and relationship building as they change between images. These two types of gaps emerge that challenge young readers' comprehension during wordless book reading.

Gaps of Characters' inner worlds

Understanding characters' inner world through **facial and body actions.** Gaps of Characters' inner worlds were identified in *Float*, where readers are asked to imagine the protagonist, the little boy's inner world as his adventure moves on. The author presents character's inner world gap through depiction of characters' facial expression and body language. Readers are "addressed" by the boy's facial expressions, with what Painter, Martin and Unsworth (2013) call generic style, which allows readers to recognize human facial and actional features that they commonly see in real life. The way of depiction allows readers to use the way they imagine people's minds in the real world to comprehend the boy's thoughts and feelings. For example, when readers see the boy frown his eyebrow, put his hand at forehead, and turn his body left and right, they may realize the boy is looking for something. Further, from this combination of action and facial expression, readers could imagine that the boy is being anxious and worried, because they experience similar scene in real life, for example, when parents are looking for something, they look anxious and worried, just like the boy in the story.

Characters' direct contact as invitations to explore inner world. Sometimes, readers are "dragged" into the story by character's "sensitive contact" (Bertau, 2014). There are places when the boy character addresses readers by breaking the boundary between "there" (the story world) and "here" (the real world). When the boy is immersed in his sadness of losing his boat, he is standing at the door, lifting his hat and looking out of the page at readers as if saying, "I'm so sorry I lost my boat." The moment the boy's eyes contact reaches readers', the invisible boundary between his world and readers' is broken, leaving readers to actively engage in this contact, by possibly responding, "oh, he is being sorry" or "don't worry!" The sensitive contact and addressivity in *Float* increase the level of engagement during reading, which can encourage readers to imagine more of the story. As noted earlier, the absence of written text that might explain what characters are thinking and feeling leaves readers to make sense of this important part through imagination. Understanding characters' inner worlds is not only important to understanding narrative moments but also critical to making sense of the narrative as a whole. The gap of characters' inner worlds can also function as a connection between story plots and help readers to anticipate what happens next.

Characters' thoughts and feelings indicated by vectors. Gaps of Characters' inner worlds were also found in *The Red Book*. During the journey of discovering the mystery of the red book, both characters, the boy and the girl, undergo a series of emotion and location changes. The plot of the dual protagonists being in different spaces and seeing each other through a red book creates the story with multiple plot lines. In order to make sense of the complex story, readers must imagine and construct missing plot elements as well as the thoughts, feelings and motivations of both protagonists.

Vectors (Kress, & van Leeuwen, 2020), usually present as invisible lines which indicates, for example, directional movement of the body or sight, suggesting the narrative nature of the image and the relationship of "doing" or "happening" (Jewitt, & Oyama, 2001, p.141) We found that vectors, as indicators of such gaps

can also draw readers readerxplore the inner world of the character and to speculate on the character's intentions in doing so. In The Red Book, when the girl first finds the red book, she is standing on a snowcovered street and looking at a red book lying in the snow. On the page, the girl slightly tilts her body with her eyes looking at the book and her mouth slightly open. This depiction of the girl invites readers to follow the girl's eyes as she attends to the red book and imagines if the girl is surprised to find it. Another example is that when the girl arrives at the classroom and begins to read the red book, she focuses on reading a map of an unknown place in her book. The image of the girl looks very close to readers as if readers are standing beside the girl and reading the map alone with the girl. This close depiction of the girl "addresses" readers by inviting readers to be with the girl and attend to read the map together. Moreover, the two simultaneous readings, the girl's and the reader's invite readers to imagine the girl's thoughts and feelings and promote dialogic transactions between readers and the text.

Gaps of Time and Space

Perhaps the most prevalent and challenging gaps for young readers are in time and space changes which are created by page turns and framing. The presence of this type of gaps enhances the quality of addressivity in texts, as the disrupted images in effect "turn to" readers for their active and imaginative involvement. Jumps between settings, or perspectives on the same setting, as well as unaccounted for passages of time, invite readers to make an excursion into the story, imaginatively create plot elements as part of the landscape of action, and character attributes (thoughts, feelings and motivations) as part of the landscape of consciousness, to overcome gaps and make sense of the narrative. Readers make decisions about what is happening and why as they participate in the unfolding narrative in complicated ways, functioning as coauthors as part of comprehending.

Time and space gaps with zooming in. Gaps in time and space were found in *Bee & Me*. For example, after the title page, readers of *Bee & Me* encounter a

cityscape that takes up a full-page opening. Turning the page to the next page opening, readers encounter a close-up of one apartment building in the previous cityscape. The apartment building takes up most of the left-hand side of this page opening. Moving the reader's perspective by zooming in on a close-up of one building on the left page, creates a gap in time (how did we get here looking at a single building) and narrative space (one building instead of a cityscape) inviting the reader to expand the reality of what is represented in the image, to create what is not represented to make sense of this series of images and the unfolding narrative. On the right side of this page spread, Jay zooms in again, this time on one apartment, changing the space in which the narrative is evolving. Now the framed and foregrounded image of one apartment (within the apartment building, within the cityscape) is the narrative context. This shift in narrative space is enhanced by the depiction of several apartment building windows through which the reader sees people inhabiting their separate apartments, one of whom becomes the main character. For the young reader, this first page turn changes the narrative space twice. To make sense of these changes, readers must create connections between the previous image of the cityscape and this new image of people in apartments. The page turn creates a gap that asks readers to keep images in memory and then see this more detailed image as part of the original. Forming connections between images that are not concretely indicated by the author creates a fuller narrative reality through imaginative meaning making.

The gaps in space and time are also evident in *The Red Book* with framed images across pages, and it challenges the reader's imagination even further. The red book in this story resembles a mysterious device that connects the two main characters in different time and space, overcoming the physical distance between them and achieving simultaneity in time and immediacy in communication. One example appears on the page opening when the girl is reading a map in her red book. On the left side of the page opening,

the girl is reading the map, while on the right side, the page is divided into four framed images, suggesting a movable map that zooms into an unknown island, and finally focusing on the boy walking on the beach. There are changes in space and time for readers when reading from left to right of this page opening. For the space change, the story location moves from girl's classroom to the island where boy lives. For the narrative time, it shifts from the girl's winter time zone to the boy's summer time zone. In order to understand this dramatic change within page openings, readers need to keep shifting their reading perspectives, from observing the life of the little through the eyes of a reader to observing the actions of the little boy from the eyes of the little girl; each shift in perspective presents a challenge for the young reader to interpret.

Various sizes of time and space gaps between **images.** The time gaps that occur between separately framed images can vary. A time gap might be only a few seconds, while others could depict the passage of minutes and hours or even days. The inconsistency of these gaps affects the passage of narrative time by making the pace of the time gap in the story different. For example, on another page opening, the girl encounters the rain-soaked bee who as arrived on the girl's window ledge on the left. The right-hand page consists of four separately framed images in which the girl spoon-feeds the bee, blow-dries his body with a hair dryer, sits with him while he recovers, and reads up on bee care. The activities on this page appear to occur within a relatively short period. In comparison, on the very next page, the time and space gap change the pace of time yet again when readers encounter 17 unframed images of the girl and the bee engaging in all sorts of activities from playing chess to bike riding. Among them, three images depict the girl measuring the bee noticing his growth in height. The bees' growth suggests that these activities are occurring not in an afternoon, or even a day but across a much longer period of time, perhaps weeks or months.

In order to understand books like *Bee and Me* and *The Red Book*, where there are various gaps in space

and time in the visual texts without written cues or commentary, young readers must successfully use imagination to expand the meanings offered in image. Gaps of space and time are ongoing and irregular. Readers must enter into that time to make sense of it. The excursion of imagination allows for the connection between narrative time and personal experience of time as part of understanding what happens in the landscape of action. In addition, readers are challenged to understand the inner worlds of the characters in the absence of verbal explanation. Achieving "sensitive contact" with characters through imagination makes it possible for readers to make sense of this landscape of consciousness. To follow these gaps, readers must persevere through a sense of disruption created by gaps and move with the changing rhythms of narrative times and spaces. Readers imagine what time has passed, as well as what might have happened and why during as part of resolving the presence of gaps in stories.

Discussion

Through the analysis of the three wordless books above, two themes of gaps emerge that challenge young readers' comprehension during wordless book reading. They are characters' inner worlds and spacetime gaps. Gaps present themselves in the omitted plots and disruptions in visual narratives.

When reading gaps in wordless books, reader's role appears to be filling gaps, but they are actually "experiencing" a combination of what gaps represent in the story and what they choose to imagine. Thus, just like the tip of the iceberg, the gaps in visual narratives seem to point to something finite, yet depending on individual readers, what is pointed to could lead to something unseen, indeed a whole new playground for meaning making. For example, when reading a sadness face of character, one reader may read, "she is sad," while another may read, "she is sad because the weather is bad, and it reminds her of losing her boat in a rainy day." When readers leave their own mind and transit themselves to characters' minds, they are experiencing the gap that prompted by character's addressivity, such as facial expressions

and actions. This type of gap allows readers to enter the landscape of character's mind to imagine. When reading a character's inner world gap, readers are not totally disconnected from the real world, they are being the character and being the reader at the same time. Imagining the characters' inner worlds allows readers to bring experiences from the real world to comprehend the gap. The comprehension practice prompted by gaps can also influence real world experience and help readers to learn to understand or empathize with other people.

When readers are reading the visual narrative with time and space change, the omitted information and hidden plots between images become noticeable. When imagining the story, like a movie, readers need to create a reasonable explanation of how the scenes between different images are connected. With imagination, readers come up with story details and extra information in order to create a coherent narrative. Often, these imaginings are built upon the comprehension of previous story plots and background knowledge of coherent narrative. When filling gaps, readers are composers. They create "mini stories" between the changes of space and time. Time and space gaps can be extended to various possibilities and reader's agency is to decide the "size" and "depth" of the gap. The challenges of reading gaps make wordless book reading a mixture of comprehending and composing. The cycle of comprehending and composing is like a dialogue between the book and the reader. Readers are no longer passively decoding visual information but creating their own narratives; and in new narratives, they see not only the authors, but also themselves. The imaginative practices when solving gaps can benefit readers in the future as mature readers and writers, as imagination is critical for both.

Conclusion

Multiple gaps in these three wordless books make them rich dialogic objects that address readers and invite responses. When reading wordless books like Float, The Red Book, and Bee & Me, readers experience a cycle of encountering and resolving gaps as they expand the story through imagination to make meaning. The ongoing addressivity of these wordless texts, created by multiple, varying and sometimes unexpected gaps, invites readers into a dynamic and challenging dialogue, which can enhance the readertext transaction for engaged, imaginative and flexible young readers. Working through gaps with imagination can bring readers a sense of accomplishment as well as a sense of expectation as they anticipate future gaps, and a sense of confirmation when they regard previous reading. In addition, rich illustrations, especially of characters and settings, challenge readers to imagine and make connections between real-world knowledge and story world experience. The imaginative construction of these connections contributes to comprehension. Visual designs such as, framing and focalizing broaden the possibility of imagining and presenting gaps.

The specific characteristics of wordless books we identified point to particular ways in which imagination and comprehension are jointly engaged in wordless book reading. Analyzing gaps that readers encounter in these texts highlights the ways in which text characteristics invite readers to use imagination as a necessary part of deep comprehending. Resolving gaps is sophisticated comprehending activities, which young children are readily engaged in. Indeed, wordless books might be considered as a special kind of complex text, and one of whose complexities is represented, in part, by the challenges of gaps within image-rendered text worlds. More generally, the role of imagination in children's reading lives, and specifically as a contributor to comprehension, is undervalued. Examining wordless books with an eye for what prompts imaginative activity is one way to move imagination into a conversation about emergent comprehension. Characteristics of wordless books depend on the reader's use of imagination as a primary contributor to sense-making. In addition, this text analysis has implications for the analysis of picturebooks as well, and the role of imagination in children's comprehending of that text genre.

References

- Allen, M. (2017). *The sage encyclopedia of communication research methods* (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc doi: 10.4135/9781483381411
- Arizpe, E. (2003). *Children reading pictures: Interpreting visual texts*. New York: NY: Routledge Farmer.
- Arizpe, E., & Styles, M. (2016). *Children reading picturebooks: Interpreting visual texts*. Routledge.
- Bader, B. (1976). *American picturebooks: From Noah's ark to the beast within*. Macmillan.
- Bakhtin M. (1981). *The Dialogic Imagination: Four Essays*. University of Texas Press.
- Bakhtin, M. (1997). *The act of reading: A theory of aesthetic response.* Johns Hopkins University Press.
- Bertau, M. C. (2014). On displacement. *Theory* & *Psychology*, *24*(4), 442–458. https://doi.org/10.1177/0959354314533742
- Bruner, J. S. (1986). *Actual minds, possible worlds*. Harvard University Press.
- Crawford, P. A., & Hade, D. D. (2000). Inside the picture, outside the frame: Semiotics and the reading of wordless picture books. *Journal of Research in Childhood Education*, *15*(1), 66-80.
- Frey, L., Botan, C., & Kreps, G. (1999). *Investigating* communication: An introduction to research methods. (2nd ed.) Boston: Allyn & Bacon.
- Green, M. C. (2005). Transportation into Narrative Worlds: Implications for the Self. In Tesser, A., Wood, J. V., & Stapel, D. A. (Eds.), *On Building, Defending, and Regulating the Self: a Psychological Perspective* (pp. 53-75). Psychology Press.
- Iser, W. (1972). The reading process: A phenomenological approach. *New Literary History*, 3(2), 279-299. https://doi.org/10.2307/468316
- Iser, W. (2005). The Reading Process: A
 Phenomenological Approach. In Tompkins, J. P.
 (Eds.), Reader-Response Criticism: from Formalism to
 Post-Structuralism (pp. 50-69), Johns Hopkins
 University Press.
- Jay, A. (2017). Bee and Me. Candlewick.
- Jalongo, M. R., Dragich, D., Conrad, N.K. and Zhang,
 A. (2002) Using Wordless Picture Books to Support
 Emergent Literacy. *Early Childhood Education Journal*,
 29(3), 167-177.

- Jett-Simpson, M. (1976). Children's inferential responses to a wordless picture book: Development and use of a classification system for verbalized inference. (Doctoral Dissertation: University of Washington). ERIC Document Reproduction Services No. ED 139005. http://www.eric.ed.gov/PDFS/ED139005.pdf
- Jewitt, C., & Oyama, R. (2001). Visual meaning: A social semiotic approach. *Handbook of visual analysis*, 134-156.
- Kress, G., & Van Leeuwen, T. (2020). *Reading images: The grammar of visual design*. Routledge.
- Lehman, B. (2004). *The Red Book*. Houghton Mifflin.
- Lysaker, J. T. (2018). *Before words: Wordless picture books and the development of reading in young children*. Teachers College Press.
- Lysaker, J., & Hopper, E. (2015). A kindergartner's emergent strategy use during wordless picture book reading. *The Reading Teacher*, 68(8), 649-657.
- Lysaker, J. T., & Miller, A. (2013). Engaging social imagination: The developmental work of wordless book reading. *Journal of Early Childhood Literacy*, *13*(2), 147–174. https://doi.org/10.1177/1468798411430425
- Miyares, D. (2015). Float. Simon and Schuster.
- Nikolajeva, M., & Scott, C. (2013). *How picturebooks work*. Routledge.
- Painter, C., Martin, J., & Unsworth, L. (2013). *Reading visual narratives: Image analysis of children's picture books*. Equinox Publishing Ltd.
- Pelaprat, E., & Cole, M. (2011). "Minding the gap": Imagination, creativity and human cognition. Integrative Psychological and Behavioral Science, 45(4), 397-418.
- Serafini, F. (2014a). Exploring wordless picture books. *The Reading Teacher*, *68*(1), 24-26.
- Serafini, F. (2014b). *Reading the visual: An introduction to teaching multimodal literacy*. Teachers College Press.
- Serafini, F., & Reid, S. F. (2019). Multimodal content analysis: expanding analytical approaches to content analysis. *Visual Communication*, 1470357219864133.
- Terrusi. (2018). Silent Books. Wonder, Silence and Other Metamorphosis in Wordless Picture Books.

- Proceedings, 1(9), 879. https://doi.org/10.3390/proceedings1090879
- Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian & East European Psychology*, 42(1), 7-97.
- Zittoun, T., & Cerchia, F. (2013). Imagination as expansion of experience. *Integrative Psychological and Behavioral Science*, *47*(3), 305-324.
- Zittoun, T. (2017). Symbolic resources and sensemaking in learning and instruction. *European Journal* of *Psychology of Education*, 32(1), 1-20.