



18. Information and delight. A study of visual transmission of knowledge

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Abstract This chapter discusses visual strategies and visual interpretations of information and knowledge in three selected Norwegian nonfiction picturebooks. What role do the illustrations play in conveying facts and information, and how are visual strategies used to communicate knowledge to different possible child readers?

Keywords visual strategies, presentation of knowledge, visual reader connections

INTRODUCTION

Inspired by Gunther Kress and Theo van Leeuwen's (1996) understanding of visual coding orientations, I have studied visual strategies and visual interpretations of information and knowledge in nonfiction, or informational books as Nikola von Merveldt (2018) and others call them nowadays. What role do illustrations play in conveying facts and information, and how are visual strategies used to communicate knowledge to different possible child readers?

To illuminate these questions, I have chosen three Norwegian informational picturebooks, aiming to reach different age groups and conveying different topics. The books that frame my material are all illustrated by award-winning and acknowledged Norwegian illustrators. The first book *Møt fjellreven (Meet the Arctic fox,* 2013), is written by Nina E. Eide, Terje Borg, and Camilla Næss, and illustrated by Inger Lise Belsvik. It addresses rather young children, from pre-schoolers to the youngest in primary school, and as a book about Arctic foxes, it lies within the field of zoology. The second book, *Grønne greier. Om natur og miljø og sånt (Green Stuff – Nature and environment and things,* 2018) is written by Ole Mathismoen and illustrated by Jenny Jordahl. The topic is nature and the environment, and the

book belongs to the areas of ecology and social sciences. It addresses readers in primary school and pre-teens. The third book, *Amundsen gjennom Nordvestpassasjen* (*Amundsen through the Northwest Passage*, 2014), is written and illustrated by Bjørn Ousland. This is a biography; it tells how the Norwegian polar explorer Roald Amundsen discovered the way through the Northwest Passage. It addresses young adults and can be categorised under history and geographic.

PICTORIAL TURN

For decades, the focus in studying informational books has been on themes and topics – and on how verbal strategies are used in different presentations of knowledge. This has changed, and today many researchers interested in this field, such as Anne Løvland and Nikola von Merveldt, claim that the visual strategies are just as important as the verbal ones. After all, informational books aimed at children and youngsters are mostly multimodal texts, meaning texts that use several modes, visual and verbal, to present knowledge and to create meaning.

Still, there are different ways of understanding the many visual modes and codes used in informational books. While Løvland (2016) is concerned about the role visual strategies play in conveying truth and facts, she uses three distinct forms: “correspondence truth”, “pragmatic truth” and “hermeneutic truth” (p. 9). Whereas von Merveldt (2018) sees illustrations in informational books in a wider perspective. She claims that illustrations “[...] do not merely represent or illustrate transparent data of facts; rather they render them visible or visualize them, which means they take on an active, interpretative role” (p. 232). Kerry Mallan and Amy Cross (2014) support this point of view. In informational picturebooks, both words and images construct knowledge, and to do so they offer cognitive, emotional and sensory experiences.

Although informational books can be and are used in school, they mainly address what we might call leisure reading. They are therefore intended to entertain and amuse; they establish insight into various topics by popularizing knowledge. Tone Birkeland, Gunvor Risa, and Karin Beate Vold, the authors of *Norsk barnelitteraturhistorie* (*The History of Norwegian Children's Literature*, 2018), point this out in their definition of informational books for children: “[Such] books are often richly illustrated, they can frame narratives and use fictional characters, and they use different strategies to involve the child reader in the inquiries that different topics generate” (p. 485).¹

1 “[Fagboka] er ofte rikt illustrert, nyttar gjerne rammeforteljing og fiktive personar og går ikkje av vege for å involvere lesaren i dei faglege spørsmåla stoffet reiser” (Birkeland, Risa & Vold, 2018, p. 485, all translations from Norwegian to English are mine).

In informational books we find *selected* and, as Nina Goga (2019) points out, *organized* knowledge. The aim is not only to reach children and young people's fields of interest, viz finding topics and themes that young readers would like to read about, but also to expand the young readers' areas of interests. Representation studies can provide us with insight into what kind of knowledge, facts and information we consider important and useful for different age groups, and maybe even more importantly; what kind of knowledge is absent. However, in this study, my focus is not on what kind of subjects and themes we find in informational books for children and youngsters. Having chosen three completely different books, the purpose is to avoid such a quest. Instead, I have focused on how visual strategies are used to communicate knowledge and information to different age groups. If we want a better understanding of informational books, we must focus not only on what kind of knowledge they present but also on *how* they communicate the knowledge, and of course that includes how they link information to different child readers. This is also one of Patricia A. Larkin-Lieffers' arguments. She claims that studies of the implied reader are just as important in informational books (or information books as she calls them) as in fiction (Larkin-Lieffers, 2010). How then, do the illustrations in the three books that frame my material connect to different child readers, and what roles do the illustrations play in conveying facts, information and knowledge?

REALITY PRINCIPLES

In *Reading images. The grammar of visual design*, Gunther Kress and Theo van Leeuwen (1996) discuss how modality is realized in what they call "a complex interplay of visual cues" (p. 167). Realism, as Kress and van Leeuwen point out, is a term motivated by signs, and to establish what they call different "reality principles", they have formed four types of visual coding orientations: "technological coding", "sensory coding", "abstract coding" and "naturalistic coding" (Kress & van Leeuwen, 1996, p. 170; van Leeuwen, 2005, pp. 168–169). Kress and van Leeuwen use these categories to explain how we respond to images and visual signs. Realism though, as they point out, is not neutral and objective; it defines what counts as real, and what counts as real will change along with different cultural and historical norms.

Technological coding is a term that refers to visual "effectiveness". A technically drawn diagram, for instance, can be more effective than a photograph if the purpose is to explain how something works. Kress and van Leeuwen (1996) explain this code as a "blueprint" representation (p. 170). In the sense I use it, it is a code that

can define images that show what something looks like on the inside, for example, a human body. *Sensory coding* refers to how different visual modes work to communicate with the reader's emotions. In informational books for children and young people, such codes are used to promote engagement, stir the reader's feelings, and capture the reader's interest. The third type is the use of *abstract coding*. Since it is possible to argue that any illustration is an abstraction, this is a difficult one. The purpose of this coding is to make something clearer through visualization, for instance, the use of charts and maps. The term refers thought to knowledge and understandings that are already culturally established. Kress and van Leeuwen (1996) claim that this is a coding orientation used by sociocultural elites and they use examples from modern art: "In such contexts modality is higher the more an image reduces the individual to the general, and the concrete to its essential qualities" (p. 170). *Naturalistic coding* is the visual expression and representation that mimics actual things and actual occurrences. When an illustrator wants to show us what a person, a building, or scenery looks like, they are most likely to use naturalistic coding.

Images are more complex than language. An image can, for instance, have high sensory coding and at the same time use both abstract and naturalistic codes. In the end, it is the interplay of different cues and codes and how this interplay connects with the viewers (readers) that creates meaning: "What one social group considers credible may not be considered credible by another" (Kress & van Leeuwen, 1996, p. 175). In the following, I use these four categories of codes as tools to provide insight into understanding how images in informational books for children and youngsters communicate knowledge and information to different age groups.

Since the illustrations in the three books that frame my material are interpretations of different verbal signs, I have also investigated how the illustrations connect and relate to different verbal expressions. To do so, I have included Roland Barthes' concepts of "anchorage" and "release" in my analyses (Barthes [1964] 1980). Anchorage is a term that refers to how words and pictures link information, and release refers to how an image can transcend and complement verbal signs (Birkeland, Mjør & Teigland, 2018, p. 118).

EXAMPLE ONE: MØT FJELLREVEN (2013)

As the title implies, this is a book about Arctic foxes, and as already mentioned, it can be classified within zoology and it is aimed at pre-schoolers and early readers in primary school.

The book is divided into two parts. The first part is linearly organized. Here we follow a fox through a year from when it is born in May until it starts its own family a year later. The second part is what we might call a spatially organized factual presentation. Here we can read about size, weight, food, how many puppies Arctic foxes give birth to, how many Arctic foxes there are altogether around the world, and so on. Some of this information has already been brought to us in the first, linearly organized part, but here it is repeated and shaped into fact-oriented framings. In this second part, the fact-oriented verbal text is in focus while the illustrations play a more decorative role. In the first part, on the other hand, the illustrations have a more significant role in conveying information about Arctic foxes, their living conditions and behaviour. I even claim that the illustrations make it possible to read a narrative into the presentation of the Arctic fox. In the following, I focus on what is going on in the first part of the book.

The verbal text in this part tells us about Arctic foxes' living conditions in general.

It is not as lexical as the framed verbal facts in the second part of the book, but still, the verbal text is quite sober and knowledge-oriented:

In a den under the ground puppies are brought into the world. They are Arctic foxes. At first, they are so small that you could have one in each pocket. However, due to the goodness in the rich milk they get from their mother, they grow fast.

In Latin, we call the Arctic fox *Vulpes Lagopus*. It is a small fox related to the dog, and it does not get much bigger than a male cat when it is fully-grown.

Arctic foxes live only in the mountains and in places up north where it is cold. They live together two and two in pairs and defend their territory from other foxes. Both the male and the female feed and care for their young. (Eide, Borg & Næss, 2013, doublespread three)²

Belsvik uses mostly naturalistic coding (she shows us what Arctic foxes look like and what their environment looks like), sometimes also technological; the

2 "I et hi under bakken kommer valper til verden. De er fjellrever. I begynnelsen er de så små at du kunne hatt en i hver lomme. Men de vokser raskt fordi de får god og feit melk av mora. Fjellrev heter *Vulpes Lagopus* på latin. Den er en liten rev i slekt med hunden, og den blir bare litt større enn en hannkatt når den er fullt utvikst. Fjellrever bor bare i fjellet og andre steder langt nord i verden der det er kaldt. De lever sammen to og to i par, og forsvarer området sitt mot andre rever. Både hannen og hunnen mater og steller ungene sine."

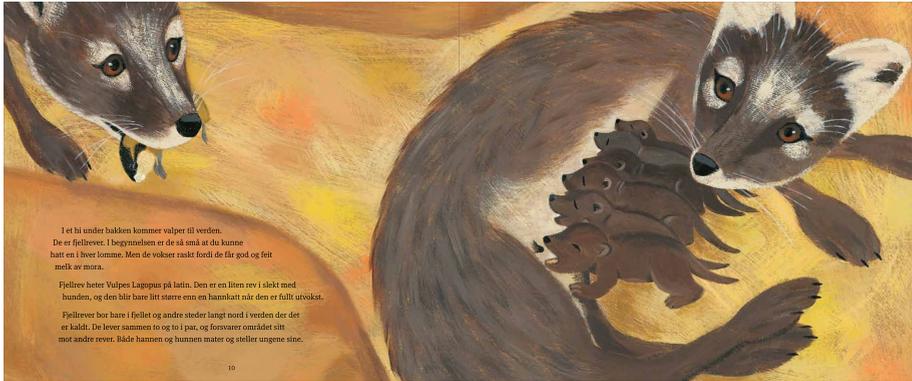


Figure 18.1 *Møt fjellreven* (2013), by Nina E. Eide, Terje Borg, Camilla Næss, and Inger Lise Belsvik, Mangschou.

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cross-section made on this doublespread (Fig. 18.1) is of course an abstraction, but it is also what I call a technical code. The verbal text in the example above is relatively sober, it is eager to give information about Arctic foxes in general. The illustrations confirm, or *anchor* in Barthes' term, but they also *release* or expand the information given by the verbal text. Inside the den, Belsvik introduces us to a “happy family image”, sensory, emotional codes are strong in this image. The mother is looking at the reader, inviting us in. Furthermore, visual clues give us information about what is going to happen next. In this doublespread, such a visual clue is the small yellow and black rodent called a lemming – the one the male fox brings into the den. Another visual narrative “clue” is that one of the puppies differs from the others. All the others have reached their mother's teats, except for one. On the two doublespreads that follow, we meet the six puppies exploring the environment outside the den. One of them, though, uses a little longer time than the others to get out, and in the illustration that follows on the next doublespread, we can see that two of the puppies are a bit more reserved than the others; one is looking out from a hole in the ground, while the other is peaking at us from behind a stone in the back. One of them is most likely “our” puppy. After these three doublespreads (one showing the puppies inside the den, and two doublespreads showing the puppies exploring the environment outside the den), Belsvik leaves the litter of puppies and concentrates on one of them. We are never told in words, but a likely interpretation is that we are following the same fox, and that “our” fox is the one that differs from the others by being a bit slower and maybe also a bit scared. The paratexts reinforce this interpretation. On the front-page, we meet one

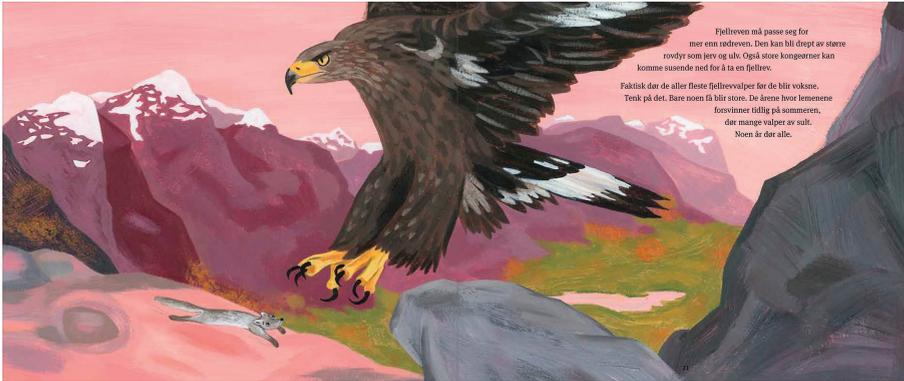


Figure 18.2 *Møt fjellreven* (2013), by Nina E. Eide, Terje Borg, Camilla Næss and Inger Lise Belsvik, Mangschou.

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lonely fox looking right at us from behind a stone, and the image on the back of the book conveys what might be our fox and her new family.

The illustrations focus on the environment of the Arctic foxes. They take us through different seasons and thereby different living conditions. They show us danger, such as how the red foxes and mountain eagles (Fig. 18.2) chase and threaten the Arctic fox. We learn about the winter coat though the illustrations cannot specify that the Arctic fox has the warmest winter coat there is, even warmer than that of the polar bear. That information is brought to us through the verbal text, but the illustrations can show us that the winter coat is white and fluffy and that the fox seems to manage very well in the cold snow.

Being illustrations, Belsvik's visualizations are of course abstractions. Belsvik simplifies, leaves out details and uses different value perspectives. Still, I argue that the illustrations in this book have what we can call, in Kress and van Leeuwen's terms, "high reality modes". The Arctic fox is a threatened species. The knowledge the book provides is therefore not just what characterizes the Arctic fox in general, it also provides information about how to save them. In this sense, the book has both a factually oriented perspective and a strong normative, value perspective. The interplay between verbal texts and visuals manage to unite these two aspects in a successful way. Belsvik uses naturalistic coding, also technical and, as I have tried to explain, sensory or emotional codes to engage the child reader. The illustrations do not merely give us information and knowledge, they also promote feelings and furthermore, they make connections between information and emotion. They also align with a young child reader and give the child the opportunity to read the first part of the book as a narrative.

EXAMPLE TWO: GRØNNE GREIER. OM NATUR OG MILJØ OG SÅNT (2018)

Grønne greier. Om natur og miljø og sånt gives information about nature and the environment – and the connection between them. The need for understanding is explicitly expressed in the introduction: “To do what’s best for nature, we have to know things about nature” (Mathismoen and Jordahl, 2018, p. 8)³. This book addresses older children than *Møt fjellreven*. Much of the material is a reproduction of cartoons printed in a newspaper for children. Two figures, named Ole and Jenny, take us through the book, explain, and convey facts and attitudes towards nature and different environments. Their appearance, and of course their names, have similarities to those of the book’s creators: Ole Mathismoen (verbal text) and Jenny Jordahl (illustrations). Together, Ole and Jenny, as figures in the book, present knowledge through dialogues and images. Jonas Bakken, who has studied the dialogues, concludes though that they are more monologues than dialogues. The two figures lecture and express viewpoints; they don’t really discuss them (Bakken, 2019, p. 27). What then about the images?

Ole and Jenny obviously work as identity figures. They seem to have a lot of fun together. Throughout the book we follow them exploring environments and discussing different topics concerning environmental sustainability. We see them together with medicinal plants in the rainforest, talking about rain, exploring the jungle, discussing Donald Trump, visiting Lofoten, and sorting waste, just to mention some of many situations and environments Ole and Jenny explore. We can see that they convey emotions, they get angry, sorry, upset, happy, and exhilarated, but they address each other, not the reader, and without explanations provided through the verbal text, it is sometimes difficult to decode what is going on.

The book is divided into seven chapters. It contains 160 pages, most of them are cartoon-spreads, but it also contains pages with lists of facts, several quizzes and pages that complement the cartons and represent verbal and visual explanations of different subjects connected to the book’s topic. Obviously, I cannot take you through the whole book. Instead, I will try to show how the illustrations communicates with the reader by looking into one doublespread (Fig. 18.3).

The color palette used, and of course the verbal title of the doublespread; “Naturen om høsten” (Nature during autumn) tells us that we are looking at an autumn image. The visual code used is not naturalistic; it is a kind of mix between

3 “For å gjøre det som er best for naturen, må vi kunne ting om naturen”.

five are placed on trees. Keeping focused on the *information* this image provides, the task we are asked to perform does not help us much. It might be entertaining, it might be fun, but it does not give the reader insight into the topic of this doublespread.

There is a lot going on in this image. Some animals are sleeping. The hedgehog is even snoring. Two hares, in winter coats, are placed in a landscape without snow, they are having what looks like a nice chat, and a salamander is about to say hello to – or eat – one of the ants, just to mention some of many different things that are going on in this particular doublespread. The challenge is that some of the things going on are connected to what we can call reliable fact-framed information (salamanders do eat small insects, like ants), others have a more decorative, entertaining function (for example the huge, dominant Arctic fox).

Jordahl uses mostly what I call abstract coding. The images in *Grønne greier. Om natur og miljø og sånt* are what we may call iconic representations of things, plants, animals, and different phenomena concerning climatic changes and environmental measures. A cloud with a happy face in this book is a happy cloud, a cloud with an unhappy face is an unhappy cloud, and so on. Through abstract codes, Jordahl correspond with visual styles that modern child readers are familiar with. Here the child reader represents the “culture elite”, to use Kress and van Leeuwens term. However, and as I have tried to explain, the connection between entertainment and information in the illustrations are not integrated in the same successful way as in *Møt fjellreven*. Without the text frames, the knowledge provided by the images is limited, sometimes even a bit confusing.

EXAMPLE THREE: AMUNDSEN GJENNOM NORDVESTPASSASJEN (2014)

Amundsen gjennom Nordvestpassasjen aims to reach older children and youngsters. The title and cover illustration refer to actual historical events, and the information provided in this book follows a linear, narrative organization principle.

This book has many layers, both verbal and visual, and thus several entries. It conveys a historical event, and it tells the story of seven men who went out into the world on a small ship. It also focuses on one man in particular, the polar explorer and scientist Roald Amundsen, and furthermore, it narrates Amundsen’s expedition through the Northwest Passage. Along the way, we also get to know about some of the earlier expeditions that failed. We retrieve information about the Inuits, about the ship *Gjøa*, the one that Amundsen used and which we can see today at the Fram Museum in Oslo. We also learn about climate. In 2010, Bjørn Ousland’s

brother, Børge Ousland, and Thorleif Thorleifsson used four months in a small boat to travel the same route that earlier demanded years, and this information is reproduced both verbally and visually at the end of the book.

With a focus on the visual part, we find that images reproduce events and high-light historical details. It is easy to see that Ousland is eager to display information. He wants to show us what the ship *Gjøa* actually looks like, the one Amundsen used through the Northwest Passage, and he wants to give a truthful interpretation of Amundsen and his expedition. The naturalistic coding is strong, the rendering of details shows accuracy. At the same time, the collection of different scenes and events is rather playful, and there are many humorous elements in the illustrations.

As we can see in doublespread three (Fig. 18.4), Ousland combines different visual codes. He portrays historical persons, like Roald Amundsen, Adrian Gerlace, Fredrick Cook, and Fritjof Nansen, and he renders details in clothing, furniture, and environment. The verbal texts in this doublespread tell us that preparations were important for Amundsen. He therefore took part in a Belgian polar expedition

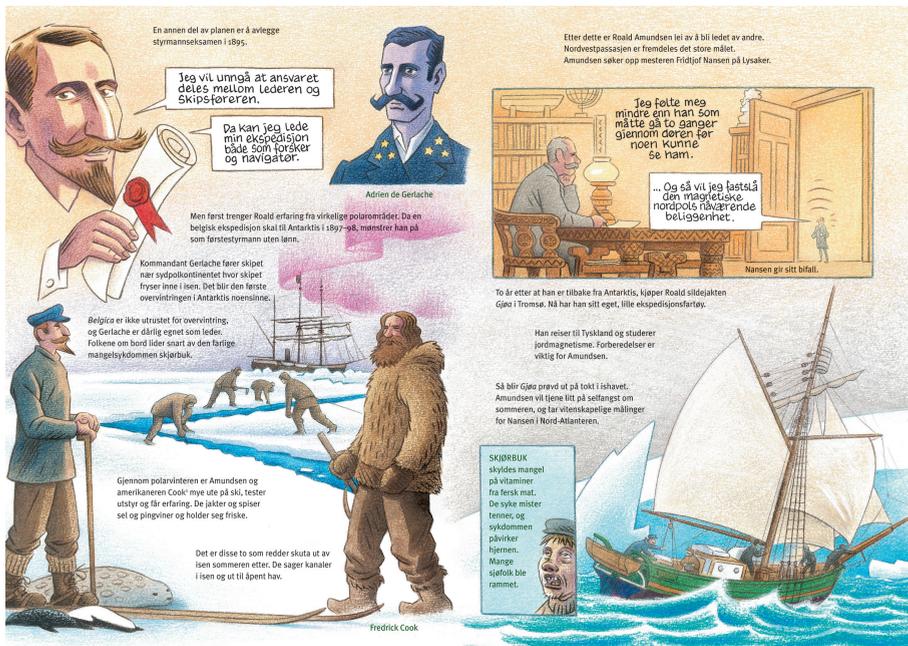


Figure 18.4 *Amundsen through the Northwest Passage* (2014), by Bjørn Ousland, Cappelen Damm.

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to the Antarctic without pay and experienced that leadership is crucial. To avoid scurvy, and together with Frederic Cook, he hunted and ate seals and penguins. The illustrations anchor this information. We see Amundsen and Cook together, and we see penguins and a seal. Scurvy is explained in verbal text in a small frame at the bottom of the right in this doublespread, and here an illustration provides us with insight into what a person with an illness like this could look like.

Two ships, Belgica and Gjøa, are visualized. We are not told in words but still it is easy to see that Gjøa, the one Amundsen used on his expedition through the Northwest Passage, is smaller than Belgica, the one used on the Belgian expedition to the Antarctic. Different scenes and episodes are also communicated through illustrations. At the top on the right in this doublespread, we see a tiny Amundsen standing in the doorway, trying to convince Fridtjof Nansen that he is the right man to lead a new expedition that can find a way through the Northwest Passage. In the verbal text, we can read that Amundsen “felt smaller than the man who had to go twice through the door before anyone could see him” (Ousland, 2014, third doublespread)⁵. In the image, Ousland renders this feeling by placing Nansen behind a desk and a tiny version of Amundsen in the doorway.

Throughout the book, selected episodes are dramatized through cartoon sequences. Even though these sequences contain many fun elements, they also communicate credibility and accuracy. It is therefore possible to argue that entertainment is connected to the knowledge the book provides. Ousland combines naturalistic and sensory coding by visualizing actual events in a humorous way. There is also examples of abstract coding in this book, rendering maps for instance, and technical codes are sometimes used, but the dominant coding principle is naturalistic coding, in combination with sensory coding.

As already mentioned, and as you can see in the doublespread above, the reader must navigate through different levels of information, both in the verbal text and in the illustrations. The book therefore requires an alert and explorative reader. In *Kart i barnelitteraturen* (*Maps in children's literature*, 2015), Goga points out that while the participants of the expedition, the ones we are following, are advancing in unfamiliar waters, the readers must advance in Ousland's dissemination of knowledge. The reader therefore becomes, as Goga (2015) suggests, “adventurer” and “conqueror”, “expedition leader” and “scientist” (p. 41). This comparison is good since the reading process is complex in this book. However, the connection

5 “Jeg følte meg mindre enn han som måtte gå to ganger gjennom døren for at noen kunne se ham.”

between naturalistic and sensory coding is helpful. In this book “information” and “delight” are bound together.

TO CONCLUDE

The analysis of the three books that frame my material obviously do not reveal all the many tasks illustrations provide in informational books for children. Still, the study shows that illustrations play an important part, not just in making connections between different topics and different child readers, but also in conveying information and knowledge. The interplay of visual codes and cues are complex, and to explore this complexity, I find Kress and van Leeuwen’s coding orientations useful. The four categories (technical, sensory, abstract and naturalistic) make it possible to identify different visual strategies and provide insight into how illustrations are used in informational books. The study also shows that fun-framing, or emotions and entertainment, are important aspects in aiming to make connections between different topics and different child readers, and that images can be used in different ways, as entertaining entrances to the verbal text, as well as independent knowledge markers.

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