	<p style="text-align: right;">Date : 08/06/2007</p> <p>Picture books accessible to blind and visually impaired children</p> <p>Beatrice Christensen Sköld, Reseracher/International Coordinantor, Swedish Library of Talking Books and Braille (TPB). Chair IFLA Libraries for the Blind Section.</p>
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<p>Simultaneous Interpretation:</p>	
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Abstract

The Swedish Library of Talking Books and Braille (TPB) has produced tactile picture books for preschool children (1-7 years of age) since 1992. The text in these books is provided in both Braille and large print. The production standards are based on research about tactile perception and the ability of partially sighted persons to perceive colour. Therefore these books can be enjoyed by totally blind children as well as children with partial sight.

TPB has chosen to make existing children's books accessible, which is possible according to the Swedish Copyright law. The tactile picture is not a copy of the original as details which the haptic sense can't perceive must be reduced, and colours, shadows and perspective must be changed.

Tactile picture books with Braille play an important role in supporting the development of reading skills. A blind child is not exposed to "sign-reading" in the same way that a sighted child is, and thus opportunities must be provided to acquaint a blind child with similar skills. Using tactile picture books at an early age is one way to develop these early literacy skills.

TPB has developed a special design which builds on the research done by John M. Kennedy and Yvonne Eriksson who have studied how blind persons perceive pictures. TPB also has a project to make guidelines for

publishers, illustrators and the graphic industry on how to make tactile picture books or “Books for all”.

Key words: Tactile books, Braille, Blind children, Disabled children
Design for all, Public libraries

Introduction

We are living in a society full of pictures. We talk about visual culture, which incorporates the pictures that surround us at home, in the streets, in buses and trains etc. Moreover there are all kinds of advertising signs, road signs and information boards in our environment. In order to move around in different settings we need to know how to interpret these signs. Semiotics is the science that works with sign interpretation and sign theory. However, I am not giving a presentation about semiotics but I will be talking about some of these theories as applied by those scientists who deal with illustrated children’s books (Fellenius and Eriksson 2006).

I will be talking about picture books, and most specifically about tactile children’s books for blind and partially sighted children.

A picture book itself has two functions:

- 1) to remould a story into a picture
- 2) to add details about the story that isn’t in the story/text.

Fairy tales with pictures are a good example of the type of literature which is helpful for a child’s language development, and so it is important that adults read this type of book to children. As an adult reads with a child, typically he/she points at the picture and at the same time mention the name of the object. In this way the child is trained to look at picture, learn the name of the depicted object and understand the relationship between the picture and the real object. We are seldom conscious of this type of learning, and instead we take it for granted that pictures are something we perceive and understand intuitively (ibid.). Every person who has read a picture book to children knows that it is often the small details that interest children (ibid.). It is around these details a conversation between adult and child starts. Thus another dimension is added -- the child’s own interpretation of a picture or the detail of a picture.

Pictures are not only important for the sighted child but also for children with vision impairments. John M. Kennedy, a Canadian researcher, has studied how the visual system and brain functions with pictures.

According to Kennedy (1992, 1996) outline drawings are common to all human kind, including those persons born blind. He has proven that blind people can draw the same way as sighted people by using a raised line drawing-kit. Kennedy has shown that “we typically think of sight as the perceptual system by which shapes and surfaces speak of the mind.” But his empirical evidence demonstrates that touch can relay much the same information. He also states that the most obvious theory is that in a basic drawing each border represents a physical boundary around some surface or shape (1996).

Tactile pictures in books

Kennedy's theories have been applied to the production of the tactile pictures books made by TPB, The Swedish Library of Talking Books and Braille. The work was initiated by Yvonne Eriksson, in 1992, who is now a lecturer at the Gothenburg University. She has conducted extensive research on children's haptic perception of tactile pictures.

Eriksson has concluded that all parts of a picture which can be perceived by touch can be transformed into a tactile picture. The picture books made by TPB are not what one could call original creations but transitions of printed books. Silk screen in combination with a collage technique is used; however, sometimes only structures made with the silk screen method are used. The text is provided in both large print and Braille (Eriksson 2006).

The collage pictures use different material in strong colours which also provide good contrast. The contrast must be strong so that partially sighted people can see the details in the picture. Partially sighted children, including those with a very limited sight, can simultaneously look at a picture and touch it (ibid).

Although the picture is in colour it does not contain any shades that in the “visual” picture provides the illusion of volume. The reason is that shades of colour can not be perceived. If a shade was represented in a tactile picture it would be perceived as a new shape and confuse the reader's perception of the picture.

In tactile pictures almost all figures and object are depicted either from the front, from the side face or from above. By following these principles it is easier to recognize the different shapes. The haptic sense can only perceive shapes which are tangible i.e. corners, edges, lines, differences

in surfaces in the form of raised shapes. Together these factors affect the design of the tactile picture (Eriksson 1997, 2006).

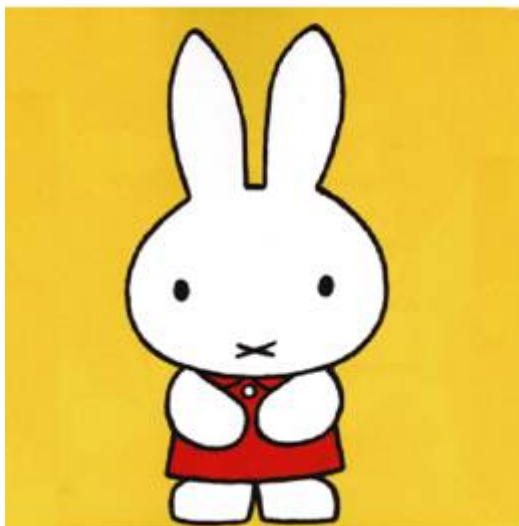
The accessible picture book

TPB makes 3-4 picture books per year for toddlers and young children. The goal is to make already published books accessible to blind and partially sighted children. Only books that are well-known or part of our “cultural heritage” (fairy tales) are made. The simplest books, those for toddlers, represent common objects and have no story line. However, text is provided – even if it is just the name of the object -- in both Braille and large print.

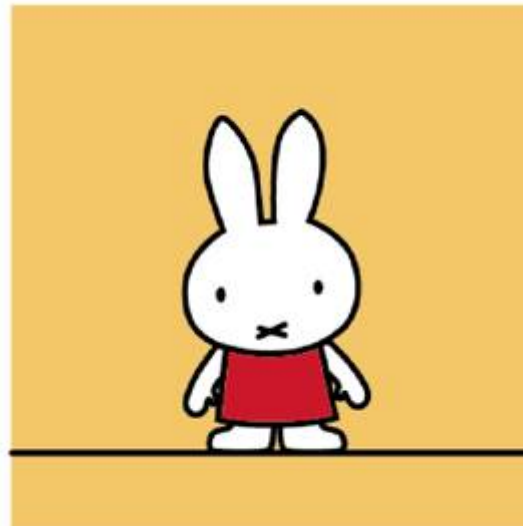
The next level is those books with a simple story line such as those about the rabbit Miffy. The text is rhythmic and easy to remember. Books with nursery rhymes, are another example of this type, and are much loved. The next level is those books with a longer story, sometimes a folktale. We have for example made the Norwegian folktale about the three Billy Goats, Gruffin to a tactile picture book.

As I said earlier, only the most important parts of the picture can be transferred to a tactile picture. So how do we determine which parts of the original picture are the most important shapes for a tactile picture? Here are some examples:

Original picture
Originalbild



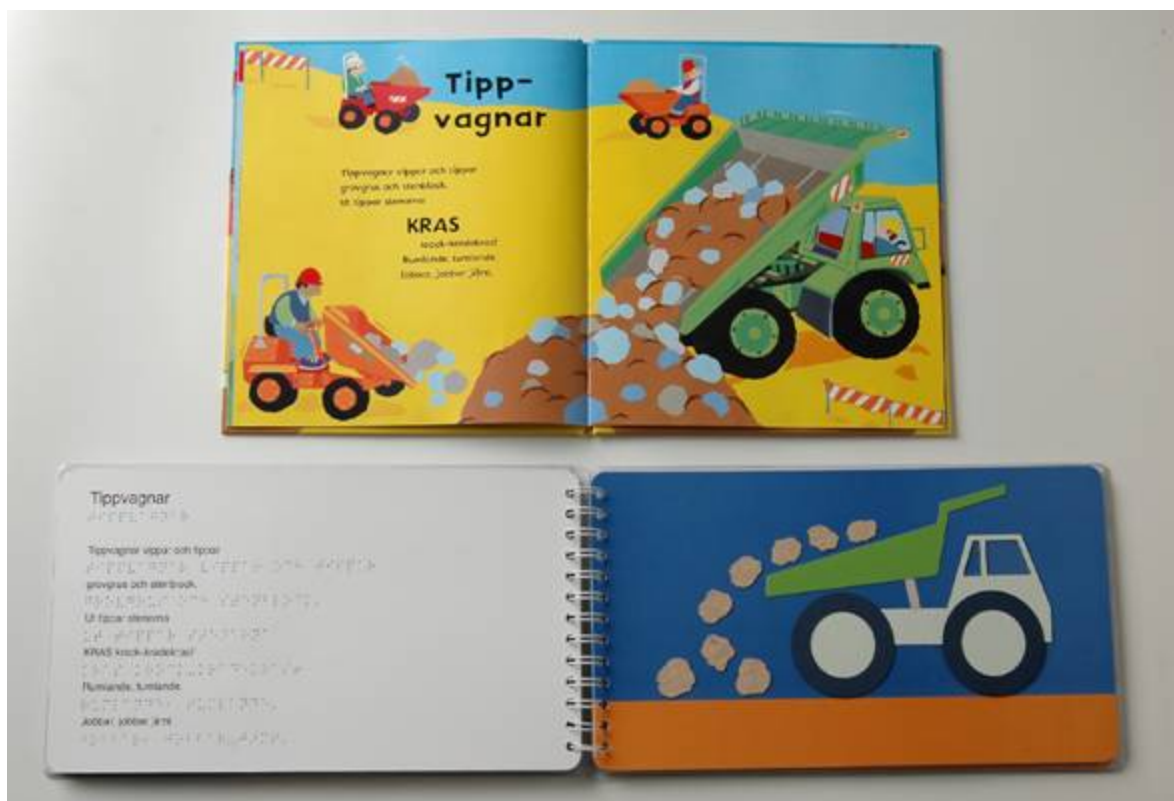
Adjusted picture
Bearbetad bild



The Miffy-books by the Dutchman Dick Bruna have good contrast; however, sometimes the figures are difficult to perceive in their original form. In one picture Miffy’s arms are resting on her body. If this detail is

not changed, the child will interpret the arms as part of Miffy's dress. Instead we redraw her arms so that they stand out from her body.

The next example is a book about different vehicles. I have chosen this one because most vehicles are abstractions for blind people, not only children. The first page in the original book shows a lorry, a driver and three road workers driving smaller vehicles. They are all unloading stones and gravel. So which is the most important part of this picture? We have concluded that it is the lorry unloading stones, which also is the largest detail in the original picture. But we have reduced the details of the depicted lorry as well as changed the perspective. In the original the lorry is depicted from behind at an angle, whereas in the tactile picture the lorry is seen en face. This change of perspective was made because, as I mentioned, it is easier to read tactile representations which are drawn en face, from the front or from above, i.e in a right angle ((ibid).



Braille as early as possible

Tactile picture books introduce braille to a blind child at an early age which is one of the reasons why TPB is committed not only to their production but also to lending them.

Kerstin Fellenius, researcher at the Stockholm College of Education has shown that it is important that a blind child gets a chance to touch Braille as early as possible. Since blind children can't see the printed word in their surroundings as a sighted child can (2006) they don't have the opportunity for what is called "sign reading", the first step to the development of literacy skills. Even though a 2 year old child can't interpret the dots as letters, the introduction to the characters is important. After a while he/she will start to ask the meaning of the dots (Fellenius 2006, Eriksson 2004).

To read the tactile picture

It is important that the parents (adults) do not have unrealistic expectations of the child's ability to understand tactile pictures as learning to read a tactile picture is a skill which needs to be learned. Neither can one be sure of the child's interest of Braille, it usually comes after a while when you have read the book several times. Patience is recommended!

Perceiving a picture by touch is not the same as looking at a picture with eyes. The sighted person sees the whole picture, as well as the details, at once, and can make the mental leap as to understanding what the picture is about. When touching a tactile picture it is the other way around. First the details are felt, then the whole picture. Piece by piece and section by section, the picture comes together until at last there is an understanding of the whole picture. However, in order to fully understand a tactile picture- if you are not an experienced picture reader – you must know what the picture represents. Therefore, it is very important to tell the child what is depicted and to talk about all the objects in the picture. If the tactile picture contains several objects or figures, the child must be told where they are and how they are placed in the picture surface.

When you read aloud to a child, typically, you sit together and discover the story. You might ask if the child knows about the things you are reading. Or the story may provide the opportunity to talk about new experiences such as those provided by fairy tales. Just as the story may contain words that are new to the child, the tactile picture and accompanying text might contain objects which are unknown to him. As you also talk about the story and the pictures, the child participates in the reading process and begins to learn how to "read" the picture. Reading aloud provides the opportunity to discover new worlds together.

For many children with a vision impairment the reading of a tactile picture book is their first experience with a picture and an important introduction to the pictures they will later meet in school books. The introduction of the picture through the tactile picture book at an early age is important. It is often difficult for children to be introduced to pictures for the first time when they are in school and in a formal learning situation. However, remember that process of developing these skills early should be enjoyable; it's not a matter of school teaching but of playful learning.

People interpret pictures in different ways. It is not a catastrophe if the blind child interprets picture in his own way. What is most important is that he understands that a raised area in a picture represents something specific. In one of our books there is a picture containing an object which depicts a piece of knitting that has fallen on the floor. Some children perceive this knitting as a cardigan, others as a carpet. The important thing is that the child has the ability to interpret the picture as something meaningful. Then it is possible to explain what the different pictures are about. One way of doing this is by comparing the picture with the real object (Eriksson 2006).

It can take a long time for a blind child to understand a tactile picture book. If a child shows a lack of interest in one book does not mean that he will be uninterested in another. It can be as simple as that the child is not amused, or the book isn't thrilling enough. The most important is that reading should be fun! Therefore, it is important to have a wide selection of tactile picture books!

The Role of the Public Library

TPB lends out the tactile picture books directly to parents with visually impaired children. However, we want our books to be read by all children who need them, not only blind and visually impaired children. As library services to all print impaired people is an integrated part of the public library system leading of these books are also a part of the services. In public libraries in Sweden tactile picture books can be found in what is called "Apple shelves", a concept that was introduced in 1993, when one of the public libraries built a big apple in the children's department, where they displayed special format material for disabled children. After that, practically every public library unit has set up shelves with talking books, books with Bliss symbols or Pictograms, video books in sign language for the Deaf, and tactile picture books. The libraries acquire the tactile picture books from TPB. But we also send deposit collections to libraries as well as to infant schools. The demand of tactile

books is great and we can not always comply with their needs.

Conclusions

In summary, I have talked about how TPB has applied solid research to modify existing picture books to produce books with tactile pictures and text which can be understood by both blind children and low vision children. I again stress the importance of introducing both Braille and tactile pictures to children at an early age so that they develop early literacy skills.

And finally, the tactile picture books which we have produced are not commercial productions, but books made in very small editions for library lending. There are commercially-made books, that not only can be touched but sometimes can also be smelled. While we are pleased that the commercial industry is trying to fill this important gap there are some drawbacks to these products of which you should be aware. The chief drawback with commercial books is that the most important object in the picture is not always the one which is made tactile. Sometimes too many details are made tactile which becomes confusing. Sometimes they include details that can not be perceived by touch. Therefore, to help others produce tactile picture books which meet the needs of both blind and visually impaired children, TPB is developing guidelines and a kit for the graphic industry, publishers and illustrators. I am pleased to say that just this year, TPB received the Swedish 2006 Design for All Award for this initiative.

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