3 What the child can learn from simple descriptive picturebooks

An inquiry into Lastwagen/Trucks

by Paul Stickland

Jörg Meibauer

Introduction

Simple descriptive books for children between the ages of 2 and 3 are definitely not the focus of picturebook research, let alone the focus of literary studies. For instance, there is no article on descriptive books in the recent Oxford Handbook of Children's Literature (Mickenberg and Vallone 2011). This is in sharp contrast to the huge interest these books may arouse in children. It is also in contrast to the important historical contribution that descriptive books have made to children's literature in general. Arguably, Orbis sensualium Pictus (The Visible World, 1658) by Johannes Amos Comenius is one of the first works of children's literature (Fassbind-Eigenheer and Fassbind-Eigenheer 2002). Why do most adult scholars — with the notable exception of researchers engaged in the children's literature—education interface — neglect the study of these books? The reasons are obvious. From their point of view, these books do not contain an interesting story, the pictures merely represent everyday objects, and the apparent joy they may trigger is a superficial and somewhat trivial phenomenon not worth pursuing. But these attitudes are only prejudices. At least from the point of view of a cognitive theory of picturebooks, this view seems completely misguided (see Kümmerling-Meibauer and Meibauer 2013).

In their excellent review of Nonfiction Literature for Children, Kiefer and Wilson (2011) point out that there is a lack of sophisticated research into nonfiction literature: not only do we find much conceptual confusion, but there is also a lack of serious analysis of single nonfiction texts. I would like to add that embedding into theories of literary development is nearly nonexistent, because nonfiction literature is typically separated from fiction literature and thus excluded from in-depth research.

In Kümmerling-Meibauer and Meibauer (2005, 2011), we argue that early-concept books — that is, wordless books for the very young that show only pictures of everyday objects — are very important when it comes to the understanding of early literacy. And the same is true with respect to simple descriptive books like the one I am about to analyze in more detail. The main distinction between early-concept books and simple descriptive books, then, is that only the latter contain text.
What is, then, a “simple descriptive picturebook”? I will assume that a prototypical picturebook is a series of picture–text combinations. The attribute “simple” means that there are not many items in the pictures and not many sentences on the pages; simple picturebooks are thus opposed to complex picturebooks containing more pictorial and textual information. But keep in mind the gist of this contribution: simple picturebooks are not as simple as they might appear. This will become clearer when we go on.

The attribute “descriptive” means that there is no story told. The term is thus opposed to “narrative”. Narrative picturebooks for the very young are also neglected in picturebook research (see Kümmerling-Meibauer and Meibauer, this volume, Chapter 1). Yet they attract more interest, because they are developmentally connected to narrative texts for older children. There are several other notions referring to descriptive books that are used in the literature: (1) nonfiction literature (Kiefer and Wilson 2011); (2) information(al) books; and (3) expository books. I prefer to speak of descriptive picturebooks, because “nonfiction literature” is a negative term. “Information” is also part of fictional/narrative literature, of course, as is an “expository” style. It goes without saying that description may be part of narration, and vice versa. Hence, there may be degrees of hybridity in the descriptive–narrative continuum (Kiefer and Wilson 2011: 291). Speaking of descriptive books still has the advantage of settling them within a comprehensive theory of description (“descriptology”; see Klotz 2013).

These distinctions leave us with the taxonomy shown in Figure 3.1.

Examples of these book types are:

- early concept book: Dick Bruna: *Erste Bilder* (1973) (see Kümmerling-Meibauer and Meibauer 2005);
- simple descriptive picturebook: Paul Stickland: *Trucks* (1986) (see the present chapter);
- complex descriptive picturebook: David Macaulay: *Cathedral: The Story of Its Construction* (1973);
- wimmelbook: Ali Mitgutsch: *Rundherum in meiner Stadt* (1988) (see Rémi 2011);
- simple narrative picturebook with text: Barbro Lindgren and Eva Eriksson: *Max bloeja* (1994);
- complex narrative picturebook with text: David Wiesner: *Flotsam* (2006);

It goes without saying that this taxonomy is by no means exhaustive and that there are many intermediate or overlapping categories. For example, there are wimmelbooks that display text. Textless wimmelbooks, in contrast, are “narrative” insofar as the pictures can tell simple stories. In sum, the taxonomy shows that the distinction “descriptive–narrative” matters, as well as the distinctions “simple–complex” and “plus text–minus text”.

This contribution starts from the assumption that simple descriptive picturebooks serve important functions on a number of levels. First of all, they deal with objects that are of interest to the child. This seems to be a trivial statement; however, when it comes to general knowledge about the world, it must be explained why trucks are more interesting than, say, toothbrushes. Second, they introduce a taxonomic system, since they bring the depicted objects into a certain order. Taxonomies are very important from a cognitive point of view, since categorization — that is, subsuming an exemplar under a certain category — is essential for understanding our surroundings. Third, they teach appropriate vocabulary including morphosyntactic and semantic information. Building up a complex dictionary, including learned or technical lexemes, is important for language acquisition and for learning in general. Fourth, they introduce the child to textual properties of descriptive texts, for example anaphoric elements. It is clear that anaphoric processes, including coherence and cohesion, are also important for narrative texts. Moreover, simple descriptive picturebooks may be superior to their narrative competitors in that they trigger more of children’s own narratives than the narrative ones do. Thus, Torr and Clugston (1999: 25) find in their experiments that the discourse surrounding the informational book was greater in quantity, contained more cognitively demanding questions, more conditional clauses and more interactions involving reasoning and technical terminology. These findings suggest that the informational picturebook has distinctive features that encourage and support children in their construction of new knowledge and patterns of reasoning.
(See also Moschovaki and Meadows 2005; Duke et al. 2012; Pinkham 2012.) Indeed, this could be an interesting reason why some children seem to prefer descriptive books over narrative books.

Learning the meaning of a complex word like *Langholzlasten* ("lumber truck") is a big challenge for a 2-year-old. Yet there are several developmental processes that make this possible. From early on, children are interested in the meaning and concepts of words (Smiley and Huttenlocher 1995; Bloom 2000; Gelman 2006; Rohlfing 2013). They are ready to analyze complex words and their components, and engage in the coining of new words in order to fill lexical gaps (Clark 1993; Meibauer 1995; Rainer 2010; Schipke and Kauschke 2011). Moreover, they use contextual (pragmatic) information to make progress (Clark and Amaral 2010). Numerous studies have shown that the reading situation is one important way in which children learn about language.

Simple as they may be, simple descriptive picturebooks participate in at least two "big" issues that have been recently put onto the agenda of research into children's cognition and culture. The first is children's knowledge acquisition; the second is how children learn from testimony. The Discovery of What Children Know, the subtitle of Siegal's book Marvelous Minds (2008), is indeed a major task of children's epistemology. There is research on what children know about astronomy, geography, biology, food, hygiene, life and death, numbers, and arithmetic. Yet there are many more fields that are the subject of children's knowledge acquisition. Certainly, knowledge about trucks does not qualify as a scientific domain; however, it is important for everyday life, as I will point out in more detail. Second, there is research on the question of how children learn from testimony. It is clear that children do not discover the whole world on their own. From early on, they rely on what they are told by others (Harris 2012). I think that the input from children's literature is one such source of testimony. When trucks are described in a picturebook for 2-year-olds, children assume that the information given is reliable.

This chapter deals with just one simple descriptive picturebook, *Trucks/Lastwagen* by Paul Stickland. The aim of the chapter is to point out how this picturebook may be related to the questions addressed in the introduction. As a linguist, I will highlight linguistic aspects of this picturebook. My point is that descriptive picturebooks have much to do with linguistics because information about the world is given qua linguistic structure. The outline of the chapter is as follows. In the next section, I describe the pictures in *Trucks*, drawing on the recent theory by Painter et al. (2013). In the third section, I will go into the textual makeup, contrasting the English version with the German version. In the fourth section, I will simulate the developmental perspective of a child in order to illuminate what a simple descriptive picturebook may mean to them. In the final section, I will address further research questions.

**The pictures**

The book contains pictures of 11 trucks and the people working with these trucks. The trucks are depicted in bright watercolors. Primary colors such as red, yellow, green, and blue are used. Usually there is an empty (white) background. Some pictures show additional background elements, such as trees or a building to be erected. The trucks are posed on a line symbolizing the ground on which they are standing or being driven. They are depicted from the perspective of a child so that they appear huge (see Figure 3.2). The depiction of the tires is very salient and not completely realistic. They are too big in comparison to the truck as a whole. The trucks are in different positions; they are depicted from the front or from behind, always simulating three-dimensionality.

As far as I can tell, we do not know much about depiction styles in descriptive picturebooks for young children. It seems to me that we can describe the depiction style of *Trucks* as (1) realistic and (2) generic. As far as (1) is concerned, it is worth pointing out that the trucks are shown as they naturally occur. In particular, they do not have faces or other properties that real trucks

![Lastwagen](image-url)  
*Figure 3.2 Book cover of *Lastwagen* by Paul Stickland, published by Ars Edition (Munich), n.d.*
do not have. This remark is not trivial. Think of the many depictions of trains, cars, etc. addressed to children in which these things are anthropomorphized, such as *Thomas the Tank Engine* (1946) by the Reverend Wilbert Awdry, or *The Story of the Little Red Engine* (1945) by Diana Ross and Leslie Wood. As regards (2), I would like to borrow from the distinction between minimalist, generic, and naturalistic depiction styles made by Painter *et al.* (2013: 34–35). While these depiction styles are related to the depictions of literary characters and are hence subsumed under the heading of “pathos”, a transfer to the depiction of things is tempting. The minimalist depiction style goes together with “appreciative” pathos; this style is used, for example, in Dick Bruna’s work (see his *Miffy* (*Nintje*) series, 1955 et seq.). The generic depiction style is related to “emphatic” pathos; indeed, the things are generic — they can be perceived as prototypical exemplars of their kind — yet they trigger the empathy and emotional attention of the child viewer. For the generic depiction style, it seems important that there is a balance between giving too much and too little detail. (The worldwide success of *Trucks* might indicate that the balance is successful.)

Beside pathos, Painter *et al.* (2013: 35–36) deal with ambience as well. Ambience, they point out, “will be regarded as a visual meaning system for creating an emotional mood or atmosphere, principally through the use of color”. The effects of color are to be seen in the parameters of vibrancy, warmth, and familiarity. Let us apply these parameters to *Trucks*. The “muted” choice within the parameter of vibrancy certainly creates a gentle feeling, as Painter *et al.* (2013: 37) put it. As for the parameter of warmth, we find warm (red, orange, yellow hues) as well as cool colors (blue, green, aqua hues). Finally, familiarity is realised by the amount of colour differentiation in the image. The basic principle here is that the more different colours are present in the image, the greater the sense of the familiar, since we usually experience the world day to day in all its variety of colour.

(ibid.: 38)

In this sense, the colorful pictures of *Trucks* are adapted to the child’s everyday experience.

**The text**

*Trucks*, first published in 1986, has been translated into several languages. It belongs to a set of similar books focusing on other vehicles (fire engines, excavators, tractors, cars, boats, planes, and trains). In Table 3.1, J1 and J2 refer to the jacket pages. The book contains 14 pages, some of them without any text (i.e. only with a picture).

In order to give a more detailed picture of the intricacies of a simple text presented to children between 2 and 3 years of age, I will point out some of its linguistic properties, dealing with phonology, morphology, syntax, semantics, and

<table>
<thead>
<tr>
<th>Page</th>
<th>German text</th>
<th>English text</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Lastwagon</td>
<td>Trucks</td>
</tr>
<tr>
<td>1</td>
<td>Title</td>
<td>English text</td>
</tr>
<tr>
<td></td>
<td>Paul Stickland Lastwagon as edition</td>
<td>Paul Stickland Methuen Children’s Books</td>
</tr>
<tr>
<td>2</td>
<td>Der grüne Pritschenwagen bringt Rohre zu einer Baustelle.</td>
<td>Two flatbed trucks. The green one is delivering pipes to a building site.</td>
</tr>
<tr>
<td>3</td>
<td>Der gelbe kommt gerade zurück. Er kann wieder beladen werden.</td>
<td>The yellow one is on its way back to reload.</td>
</tr>
<tr>
<td>4</td>
<td>Der Baustofflaster hat einen Spezialkran, mit dem man Ziegelsteine auf- und abladen kann.</td>
<td>A builder’s truck has a special crane for loading and unloading bricks.</td>
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<td>5</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>6</td>
<td>Dieser Fernstarter hat einen Motorschaden.</td>
<td>This lorry has broken down.</td>
</tr>
<tr>
<td>7</td>
<td>Der Abschleppwagen ist gekommen. Er wird den Laster in die Werkstatt bringen.</td>
<td>The breakdown truck has arrived to tow it to a garage.</td>
</tr>
<tr>
<td>8</td>
<td>Aus diesem Tankwagen werden die unterirdischen Benzinlager einer Tankstelle gefüllt.</td>
<td>The tanker fills the garage’s underground tanks as the red lorry gets petrol from the pump.</td>
</tr>
<tr>
<td>9</td>
<td>Unterdessen bekommt der rote Lastwagen Dieselloh aus der Zapfsäule.</td>
<td>Container lorries drive huge distances, taking goods direct from ship to warehouse.</td>
</tr>
<tr>
<td>11</td>
<td>Solche Fernlastwagen transportieren die Güter in Containern.</td>
<td>Container lorries drive huge distances, taking goods direct from ship to warehouse.</td>
</tr>
<tr>
<td>12</td>
<td>Sie können mit einem Kran leicht auf einen Eisenbahnwaggon oder ein Schiff umgeladen werden.</td>
<td>The trees have been cut down, and are being taken by special lorry from the forest to the timber yard.</td>
</tr>
<tr>
<td>14</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>14</td>
<td>In diesem Bilderbuch finden Kinder ab 2 bis 3 Jahren die verschiedensten Lastwagen.</td>
<td>All kinds of trucks for the very young.</td>
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</table>
pragmatics in turn. I assume that the text will be read to the child by an adult or older sibling. Note that the English and the German texts are not in a one-to-one correspondence. Thus, I present word-by-word translations in the examples that follow.

**Phonology**

Interestingly, the text starts with a contrast focus. The two color words *grün* ("green") and *gelb* ("yellow") stand in a semantic opposition. When the text is read to a child, the reader should pose a strong accent on the first syllables of each contrasted word. (Quite possibly, this is a source of error when reading the text for the first time.)

1 Der GRÜne Pritschenwagen bringt Rohre zu einer Baustelle. Der GELbe kommt gerade zurück.

   "The green flatbed truck is delivering pipes to a building site. The yellow one is on its way back."

In addition, in the second sentence, *Pritschenwagen* ("flatbed truck") is left out (by way of ellipsis) and has to be reconstructed. Thus, der grüne Pritschenwagen ("the green flatbed truck") and der gelbe Pritschenwagen ("the yellow flatbed truck") are contrasted with each other.

**Morphology**

A look at the verbal constructions reveals several tenses and different constructions. Besides the simple present we find:

2 [3]  a. kommt ... zurück
   "comes ... back"
   (particle verb)
   b. kann ... beladen werden
   "can ... load"
   (present tense modal passive)
   auf- und abladen kann
   "up- and down can"
   (modal construction)
   [7]  d. ist ... gekommen
   "has ... come"
   (perfect tense)
   e. wird ... bringen
   "will ... bring"
   (future tense)
   [8]  f. werden ... gefüllt
   "are ... filled"
   (present tense passive)
   [12]  g. können ... umgeladen werden
   "can ... reload"
   (present tense modal passive)

What is astonishing, however, and central to the topic of this chapter, is the rich set of complex nominal compounds:

3 Pritsche+n-wagen, Bau-stelle, Bau-stoff+laster, Spezial+kran, Ziegel+stein, Fern+laster, Motor+schaden, Ab+schepp+wagen, Werk+statt, Tank+wagen, Benzink+lager, Tank+stelle, Last+wagen, Diesel+öl, Zap+säule, Fern+laster, Eisen+bahn+waggon, Lang+holz+laster, Baum+stamm, Stapel+platz, Säge+werk

Hence, 21 out of 99 words are complex nouns. While Last+wagen ("truck") is a nominal compound, Last+er (meaning also "truck") is an -er derivation with a nominal base. Thus, this pair may give insight into patterns of word formation. Moreover, the elements Last+er and Wagen are morphological heads of some complex words. So, we find Fern+laster as well as Tank+wagen.

**Syntax**

There is only one complex sentence, namely [4]. The embedded sentence is a relative clause.

4 Der Baustofflaster hat [einen Spezialkran,] [mit dem er] man Ziegelsteine auf- und abladen kann.

   "The builder's truck has a special crane by which one can load and unload bricks."

We find several anaphors creating textual coherence:

5 a. [Der gelbe] kommt gerade zurück. Er kann wieder beladen werden.
   "The yellow one is just coming back. It can be reloaded again."
   b. [Der Abscheppwagen] ist gekommen. Er wird den Laster in die Werkstatt bringen.
   "The breakdown truck has arrived. It will bring the truck into the garage."
   c. Solche Fernlastwagen transportieren die Güter in [Containern]. Sie können mit einem Kran leicht auf einen Eisenbahnwaggon oder ein Schiff umgeladen werden.
   "Such long-distance trucks transport goods in containers. They can easily be reloaded with a crane onto a railway wagon or a ship."

Moreover, we find ellipsis, as in the case of der gelbe [Lastwagen] in [3], and the elliptical coordination auf- und abladen, which has to be interpreted as aufladen und abladen.

**Semantics**

We find definite and indefinite articles as well as demonstrative pronouns:

6 a. der Baustofflaster
   the build+stuff+laster
   "the builder's truck"
The general topic of the book is of course the presentation and naming of different kinds of trucks. These names constitute a lexical field. As an archlemme, we find Lastwagen. Note, however, that this term is first mentioned on page 9.

7 Lexical field of nouns denoting types of trucks: Pritschenwagen, Baustofflaster, Fernlaster, Abschleppwagen, Tankwagen, Lastwagen, Fernlastwagen, Langholzlaster

Note that in the English original, we find container lorry, while in the German version we find Fernlaster ("long-distance truck"). In addition, the original simply speaks of "special lorry", whereas the German version uses the more specific Langholzlaster (lit. long+wood+truck, "lumber truck").

Recall that Wagen and Laster are both morphological heads, for example in Tankwagen and Fernlaster. In addition, they are semantic heads: thus, a "Tankwagen" is a type of "Wagen" and a "Fernlaster" is a type of "Laster." Wagen and Laster are related by hyponymy, Wagen being the hyperonym, Laster the hyponym. Thus, every "Laster" is a "Wagen" but not every "Wagen" is a "Laster".

Pragmatics

In picturebooks, the pictures provide a context for the text. Therefore, indexical elements point to the things or events that are depicted. For example, the expressions der grüne Pritschenwagen, dieser Fernlaster, and solche Fernlastwagen refer to the pictures in which such kinds of trucks are shown.

The speech acts used in this text are assertives. However, it is not simply asserted that the green flatbed truck is delivering pipes to a building site; it is explained. The presupposition is that the child does not already know these facts; therefore, an expert is explaining these facts to the child. This is of course typical of descriptive books.

We do not know whether a child listener correctly attributes this information to a certain speaker. For instance, if Ken's father is reading the text to his son, is it possible that Ken believes that his father has so much knowledge about trucks? Or does Ken form the concept of an anonymous expert author and knows that his father is only the transmitter of the words the author-speaker has laid down in the past? As far as I know, we do not really know of to whom testimony is attributed from the child's perspective.

The overarching theme (also called "question under discussion" or "quasist") is of course information about trucks. There is no introduction to this theme, there is no complication, there is no solution, and there is no ending. Narrative elements are simply not there.

Yet there is some tension in the description that has to do with the movements and specific tasks of the trucks. For example, in [2] and [3] the child has to understand that the two flatbed trucks share a common task. Similarly, in [6] and [7] the function of the breakdown truck is to help the lorry, hence, the two trucks cooperate. Furthermore, in [8] and [9] it is shown (but only in the German version) that the tanker delivers the gas that is needed by another truck, so again we find a cooperative relation between the trucks.

In sum, Trucks is helpful in constructing knowledge concerning trucks. Learning about trucks has to do with acquiring basic knowledge such as that (1) trucks have functions; (2) trucks transport goods, e.g. bricks, gasoline, wood; (c) trucks have drivers and the drivers do something with the trucks -- for example, they load them; and (4) trucks are named after the goods or after their functions. Possibly this knowledge is integrated into a truck frame that will be expanded in the course of further development.

Comparison of the German and English texts

We cannot go deeply into quantitative aspects of the length of texts and sentences. It must suffice here to notice that length is not trivial with respect to acquisitionals tasks. A well-known methodological tool for the comparison of children at different ages is to compare the mean length of their utterances -- that is, to find out their MLU value. So, if the MLU of the textual input is measured, one finds a higher MLU in the English text than in the German text (Table 3.2). We cannot go into the question of whether English sentences are longer than German sentences in general. However, if it is assumed that children in the acquisitional process aim at being able to produce longer sentences, then it can be concluded that the English text is somewhat more demanding and, maybe, more effective.

Suppose little Ken is bilingual; as a matter of fact, he has the English as well as the German version at hand. Then he might find out that both texts give different information. For instance, take the last sentence in the two books:

<table>
<thead>
<tr>
<th>Table 3.2 A comparison of the text lengths of Lastwagen/Trucks</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Words</td>
</tr>
<tr>
<td>Sentences</td>
</tr>
<tr>
<td>Mean length</td>
</tr>
</tbody>
</table>
a. The trees have been cut down, and are being taken by special lorry from the forest to the timber yard.

b. Ein Langholzlaster fährt Baumstäbe aus dem Wald zum Stapelplatz des Sägewerks.

While in the first conjunct of [8a] it is explicitly expressed that trees have been cut down, this information remains implicit (it is presupposed) in [8b]. In contrast, while the truck is vaguely described as a "special lorry" in [8a], it gets a more explicit term in [8b], Langholzlaster, which can be paraphrased as "truck that transports long timber".

Let us now consider the text–picture relation, which is at the heart of picturebooks. In early-concept books, we have the prototypical case of a one-to-one correspondence between pictures and verbal information. For instance, there is a picture of a ball on the right-hand side of a double spread, and the word ball is printed on the left-hand side (Kümerling-Melbauer and Melbauer 2011). In simple descriptive picturebooks, however, we find (1) cases where the textual information surmounts pictorial information, and (2) cases where pictorial information surmounts textual information.

For instance, in the German version of [12] it is said that containers can easily be reloaded onto a railway carriage or ship by means of a crane, but the corresponding picture is left to Ken’s imagination; it is not depicted. On the other hand, most pictures contain more information than the text. This is trivially so when the picture stands for itself and is not accompanied by any text. But even in normal text–picture configurations, there are aspects (that Ken is potentially interested in) which are not verbally expressed in the accompanying text. For instance, in [8] the 15 logo-like yellow stars on a red circle (similar to the Caltex sign) are quite salient for Ken, but there is no further information about them.

Hence, what we find in a simple descriptive picturebook like Trucks is a careful balancing of textual and pictorial information, thus supporting the child’s interest in adding lacking information, be it from the perspective of the text or the perspective of the picture. Interestingly, the books under consideration slightly differ in the information they offer to readers.

A developmental scenario

Before embarking on the following developmental scenario, let me start with a cautionary note. What I am striving for — and what is much needed — is an integrative picture that is able to bring together findings from both naturalistic and experimental studies. The format of a developmental scenario is an appropriate method for this purpose as it fleshes out the situation of a fictive model recipient. In this way, it is possible to hint at research questions that often are not even asked in purely experimental work.

Let us assume that Ken’s father, Ben, bought Trucks from the local bookseller. He read on the back flap (and believed) that this book is suited “for the very young”. His son Ken is very young indeed: it was his second birthday four weeks ago. Moreover, Ben thinks that Ken could be interested in learning more about trucks. He has observed Ken’s attention whenever a truck enters the little street where the family lives.

Ken, being 25 months of age, certainly does not know much about types of trucks and their different functions, but he knows something about language and concepts, of course. Let us assume that Ken already knows about 200 words (supposing that he knew 50 words at 18 and then acquired 5 new words each week). In this still small lexicon, there are many nouns, comparatively few verbs, and some adjectives (see Kauschke and Holmeister 2002). It is clear that Ken has to learn more vocabulary.

Verbs are very important to him, since verbs organize sentence structure via their argument structure. Ben supposes that Ken still does not know the verbs to deliver, to load, to arrive, to fill, to drive, and to cut, for instance. But Ben is not sure. Maybe Ken has overheard one or more of these words on occasion, so that they may be part of his passive lexicon.

To be sure, it is unreasonable to assume that he possesses several words denoting types of trucks, so here is Ken’s chance to enhance his truck lexicon.

Ben is right in assuming that Ken is interested in trucks. When Ken was still a baby, he became interested in moving objects. While some objects were self-moving, other objects moved when they were caused to move, for instance balls. Trucks belong to the class of self-moving objects; however, Ken suspects that the driver is an actor that causes trucks to move. Moreover, trucks are movable objects that make noises. A ball, in contrast, is an object that does not make noises. So what is the reason behind these noises? Animals, for example, are moving objects that appear to produce noises by themselves. The noises produced by trucks seem to stem from the motor. The motor is something that makes noises and has the force to propel the truck. Finally, trucks are very large objects, at least in comparison to little Ken. And he knows already that trucks are somewhat dangerous. This is something his parents told him on several occasions.

Ken, being 25 months old, has just started to coin new words. His lexicon is still small, so compounding is a strategy for enlarging it when the situation requires. Typically, these new words are nominal compounds (cf. Clark 1993; Melbauer 1995). When Ken is reading Trucks together with his father, Ben, and his mother, Betty, he detects and feels assured that there are many complex nouns referring to the objects he is interested in. These nouns are fast-mapped — that is, they are stored in his memory. Moreover, since these nouns are related (they denote subcategories of trucks), they are semantically connected in his lexicon.

Since the text is read to him repeatedly, Ken learns how the words are pronounced. This helps him with the segmentation of the words. Moreover, Ken experiences that his mother Betty pronounces some words in a slightly different manner than his father does. Nevertheless, he detects that these words are the same, be they spoken by Ben or by Betty.
During the third year, there is an increase in the mean length of utterance. At 3;0, most children have an MLU value of 3—that is, their utterances contain three words on average. Ken will be no exception, but most of his utterances still consist of only two words. Confronted with *Trucks*, he hears very long and complex sentences that surmount his own abilities. For instance, he will be able to produce embedded sentences at 3;0, but *Trucks* already contains an embedded sentence, namely [4] in the German version and [8] in the English version. Typical embedded sentences in German have SOV (subject–object–verb), while typical root sentences have SVO. In the two-word stage, German children posit the infinite verb at the second (last) position. So, they have to learn to move the verb when using root sentences (this happens around 2;6) and to leave the verb in its position in embedded sentences (cf. Gretsch 2013; Kauschke 2012). Moreover, they have to master the verbal inflection.

It goes without saying that knowledge of grammar and texts is still restricted at 25 months of age. As a matter of fact, Ken will learn a huge number of things about grammar and usage during his third year of life. For instance, he learns to avoid ellipsis of subjects and function words; and he uses different sentence types, including embedded sentences. Moreover, he learns to use obligatory articles and to get the agreement between subject and verb right. Case, number, tense, and further morphological and syntactic properties of sentences are still difficult for Ken; however, even in this respect he will make some progress within his third year of life. In all these dimensions, he receives input by reading a simple descriptive book like *Trucks* together with one of his parents.

As we have seen before, his knowledge of texts, especially of the main textual properties of cohesion and coherency, is still restricted. So, there is an interesting aspect here: on the one hand, the text is quite demanding for Ken, since it contains complex words and sentence structures; on the other hand, it is an easy read, since there are no complex characters and narrative plots. To learn something about trucks and about grammar and lexicon is sufficient for 25-monthold Ken. Maybe when he is confronted with fictional characters like trains that can speak (e.g. *Thomas the Tank Engine*), he will not be happy about this jump from reality to fiction.

Perhaps Ken is primarily interested in the pictures, not in the accompanying text. The pictures depict trucks and selected parts of their surroundings in a special way. There are no detailed backgrounds. The trucks appear as huge objects seen from the perspective of a small girl or boy. The main relation shown in the pictures is the one between the truck and a person who has some function with respect to the trucks. The pictures are not very detailed; they are more realistic than naturalistic. Yet there is some special information given in the pictures that add realism and lead to further thinking about them. For instance, there are traffic lights, license plates, and even reflections of the forest on the chromes parts of the special lorry that transports wood. What is also salient to Ken is the position of the tires, which gives an indication of the direction in which the truck will turn when moving. All these things invite further pointing and asking.

*Trucks* has no introduction, no climax, no complications, no ending—in short, all elements of a narrative are lacking. This does not mean, however, that this simple text has no connection to narration at all. Indeed, some of the textual elements can be found in narratives, too. First, you find contrasts on a number of levels: contrasts between pictures, contrasts between lexical items denoting trucks, and contrasts between sentences such as in [2], [3] or [8]:

9. Two flatbed trucks. The green one is delivering pipes to a building site. The yellow one is on its way back to reload.
10. The tanker fills the garage's underground tanks as the red lorry gets petrol from the pump.

Second, since the picture-text sequences are ordered, there is a moment of sequentiality. For instance, the huge red truck transporting wood is at the end of the book.

Certainly Ken's ability to tell a story must still develop. And we know from numerous inquiries into children's narrative skills that there is a long road ahead. Empirical research shows that these skills develop gradually, from 3;0 years onwards until adolescence (cf. Bamberg 1987, 2005; Bouke *et al.* 1995; Becker and Quasthoff 2005; Dannerer 2012). What is remarkable, however, is the fact that all narratives, the child's own narratives as well as the narratives of professional authors, contain descriptive parts. Indeed, it is a key feature of every narrative that it contains descriptive elements. Hence, Ken's interest in trucks might constitute a building block for his later interest in descriptive passages as part of a narrative.

Furthermore, it could be that descriptive books have a greater impact on the child's own narratives than fictional books. Of course, Ben will have a major role here. Ken and Ben may develop stories in which they drive huge trucks across the deserts, for example. Trucks transporting dangerous materials are potential characters in these stories. In contrast, a story overloaded with fictional characters may not function as a trigger for the child's own narratives in a similar way. Perhaps descriptive books offer material that children can manipulate and rearrange according to their needs at a certain point of their development.

**Outlook**

The fictive developmental scenario embeds *Trucks* into the world of a little boy and reveals how this book may function in this world, and how a child can "learn" from this book. "Learning" is a multifaceted notion that can be spelled out in a number of ways. A very general definition of "learning" has been proposed by Jarvis (2009: 25):"11

The combination of processes throughout a lifetime whereby the whole person—body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, meaning, beliefs and senses) experiences
social situations, the content of which is then transformed cognitively, emotionally or practically (or through any combination) and integrated into the individual person's biography resulting in a continually changing (or more experienced) person.

If we take this definition seriously, it is obvious that "learning from picturebooks", including one particular person's learning from one particular picturebook, is a complex process.

Ganea and Canfield (this volume, Chapter 2) report experimental findings according to which young children prefer realistic picturebooks, and have an early preference for "realistic color photographs". Yet it has to be emphasized that learning from picturebooks happens also, and very importantly, from narrative books (fantasy, tales, etc.). It is not restricted to so-called information or reality, since there is also learning with respect to emotions, aesthetic values, and fiction. In addition, an early preference for "realistic color photographs" does not prevent children from appreciating, for instance, Dick Bruna's abstract drawings. So, there is much room for more naturalistic experimental research that is, research focusing on individual development and authentic picturebooks.

Kiefer and Wilson (2011: 291) approve of the taxonomy by Lounsbury (1996: 29), according to which nonfiction books can be subcategorized as follows:

- lives (diaries, memoirs, autobiographies, biographies);
- events (histories, journalism);
- places (travel writing, nature writing, science writing);
- ideas (essays, including religious and philosophical work).

Specifically, they state that "Lounsbury's explanation works just as well for studying children's nonfiction as it does for adult nonfiction." I do not agree. Simple descriptive picturebooks certainly are nonfiction; however, trucks, animals, things of everyday life do not fit into the above categories. Yet they regularly show up in children's literature for the very young. Books like Trucks are more demanding than early-concept books as described by Kümmerling-Meibauer and Meibauer (2011), yet they display simple descriptive texts that contrast with the complex genres listed in Lounsbury's classification.

Recently, Bernstein (2013) suggested to view children's literature in the context of material culture and play. In contrast, I would propose that children's literature should be appreciated as an important subject of a cognitive theory of language and literature acquisition. However, Bernstein is right in that she focuses on relations between children's literature and play. It seems to me that little Ken compares the pictures of Trucks with his own toy trucks and that he can even transfer knowledge he acquires from the text to his play with his trucks. On being confronted with hybrid toy trucks (e.g. books in the form of toy trucks) which are available in his local bookstore, he will notice a category mistake.

Much more may be asked about simple descriptive picturebooks. Are they a separate genre and, if so, are there subgenres? To what extent are children able to distinguish between narrative and descriptive picturebooks? What can children of both sexes learn from descriptive picturebooks? Are they able to transfer knowledge from picturebooks to reality (cf. Ganea et al. 2011)? Are simple descriptive picturebooks better for learning than narrative picturebooks? Is there competition between them or do they complement each other? I cannot go into these questions in any detail. I think that there is ample room for experimental research into descriptive picturebooks (see Torr and Clugston 1999; Moschovaki and Meadows 2005). My main goal here was to show that simple descriptive picturebooks like Trucks should by no means be underrated.

Notes

1 There are early-concept books that contain, for instance, the word apple in addition to the picture of an apple. Apple, however, is not a text. I assume that a minimal text consists of at least two sentences or utterances. Cf. the very wide notion of text adopted by Lancaster and Flewitt (this volume, Chapter 7), who assume that even bedrooms and photographs are texts.

2 For instance, it is an anaphor referring back to the lorry in the following text:

This lorry has broken down. The breakdown truck has arrived to tow it to a garage.

3 However, see Painter et al. (2013). The styles mentioned by Ganea and Canfield (this volume, Chapter 2), i.e. "highly realistic color photographs", "simplified and schematic drawings", "highly distorted and less realistic cartoons", do not exhaust the variety of styles to be found in picturebook art, let alone the problem of how to define these styles. It is unclear to me why children should prefer the former across the board since these styles deliver distinct kinds of information and are connected to distinct aesthetic values.

4 It goes without saying that it is not possible to relate all of these descriptive findings to recent language acquisition research in a sensible way. For a comprehensive survey on first language acquisition, see Clark (2003).

5 See Clark and Karumada (2013) for a recent analysis of brevity in language acquisition.

6 There are many methodological approaches to early literacy, ranging from naturalistic, parent-observer studies to experimental, eliciting studies in laboratory settings. Typically, the latter are quite restricted in scope, mainly because of statistical requirements. First of all, in order to isolate and control variables, they often use self-made picturebooks. Second, they elicit children's knowledge in more or less artificial laboratory settings. Third, they typically are cross-sectional studies — that is, they cannot cover the longitudinal development of an individual. Fourth, the participants chosen are not representative of the society. In contrast, parent-observer studies display a richness of data on different observational levels. However, their drawback is the lack of control of variables. Moreover, generalizations with respect to cohorts of children are not possible. Yet these studies often present data that are not easily captured in laboratory settings. Impressive parent-observer studies include those by Lowe (2007), who studies the literacy development of her two children Rebecca and Ralph, and Rainer (2010), who studies the acquisition of word formation by his daughter Carmen.

7 Cf. the observational-descriptive method applied by Lancaster and Flewitt (this volume, Chapter 7), which is intended to give an idea of what "distributed cognition" is about.
There is some evidence that in reading situations, fathers behave differently from mothers. Moreover, mothers and fathers, respectively, react differently depending on the sex of their children. See Elias (2009) for a comprehensive study of fathers’ reading behavior.

Compare Jake’s fascination with farming, farming machinery (tractors), and farm animals, as well as Mike’s interest in planes, as described by Lancaster and Flewitt (this volume, Chapter 7).

Hiebert and Bravo (2010) point out that early morphological knowledge, like early phonological knowledge, may promote later success in reading abilities. With respect to morphological input, *Trucks* may play a small part in this process.

See also the articles in Jarvis and Watts (2012).

References

Primary sources


Secondary sources


The development of color vision and of the ability to appreciate color in picturebooks

Mei Ying Boon and Stephen J. Dain

Introduction

Picturebooks may be described as sequences of picture–text relations. The pictures are an integral part of the picturebook. Neither the text nor the pictures should stand alone. The exploration of this specific relationship is a fundamental task of picturebook theory (Nodelman 1988; Lewis 2001; Nikolajeva and Scott 2001). There are also textless picturebooks, for instance early-concept books or relatively complex picture narratives. In these cases, the meaning of the single pictures or of the story connected to the sequence of pictures has to be interpreted by the viewer.

Quite often, pictures are seen as mere illustrations, and the idea that children have to learn to interpret pictures, just as they have to learn to understand the meaning of texts, is not always appreciated by picturebook theorists. This contribution focuses on one particular property of pictures, namely color.

What one finds are considerations of the functions of pictures, often from the perspective of pedagogic or literacy enhancement. Thus, it has been pointed out that pictures may engage children with “reading” (or even “literature”) without being able to be read in the literal sense (Kiefer 1995; Jones 1996; Nikolajeva 2003). There is a division of labor in that the child looks at the pictures while a caregiver reads the text. There are, of course, numerous actions such as pointing or gesturing that accompany this situation of common attention, thus supporting the child’s learning about the specific picture–text relations.

Pictures may trigger engagement in the viewer, a process that is not easy to understand and has hardly been investigated from a cognitive point of view. Enjoyment is thought to be essential in the learning process, as it motivates and engages children to read and to continue to want to read (Apseloff 1987; Jalongo 2004). It has also been noted that, in order to maximize the child’s engagement, the pictures must be clear and appropriate to the child’s developmental stage (Styles and Arizpe 2001). One may ask at this point how color, as a crucial pictorial property, may be related to enjoyment. This question presupposes that we know what color is and how it relates to the quality of pictures.

For adults, color has been described as having three levels of meaning (Painter et al. 2013) in a way that is analogous to how language has three