

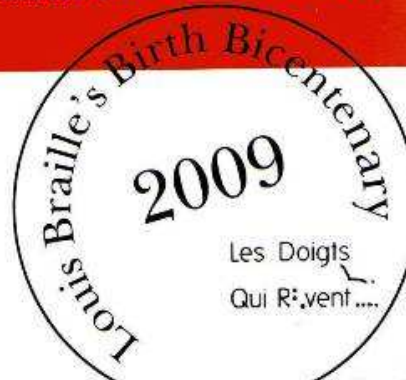
Collection
Corpus Tactilis

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<i>Jana Vachulová</i>	<i>Czech Republic</i>
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The Typhlo & Tactus Guide
to children's books ...

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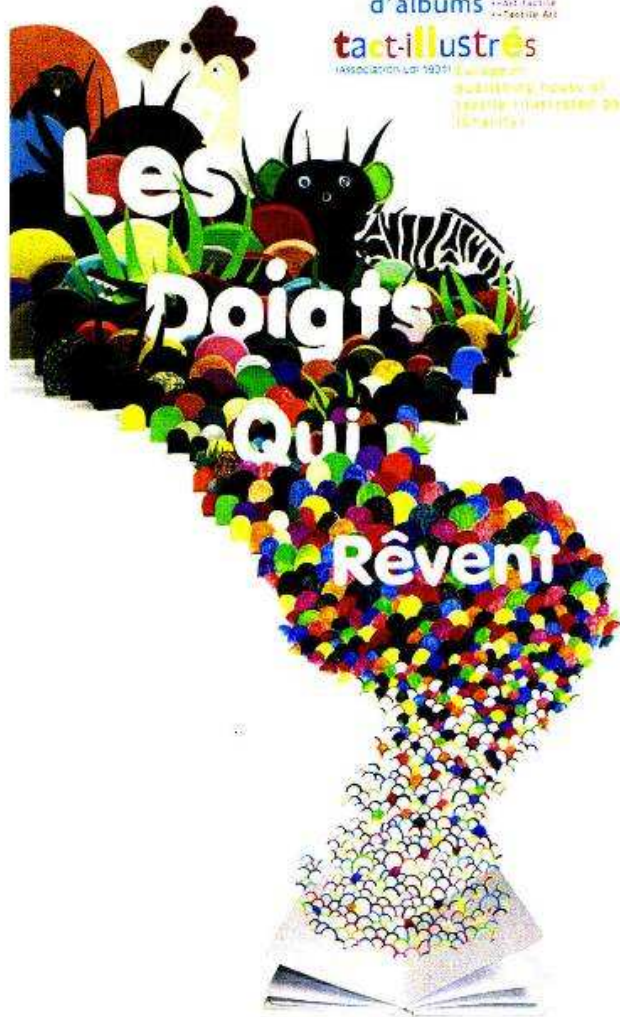


The
Typhlo & Tactus Guide
to children's books
with tactile illustrations
2009

Éditions
européennes
d'albums
tact-illustrés

• Braille
• Révisé
• Projets internationaux
• Anecdotes
• Anecdotes
• Anecdotes
• Anecdotes

Qualité, innovation, qualité
Qualité, innovation, qualité
Qualité, innovation, qualité
Qualité, innovation, qualité



Culture 2000 Program

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Burgundy Regional Council



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Patricia Richard, Claudette Kraemer
& the Ldqr team

The Typhlo & Tactus Guide to children's books with tactile illustrations

2009

Corpus Tactilis
... Les Doigts Qui Rêvent
Six Points Pour Brailler Plus Fort ...

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Next publication of the T&T Group :

***Typhlo & Tactus,
a European story***

including

- ▶ the 521 entries in colour photos
- ▶ the 16 awards in colour photos
- ▶ all the authors listed
- ▶ all the judges listed
- ▶ all the presidents of the jury listed

Typhlo & Tactus
the first and unique
international competition
of
Tactile Illustrated Books for V. Imp. Children



Tactus Group

From left : Josée Lanners, Paivi Voutilainen, Pietro Vecchiarelli, Philippe Claudet, Monque Clette, Anja Strobach, Marion Ripley, Patricia Richard (Les Doigts Qui Rêvent Pdt), Irmili Holstein, Anneke Blok, Marek Boguslaw (May 2007, Dijon)

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the irreplaceable administrator
at the heart of the Typhlo & Tactus project.

&

the team of Les Doigts Qui Rêvent,
Céline Girot, Marilyn Dole, Anaïs Brard,
Solène Négrerie, Claudette Kraemer

&

to the

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Direction du livre et de la lecture

(French Culture Minister)

Relais Culture Europe, Paris

Regional Burgundy Council

General Council of Côte d'Or

Town of Dijon

&

specially to all the

Ateliers Pour Voir handworkers (ACODEGE, Dijon)

who produced all the T&T books

with the help of l'Oeuvre Nationale des Aveugles de Belgique

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President

and

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Director

of the Oeuvre Nationale des Aveugles from Belgium
who were the first person to believe in the Tactus project
and helped us so much,

&

Professor Silvano Pagura (Blind)

Ex-President

of the Federazione Nazionale delle Istituzione pro Ciechi of Italy
who was so enthusiastic to be in the Tactus project.

&

to all **Visually Impaired Children...**
their **families**
and to all **professionals** working with

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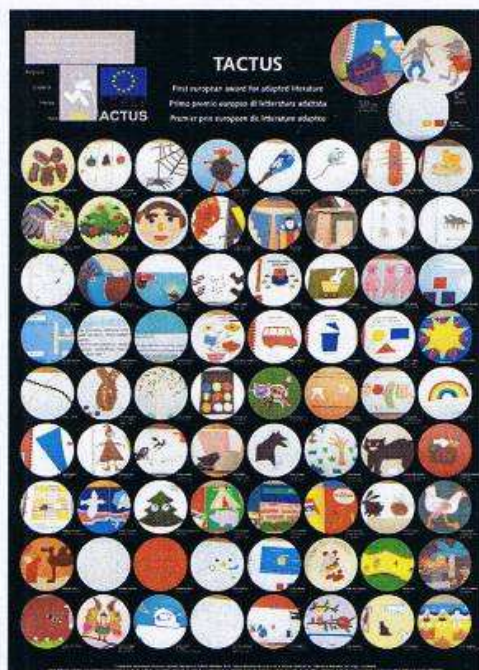
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1st Poster T&T 2000
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8th Poster T&T 2007
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T&T Members

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Germany
Italy
Netherlands
Poland
United Kingdom

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Australia
Korea
Croatia
Japan
Quebec
South Africa
USA

T&T Working Partners

Czech Republic
Estonia
Ireland
Lithuania
New Zealand
Romania
Slovenia
Spain



... **To learn to read, yes, but to read what ?** (UK, USA)
 ... Apprendre à lire, oui, mais à lire quoi ? (Fr)
 ... Imparare a leggere, sì, ma che cosa ? (It)
 ... Jos opin lukemaan, onko, mitään luettavaksi ? (Fin)
 ... Lesen lernen, ja, aber was lesen lernen ? (De)
 ... Leren lezen, ja, maar wat lees je dan ? (NL)
 ... Nauczyć się czytać, tak, tylko co czytać ? (PL)
 ... Učit se číst, ano, ale co ? (Cz)
 ... Aprender a leer, sí, pero qué leer ? (Sp, Cast)
 ... Apprendre a llegir, sí, però qué llegir ? (Sp, Cat)
 ... Me ako ki te panui, engari, me panui i te aha ? (N.Z, Maori)
 ... Įšmokti skaityti, taip, tačiau ką skaityti ? (Lit)
 ... Naušiti se brati, to že, ampak kaj brati ? (SL)
 ... Õppida lugema, jah, aga lugema mida ? (Est)
 ... Sa inveti, sa citesti, da, dar ce sa citesti ? (Ro)
 ... Om te lees, ja, maar wat om te lees ? (S. Af, Afr)
 ... Ukufunda incwadi, ewe, kodwa uzakufunda ntoni ? (S. Af, Xh)
 ... Učiti čitati, da, ali čitati što ? (Cr)
 ... Atuarniarnermut ilinniarluni, aap, kisianni suna atuarlugu (Ca, Inuit)
 努力で「読む方法」は身につけられる、でも「何」を読むのだろうか？ (Jap)
 这是原网页的计算机翻译。它仅提供大体上的翻译，不能视为完整或准确无误。 (Aust, Chin)



*Why everybody is saying
that Tom looks like Grand-Father
since Tom is all sweet and warm
and Grand-Father is prickly and all stiff ?*

*How can you see
a big tree across a small window ?*

*If you can see accross a closed window,
why cann't you see across a wall ?*

*This is not a table,
this is just 3 lines.*

Blind Children words reported by Boguslaw Marek during the Tactus meeting in Cannero Riviera,
June 2004.

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Introduction

France

Patricia Richard, Philippe Claudet

The idea of the '**Tactus**' project was born in 1995 when visiting around Europe some of the future members of Tactus and really took shape during the international seminar '*Learn to read ? Yes, but what ?*' we organised within Les Doigts Qui Rêvent (Dreaming Fingers) in 1999¹.

Following this, and on a proposition of Philippe Claudet and Patricia Richard, Belgium, France, Italy and the United Kingdom decided to work together in true cooperation and create tactile books, accessible to blind children, allowing them the possibility of having appropriate children's books.

In 2000, motivated by the Ministry of Culture's directive 'books and reading' and with the help of the 'Culture 2000 contact Point' in Paris and of the Regional Council of Burgundy, we were able to take the opportunity to enter the programme 'Culture 2000' proposed by the European Commission.

1. See the minutes in *Le développement de la conscience de l'écrit chez l'enfant aveugle de 0 à 5 ans*, Les Doigts Qui Rêvent, Corpus Tactilis, 2008.

This group accepted the proposal of Les Doigts Qui Rêvent to create an annual European literary prize, **Tactus**, in order to bring out the remarkable work of parents, teachers, artists, individuals and volunteers alike who made splendid illustrated books but who unfortunately created only *one example copy*. These people were often isolated and ignored and lacked appropriate contacts and funding. Thanks to the Tactus prize, these award winning books are, since 2000, produced and distributed by the Tactus group's membership countries in their own language. Production is what makes Tactus original. The principal benefactors of this, of course, are really the visually impaired (V.I) children, according to the Tactus charter created in 2000. Finally there is, an annual meeting for all the volunteers and from this the V.I children can have access to reading books and culture and so to citizenship.



During 7 years, the European Commission has renewed its confidence in us three times and recently (2005) **Tactus** has become **Typhlo & Tactus** (T&T) to include the new countries entering the European Community.

This guide is one of the many results of **T&T**'s seven years' work. The objectives are to transfer our experience, give advice and encouragement to those who would like to launch into this marvellous adventure in their own country and create a desire for these extraordinary children to learn to read and find the pleasure in reading and sharing books with others.

We introduce here a range of solutions, a multitude of experiences, which varies according to the culture and technical and financial means of each country where the books are being produced. When we proposed this Guide project to the T&T group, our aim was to help emerging countries. The result is quite beyond our wishes since all those articles here (full version on the print version in English and in French) are the largest panorama

never gathered about the tactile illustrated books.

The goal is not to recreate the exact model but to give some inspiring examples to help find the best solution, not only for the producers but, above all, the V.I children and provide access to the wonderful world of books.

When publishing this **T&T Guidelines**, after 7 years of project work, the **T&T group** decided to take one year off in order to take time to think about new perspectives. Indeed **T&T** created a real European synergy, even an international one, and never such amount of TiB* were produced and distributed since Valentin Haüy** and Louis Braille. But a lot still has to be done and only a generous and clever cooperation will be able, one day, to offer as many TiBs* as those children need just for equal opportunities.

In reading the bibliographies, you will notice that each country has specialists publishing research work in their respective languages. However, these publications remain inaccessible to people who do not understand the languages in which they are written. Therefore, perhaps the time has come to consider creating a common library which would regroup all of the publications and make them available in all of the languages of the European Community. One of Tactus's greatest successes is to have initiated, with modesty, the creation of an international synergy and cooperation.

As we are writing these lines, we have a particular thought for Polly K. Edman*** who inspired everyone so much who has made and still do tactile pictures.

* TiB = Tactile Illustrated Books

** Valentin Haüy created the first school for the Blind in France in 1784

*** Edman Polly K., *Tactile graphics*, American Foundation for the Blind, 1992

Foreword

In Part I, presentations are from the **Typhlo & Tactus members**, i.e. countries which were engaged with the European Commission by signed contract.

In Part II, presentations are from **Typhlo & Tactus Working Partners**, i.e. countries which have been invited as guest, or where T&T made workshops.

In Part III, presentations are from **Typhlo & Tactus International Colleagues**, i.e. countries with who we have been in contact along those years.

As far as we know, all this presentations here together are the largest panorama never gathered about TiB. We are happy to publish this guideline in 2009, year of the Louis Braille Bicentenary of his birth, and 15 years after our first international meeting «*To learn to read yes, but to read what ?*»

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&

We wish this T&T Guideline will help every one to know what happen about TiB in other countries and to know how to start to provide TiB to Blind Children and partially sighted Children.

Most of the authors of this book are not English speaking, and we thank them for their cooperation and translation work.

Some of them use the word visually impaired (v. imp) for partially sighted, while for others, visually impaired means visually handicapped and Blind. But the context will help you to understand their articles. This reflect also the different approaches depending of each culture and its language.



**The quality of the photo is under the responsibility of each author*

Part I

Typhlo & Tactus Members



Culture 2000 Program



I

Italy

Reading together, when do we start ?
Here is a good way to begin.

Giancarlo Abba

Even for a visually impaired child the book has to become a treasure chest of words that come out of the pages almost if by magic. This article is about the important subject of reading, or beginning to read, for visually impaired children. I will not look into teaching methodologies; instead I wish to talk about what I believe to be a good start for talking about this subject, even before, for instance, the prerequisites for Braille.

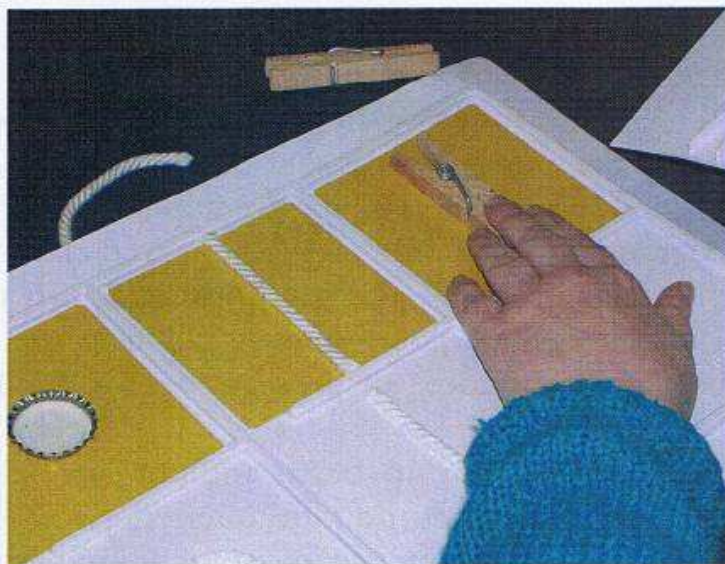
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It is a way to begin without any additional handicap because difficulties do not often depend on blindness, but they are a consequence of not knowing what to do or how to do it. It is about building a pedagogical environment that encourages the growth of a visually impaired child in a school that is open to everyone. Only the educational environment can create a world with no barriers. Our kids who cannot see should be able to access reading just like every other child. We all know how valuable reading is, we also know that learning to speak is a natural fact and learning to read is a

cultural fact. The child who can see starts reading through images, pictures coupled with symbols, codes, letters, words placed on something called a book. The book for a child is to be thought of as a treasure chest of words that initially comes out of the pages, almost like magic, where each word is a new jewel enhancing his/our mind. Even before being able to read the child who can see can already "read", he knows the book already, he's already experienced it, and he has seen it.

What about the child who cannot see?

E v e n
for a child who
can't see and
for the visually
impaired child
a treasure chest
exists, or must
exist. His/her
first books must
be full of images
and words and
in our case
we are talking
about words to



be read using the hands, to be discovered with the hands. The word goes along with what the child explores in a tactile way. Reading, wanting to read, and being able to read, offer incredible perspectives for the growth of a visually impaired child. In the modern technological society we must make an effort to revive some aspects of the children's world. In our contemporary society, that tends to place the child and his/her experience

experiences in stereotypical situations, forgetting about the real reasons that move his/her mind and body, we adults (teachers, tutors, parents) have the responsibility of lighting their intelligence.

People who cannot see are at risk, they can encounter difficulties developing a variety of abilities on different levels: communication, personal relationships, body movement, autonomy and integration. This is why it is necessary to highlight that the idea of reading is one of those conditions that can help handling difficulties, because it starts with specific thoughts linked with the needs of visually impaired children.

To say that a visually impaired child is a child like any other is not an abstract idea, in fact it means that there are rights that cannot be ignored and these are the rights of the children, even as we are in the subject of the visually impaired children. Reading, the introduction to reading and the ability to read are some of these rights. It is necessary to consider some elements that can help us understand that approaching reading, by a visually impaired child, requires specific typhlopedagogical prerequisites.

Let's talk about some parameters we can work on.

Firstly, we should start thinking about the children of reason, understood as the course to be followed since their early childhood.

- Child who knows = education of one's mind
- Child who explores = education of one's body and hand
- Child who thinks = education of one's imagination
- Child who discovers = education of one's curiosity and sense of adventure.

Can the visually impaired children, just like the others, enjoy this opportunity of growth? Yes, if they are offered a chance!

A passion for knowledge does not naturally grow, it is a feeling that the will of the adults working with our children can enhance. We also need to take into consideration, here in a stronger way compared to those people who can see, that first of all the book is an object, a thing, it must be something nice to touch, just like Borges, the blind Argentinian poet used to say, something nice to be hold in one's hands, to be moved around in a plurality of feelings. The child who cannot see or does not see well has to learn how to use feelings; feelings are never passive ones.

In the use of feelings we act, we are not acted upon.
Feelings convey different messages.

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&

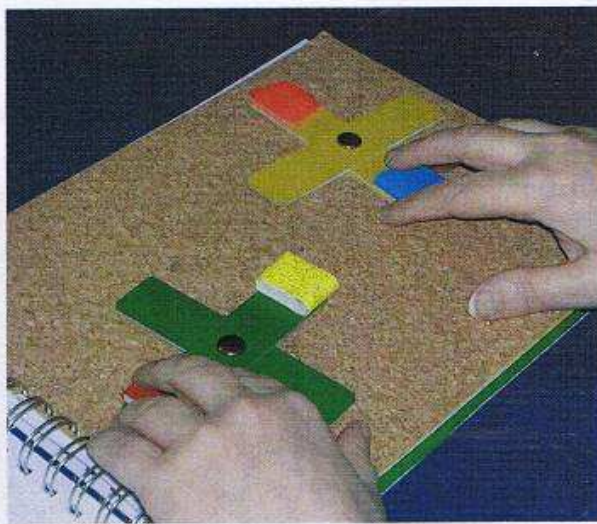
A child's first tactile book is, as previously mentioned, a treasure chest full of jewels; it is a source of satisfaction. From there come different and new things. This is why for our visually impaired children we have the duty to intervene with specific and common elements for everyone as we cannot forget that experiences are to be done together.

Starting to read as a narration, as an enrichment of expression, of communication, of the reception of images and of ideas means, for instance, attributing a strong communication value to the story telling, which is part of a child's experience. Even the child who cannot see has a right to stories, but the passion for reading is helped by a comparison with reality.

How? Playing.

For a child a statement like: "I'm playing" means "I am busy". At the start of a path towards knowledge, the first experiences of approach, of familiarity with reading, and playing cannot be left out. Therefore approaching reading could mean playing... in a serious way. Because it is with words and actions that we become a part of the human world.

The lack of sight or a serious visual disability cannot and must not become a barrier within the process of discovery of the world, and the book is one of the ways which can help all of us to get to know it. Even in its aspects of imagination.



Here comes the tactile book to help, to be used, to be read even before being able to read and, in the meantime, loaded with words that from it originate.

In this context, the child who cannot see, playing with the book and supported by different materials (soft, coarse, cold, long, short, light and heavy materials) begins to use his/her hands to intentionally touch in order to discover, to get to know things, to have fun, to learn words and shapes.

Every sense-perceptive experience, through a multidimensional approach to reality (acoustic, olfactory etc.) encourages growth, consolidating the experience.

We are laying the foundations for brave and clever hands which, pushed by the need, will explore with curiosity and will organize a deliberate action. And we know how much our kids need to use their hands. Using clever hands means knowing and recognizing, acting, understanding and sharing.

We also lay the foundations for building a correspondence between image and reality. Playing, as said before, is the field where reality meets. In a tactile book the child meets the reality that he/she finds in it and that we have to "pull out".

The origin of the imaginative thought is an individual process that a child completes autonomously if appropriately asked for. Such an education to exploration grows in complexity with the



growth of the child and it will take him/her to the imaginative thought, diverging because the "basket of proposals, of ideas" is always full of real and imaginary objects.

When I read: "the evil Queen had a poisoned apple for Snow-white", evil Queen is imaginary, it's an imaginative idea where all that counts is being "evil". It's a feeling that a child begins to know.

As for the apple, the child who cannot see must know what it is, he/she knows it. That real object, the apple, is loaded also with emotional significance, such as being poisoned (evil), good etc.. We are dealing with a constant game alternating reality and imagination, which will help the child to develop a multidimensional thought. This is why is so important to couple the stories also with a tactile image supported by the experience. To read with hands and mind. Hands, tact, they are both bearers of meanings. Just like the way words loaded with emotional meanings are warm languages.

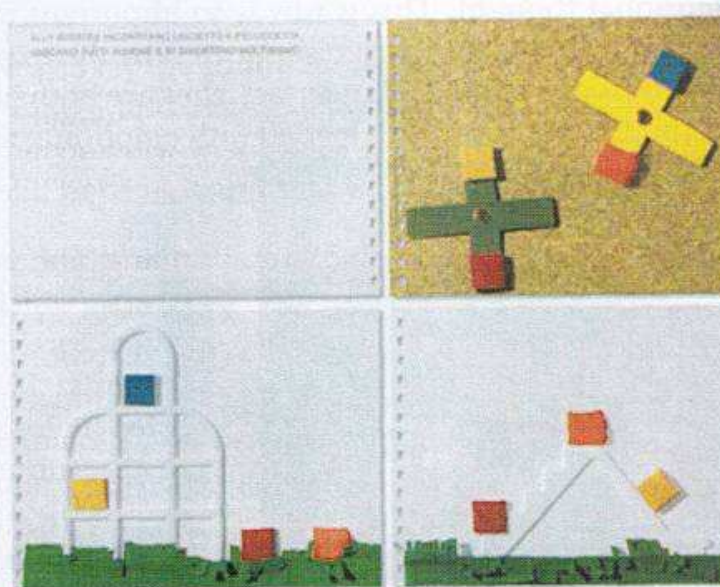
We have to get to reading not thinking about it only as a training, as a way to recognize characters (which is not be ignored anyway) but, above all, as a passion for narration, a delight for story telling, a pleasure for words. It is from the pleasure of narration that the desire for telling stories origins and the pleasure of reading, as a consequence.

At this stage books built together can be born. Stories to be shared can be created too, putting together "pieces" of the object world that becomes a story. This is when reading can become a wish.

We always talk about educating the child for the world but a world has to be given and together with a real, tangible, concrete world we start off with, we also support the world of fantasy, of imagination, of the unusual, of possibilities and ideas and afterwards, gradually, we get to the organized knowledge.

This is why at the Institute for blind people in Milan part of the teaching material is dedicated to "the first books". Tactile books to be hold in the hands, to be touched with feelings!

For a child who cannot see these are books to play, to think and to discover with. The passage from the process of reading to the actual words, to learning Braille, just like for any other child, will be a "spontaneous" request to get to know things better.



Reading together, when do we start? Now.

Also we adults must believe in books, in an effort to promote the interest, the curiosity, and the desire for discovery, the pleasure of emotions. All of this is not excluded from the problem of reading.



II

First tactile books

Netherlands

Italy

Anneke Blok

Josée Lanners

The Italian author Paola Bonanomi in the publication “*Imagini da toccare*” describes the extremely important function of tactile books for the development of children in preschool age. She refers how tactile books are an extremely important cultural medium, which can be used to convey many kinds of messages, information and knowledge and to further a child’s cognitive-affective and relational development. They offer a great opportunity for cultural and creative interaction: they help the visually impaired child share experiences and integrate with his or her peers, lengthening and improving the quality of contacts between them. Tactile books engender curiosity, they enable a child to comprehend and reconstruct facts, and perceptive analysis of images means more information can be acquired.

A small child with little or no sight is unable to spontaneously recognize and symbolize the real world around him; initially at least, he needs guidance and must be taught to systematically compare reality and the image that represents it. To be able to

recognize an object depicted it is essential that the child first get to know it in real life. Touching it means knowing it and subsequently being able to represent it and communicate it. The young child first starts to recognize daily objects and between 4-6 years it recognizes similarities.

The more familiar a child becomes with representative events of the real world, the better he will understand that this world can be coded and narrated. It is fundamental that tactile books match the child's level of knowledge and understanding so they allow him to consolidate, broaden and integrate his experiences; he will then be able to arrange and classify them and to enrich them with verbal, imaginative and affective content. The process of abstraction is strengthened as is the capacity to compare, group and generalize, thereby reducing the risk of fragmentary learning.

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TYPHLO
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TACTUS

Basic tactile books are a first reconstruction in narrative form of a child's personal experience. They enable him to move from a real object he knows and has handled and explored in its context, with a form and function he recognizes, to a fixed



representation on the page of a book where the object gradually loses certain attributes of reality. These first books, also known as "reality books with simple images", encourage the child to make continuous comparisons between an illustration and the real object.



Each object is a reminder of something; it has its own story, setting, smell and function. Stuck on a page, and then on lots of pages, the objects become books, "BOOKS TO READ WITH HANDS", which can gradually become richer in content and more closely related to a context.

To be able to read with hands the child must use its sensitivity for touch. This will allow him to feel details, different textures, raised and lowered relief and lines.

At the start it is best to fix a single object on the page or, if it is preferred to use several objects, to make sure they belong to the same category (e.g. a few leaves, a couple of buttons etc..). In this way it will be easier for the child to concentrate on exploring the object on the page; this learning process will in any case be a different tactile experience to gaining familiarity with the real object, which he has grasped in his hand time and time again.

The first phase regarding the passage from the real object to the object fixed to the page can be simplified by using Velcro instead of glue. This enables the child to touch the object in the book but also to take it off pull it off and recognize it once more

as the real object. The adult who assists the child as he reads his books can also encourage his perceptive analysis; but most important of all, he will help him grasp the link between the real object and its representation.



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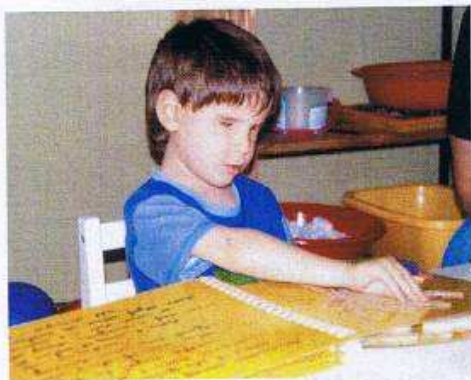
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Linking the two will be easier when the books depict objects and events more familiar to the child because he has experienced them in his everyday life. On a page we can stick sand, using a thin layer of glue, and on top of the sand fix shells of different shapes and sizes, collected with the child on a beach, and we can relate things that happened while holidaying by the sea.

Alternatively, we can glue in pebbles, moss, bark, feathers and flowers gathered when visiting grandparents in the country. These real objects, once collected and taken home, are then re-explored and eventually "immortalized" in a book, following the actual order of the events experienced. The child's personal experience thus becomes memories, real objects and events are turned into tactile images that can evoke and bring to mind events, situations and emotions.

The second category of books consists of “pre-stories”, short tales about characters involved in situations the child has already experienced for himself. They are selected from books sold for sighted children; they are then transcribed and tactile images made from real and conventional materials are added to them. Using books normally sold for children with sight helps the visually impaired ones to share experiences and integrate with other children of their own age. The tactile images serve to explain the narrative and are an aid to understanding the written text.



The objects depicted become symbolic references to the objects, no longer identical to the real object as in the first books but similar and easily associated with what the child has got to know and touched. We have to remember that sighted children can continually refer to the plentiful pictures that illustrate such stories, whereas visually impaired children often have to rely on words alone. The priority objective is therefore to expand their perceptive and representational skills thanks to direct experience and, later, using images to stimulate recollection.



To be sure a book conveys its intended message in a clear and meaningful way, several basic criteria should be followed:

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- The book should be made of sturdy cardboard that the chosen objects can be stuck to.

- The glue used must be non-toxic and strong enough to ensure none of the pieces come unstuck and become a hazard for the child.

- The book must be of a size that makes it easy to handle, and it is a good idea to mark the bottom edge so the child knows which way up to hold it when reading.

- Although a metal ring binder may not be the most attractive option, it is the most durable and appropriate considering the thickness of first books created with real objects inside.

- Its contents must be simple, schematic and meaningful, in order to assist comprehension and completion of the text.

- It must also be resistant and robust so it will stand up to repeated handling while exploring its pages.

- Besides being easy to recognize and identify, shapes must be represented in full: if any part of an illustration is missing,

the child will comprehend it as a mutilation. Only when the child is old enough (6-9 years), it will learn about part-whole relationships.

- Individual pieces must not overlap, overlapping is very much visual. Again at a later age the blind child will learn about lines and textures which are crossing.

- Front views must be used when presenting a diagram of the body and side views for animals, which must be shown in their entirety (for example, in a side view a dog is depicted with four legs).

- The shapes represented must be sufficiently thick (at least 1 mm) to make it easy to differentiate image from background.

- They may vary in size provided there is a proportionate relationship between the different pieces; they must however respect the child's investigative capacity.

- In terms of texture, an adequate contrast is needed to make it possible to distinguish between the various pieces used. It is advisable not to use the same material for different parts of one same illustration.

- Initially, spatial organization of the images should be two-dimensional, viewed from the front or from above. We advise against reproducing any illusions of perspective: visually impaired children can grasp and interpret these only when they are older and have received special training with appropriate material.

- The importance of colour should not be underestimated since tactile books are often read by children who have residual vision. It is therefore vital to use strong, bright, contrasting colours to contribute to the image/background identification process. Beware of reflecting surfaces

because many low-vision children can be disturbed by glare.

-For visually impaired children colourful books have an additional plus in terms of interaction with their sighted peers.

A tactile book of the type described helps a child comprehend his personal everyday experiences, it allows him to relive them, extend them, modify them and, in the process, to create his own personal story. This means helping him gain the ability to re-interpret his experiences through a message expressed in images.



In the first 5 years of his life every child has to obtain a basis lexicon. These words often refer to their world of experiences. They form the clue to learn other words that are further away of their own experiences. The development of the basis lexicon of a blind child is just a little different because their world of experience is different. They have to form an image on the basis of touch-hearing and smell experience or by verbal explanation. This is far more difficult, but good tactile books, not too much based on visual concepts will help. Tactile books can also be source of gaining tactile language, words that refer to the things the child feels: words like bumpy, ribbed, dotted, rough, smooth, curved.

A tactile book lets him take possession of a communication system used by everyone around him, develop and become a child who creates, grows and above all has fun, in other words, a child who learns to love reading and the world he lives in.



III

Finland

Fabric tactile book

Paivi Voutilainen

Tactile books or picture books for visually impaired children can be made in different ways. It is often necessary to make tactile books by duplicating them from an original model, as children need a lot of books. By making several copies with the help of technology the production may be designed to benefit many

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children and even to be financially worthwhile. Nevertheless, the most beautiful and varied tactile books are completely handmade. These fabric books are treasures and unique masterpieces of any tactile book collection.

Making a fabric tactile book requires good handicrafts skills, knowledge of materials, knowledge of how visually impaired children think and use their senses as well as a great deal of patience. As tactile illustrations are time-consuming to make, it is important to reserve ample time for the planning stage.

Suitable books for different age groups

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Whether we are talking about sighted or visually impaired children, the age of the child plays a role. There must be tactile books for children in all age groups. Tactile books are meant to be read together with adults. The illustrations open up interesting and stimulating experiences, and it is the job of the adult to help the child to understand the illustrations. If the content of the illustrations is not understood, the child may become frustrated and give the books a rough treatment.



Elias exploring a fabric book with his mother.

Fabric is a very good material for books for small children. The first books for small children are picture books with very little or no text. The pictures do not have to be large, as the child's hands are also very small. One clear picture on a page will suffice with the name of the object as text. The pictures in these first books do not need to represent an object. The use of different materials stimulates the senses and activates hand-eye cooperation. Clear colour contrasts are important.

When the child continues to develop and starts to talk, the books should contain more text. The illustrations may still be simple, but they should be as varied as possible: different textures, shapes and objects on varying backgrounds. A couple of pictures per page are enough. The books may also contain sounds or smells.

Books meant for older children may contain more detailed illustrations and from 5 to 10 pages. Older children will want to read real stories, as changing materials and textures alone are too familiar. The books should nevertheless have a limited amount of pages, as very large books are hard to handle. The child must be able to hold the book in his hands or keep it in his lap.



The shape and materials of the books

Tactile books come in different shapes. The books may be shaped like an accordion, they may be bound or consist of loose pages bound together using holes and some string. The book may also consist of just loose pages.

The more tactile experiences in the book, all the more interesting for the reader. If you are going to make a tactile

book, get acquainted with different materials and their characteristics with the help of touch. The most commonly used materials include different types of fabric, thick yarn, leather, fur and plastic. Wood and metal may be used with some caution. Clear colours and good colour contrasts are essential for children with low vision. The colours are also important for the parents when they describe the pictures: they bring adjectives into the conversation which in turn enrich the child's vocabulary.



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For the surface of the pages use a fabric with distinctive texture and colour. For example, a dark and furry teddy bear illustration should have a light and smooth background, and a hard, light object should have a dark and soft background. For the pages, choose firm, single colour surface material that repels dirt.

Choose the colour of the surface material according to the illustrations, but using a similar texture throughout the book is a good idea, as it is easier to distinguish the actual illustrations from the background. When choosing materials it is important to remember that the illustrations are read by hand and sometimes even by mouth.

Good textures and lifelike materials are important also for the sake of credibility: a house should not be made of silk or

a rock from cotton wool. For stuffing or padding, use hygienic materials. Even though hard materials are durable and therefore recommended, do not use any sharp or scratchy materials in the books as they may cause an injury.

Tactile illustrations for older children especially may contain parts that enhance fine motor skills, such as zippers, push buttons, buttons, Velcro, pockets or wheels.

Making the illustrations

To make clear and simple illustrations, try to depict the most central aspects of the text. The illustration and the text should correspond, so that the reader may recognize the objects mentioned in the text.

A guiding line or ribbon may be added into the bottom of the page to show which way the picture should be read. The most user friendly perspective depicts the figures straight from the front or from the side. You may enhance the picture with three dimensional objects, as long as they are attached properly. A three dimensional illustration or object gives much more information for a blind reader than a two dimensional one. Reading a two dimensional illustration takes practise: a flat circle depicting a ball is much harder to understand than a small round ball attached with a piece of string.

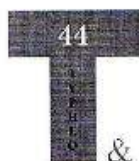
Make fabric pages sturdy by inserting a sheet of cardboard or plastic inside the pages. If you use cardboard, cover it with plastic film to prevent it from bending and getting wet. Make any sharp corners round. Books for small children may have just soft pages.

Attach the illustrations firmly to the background, either by sewing machine or by hand. Fishing line is very durable when attaching objects.

An illustration may also be attached only partially or left loose. A loose illustration should nevertheless be attached by some string and perhaps a piece of Velcro.

Indicate page numbers with a marker or with beads or buttons. Bind the pages together for example by making some holes in each page and tying them together.

It is a good idea to close the book with a Velcro flap, a button or a string. It makes the book easier to handle and protects the pictures.



Music, sounds and smells

Sounds, such as rattling, tinkling, squeaking, sizzling and crackling make the tactile books even more appealing. Not every page needs to make a sound, but the book should nevertheless contain some source of sound, a small bell, for example. Even the most ordinary ingredients create interesting sounds: for example, potato starch inside a piece of plastic sounds like snow. Hobby shops sell flat whistles that may be hidden inside tactile animals to make a squeaking sound.

Different scents or spices may be used in tactile illustrations. Some materials even have a particular smell of their own. But, strong scents may cause allergic reactions. Scents and smells also tend to disappear over time.

Safety first

A tactile book must always be safe. The books may not contain parts that come loose or break easily. Small children inspect the books with their mouths,



which means that the pictures must neither be toxic nor contain any small parts that may come loose. Any objects that are meant to be loose should be attached with a strong ribbon. The ribbon must not be too long as it might get caught around the child's neck. The objects may also be held in place by a piece of Velcro or a belt closed by a push button.

Avoid toxic materials and glues and choose surface materials that are easy to clean.

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The pros and cons of fabric books

Naturally, there are problems with producing fabric tactile books.

The greatest problem is that there are not enough book designers and thus not enough books, as these books require time and effort to make.

Even if the cost of materials is not that high, to order a book from a private producer is extremely expensive if the fee is paid according to time spent making the book.

Every one of these books is unique and cannot be copied or produced in great quantities.

Books made of fabric become dirty and are subject to wear and tear during use like any other books. At Celia Library the books are vacuumed and wiped clean after every loan period. Sometimes the books need to be taken apart, cleaned and put back together. On the other hand, this can only be done with fabric books. Celia Library has some tactile books that are 20 years old but are still in use.



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If a fabric tactile book is well made, it is very durable and suitable for circulation.

A fabric book feels good to handle, and it is well suited for small children.

Objects and pictures may be safely sewn onto the pages without using glue or sharp pins.

Coloured fabrics are safe and they bring variation as well as easy colour contrasts.

A large amount of materials may be used in fabric books to create a variety of memorable textures.



IV

United Kingdom

Creating a Loans Collection of Tactile Books for Young Children with a Visual Impairment

Marion Ripley

In the year 2000, the ClearVision postal library started to set up a collection of tactile books for visually impaired children in the UK. Seven years later we have a collection of over a thousand tactile books which we lend to schools all over the country.

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Background

ClearVision is a national postal lending library of over 13,000 mainstream children's books with the text added in Braille on clear plastic sheets.

The books can all be shared by print and Braille readers, whether these are children learning to read Braille with the help of sighted family and classmates, or blind parents reading to sighted children.



These books give young visually-impaired children access to the books their sighted friends are reading, but they do not contain tactile illustrations. The tactile book collection is therefore a new and quite different resource.

What are the Books Like?

Seven hundred of the books in our new collection are made of fabric, with textures, shapes and objects sewn onto the pages. These are the easiest for volunteers



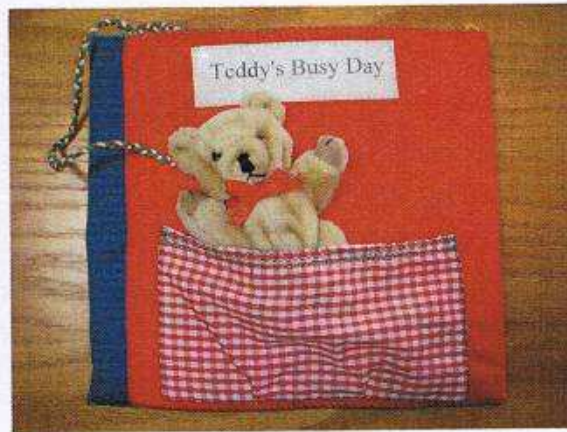
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to make satisfactorily and many people already have all the equipment and materials they need to make this kind of book. Fabric books feel good in the hands and they can be the most durable and safe for young children. Objects can be more securely sewn than glued onto a page, and the pages will not get torn. We also have collage books, with items stuck onto the pages. Some of our books have vacuum forms of real objects stuck onto the pages as illustrations; a few have screen printed or swell paper illustrations but, generally speaking, raised line and swell paper illustrations do not provide enough tactile interest for very young children.

All the books contain tactile illustrations but some also have sounds (bells, sound buttons, etc.) or smells (lavender, spices, etc.. in fabric bags sewn to the page). Topics include nursery rhymes and traditional tales, original stories, numbers, individual letters of the alphabet, early learning, and everyday life. Most

of the books were especially created as tactile books for blind children; a few are published mainstream books with added tactile illustrations. Most of the books have Braille text as well as large print.



Who will use them ?

Clearly these books are invaluable for young children with little or no sight. They are also appreciated by older children for whom tactile illustrations are still a rare treat.

A considerable number of visually-impaired children have additional learning difficulties which means that simple tactile books will be appropriate for them at a later stage than for other children. Even visually-impaired children without additional disabilities are likely to suffer from some developmental delay in their early years. We can therefore expect these books to be enjoyed by children within quite a wide range of ages.

The books are enjoyed by children with low vision as well as totally blind children. Strong colour contrasts, large print text and the use of light reflective materials will make tactile books especially enjoyable for children with some sight.

Hand-made books are not usually safe for babies and very young children who could choke on small items. All children will need to be closely supervised when using these books.

Where do the books come from ?

A very few of our books are commercially-produced, mainstream fabric books, designed for sighted babies and toddlers. Most books of this kind have very little in the way of meaningful tactile illustrations but occasionally one is published which could be described as a tactile book. One of the first books in our collection was a mainstream book on getting dressed, with zips, buttons, press studs, etc..

ClearVision designed some tactile books using thermoformed illustrations. The Royal National Institute of Blind People paid for these to be mass produced for sale to the public and ClearVision bought twenty copies of each.



There are very few tactile books available for sale in any country but ClearVision has bought some books from abroad –including some of the Typhlo & Tactus prize-winning tactile books.

Some of our books are collage books made by a small group of volunteers who base most of their work on popular mainstream titles.

Most of our books are fabric books sewn by volunteers. Most of the people who make these fabric books, free of charge, are older women who belong to craft groups, women's groups, or church groups. Many older women have good sewing skills, experience of young children and the things that interest them, and time to spend on sewing a book. I have been surprised by the enthusiasm with which this new project has been welcomed by people looking for a new craft activity.



Students on a university Textiles and Fashion course have also sewn lovely, imaginative books as part of the curriculum. They received marks towards their final qualification and all the books were donated to ClearVision.

Over a hundred fabric tactile books have been made by women in prison. Many prisons in the UK have sewing workshops where prisoners make clothing for use by prison staff and inmates. Three of these workshops have also taken on work for ClearVision, copying fabric books designed by other people.

Tactile books are intricate and time-consuming to make and we only need a few of each design. The high labour costs in the UK would make it prohibitively expensive for us to pay someone to make books to our designs, but this may be an option for other libraries.

Training volunteers

A lot of time has been spent speaking to groups and preparing and distributing guidelines for producing books. As well as printed guidelines, many people feel they need to handle

some actual books to give them an idea of what is required. This is not surprising as the whole concept of tactile books is quite new to most people.



We ask volunteers to design and make a book from their own ideas; we just suggest topics which might help or inspire them. Whenever possible I speak to groups of interested people and take a display of tactile books to inspire and inform them. The more information volunteers have before they start to design and make a book, the better the end result.

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It is sometimes suggested that there should be more rules for tactile illustrations and that books which fail to observe these rules should be discarded. I think that there is such a desperate shortage of tactile books - and children are generally so thrilled to find anything tactile in a book - that it would be a great shame to discourage any volunteers by issuing too long a list of strict rules. Of course, some of the books people make are much better than others, but the vast majority are quite acceptable and some are absolutely wonderful. If someone makes and donates a book which is not suitable for our library, we find a good home for it in a local school.

What makes a good tactile illustration ?

Making a tactile illustration is rarely just a question of raising the print illustration. It is important to think about what

will be a meaningful tactile illustration for a blind child. There are guidelines on designing tactile illustrations elsewhere in this publication and at www.tactilebooks.org

The most important aspect of a tactile illustration is that children should enjoy exploring it with their fingers. An adult should help the children to interpret what they are feeling and to understand why it is there. There should be no suggestion that identifying what they are feeling is some kind of test a child will pass or fail. When creating a tactile illustration every effort should be made to make it as simple and as easy as possible to understand.

Some simple rules apply to all tactile books for young children. These books should be :

- Safe - it is very important that everything should be securely attached to the page, whether sewn or glued. Avoid small objects and loose fibres, which could cause choking. Avoid any toxic glues or other materials and anything sharp.

- Simple - for young children no book can be too simple. Many are too complicated.

- Small - the pages should be small so that children's small hands can easily scan the illustration without too much effort. If the page is too big they are likely to miss parts of the illustration.

- Short - exploring each illustration will take time. If there are too many pages the child will tire of the book before the last page. Just a few pages will be quite enough for young children.

·Sturdy - children will try to remove items from the pages and may chew, throw or sit on the books. The more robust the book, the longer it will last. Where possible, ensure that the pages can be sponged clean.

·Stimulating - use varied textures, rough, smooth, hard, soft, warm and cold. Introduce smells and sounds. Use bold colour contrasts and reflective, sparkly materials to stimulate low vision.

Lending the books

Ours is a postal lending library, covering the whole of the UK. The books are sent by post with Articles for the Blind labels, so there is no postage to pay when we send them out or when they are posted back to us. Borrowers are sent up to five tactile books which they can keep for up to four months.

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Borrowers are asked for details of the children who will use the books, including age, ability, special needs and interests, and how careful they will be when handling the books. We then choose appropriate books from our stock.

The safety aspect of lending hand-made books to young children is a major concern for us. We are mainly worried that a child might pull something off the page and choke on it. For many years this consideration discouraged us from starting up a tactile book library but the need for tactile books is so great that we decided we must do something to help.

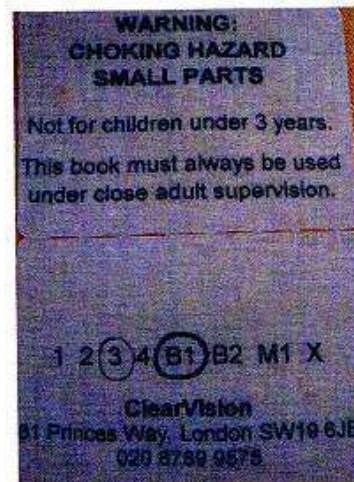
As a postal library we are in quite a different position to a library where members visit the premises to choose books and are known to the librarian. In this situation the librarian would

perhaps be in a position to assess whether a child is likely to try and dismantle a book and would also have a better idea of the kind of supervision offered by the parents.

We have taken four steps to try and ensure that our books can be safely used and enjoyed :

- Everyone making a book is told about this issue and asked to do their utmost to ensure that the book is made to high safety standards.

- Every book has a label on the back warning of a possible choking hazard and stating that the book is not suitable for children under the age of 3 and must be used under constant adult supervision.



- The books are only lent to schools and other educational establishments. The books can then be examined by a professional who knows the child and he or she can decide if the child will be safe using the book (and if the book will be safe with the child!). If they wish, they can allow parents to use the book at home with their child.

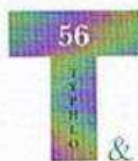
- Before they can borrow tactile books, the head of the establishment must sign a form to confirm that he or she takes responsibility for ensuring that the books are only used by children over the age of three, under close adult supervision.

Measures of success

This new collection has been warmly welcomed. We now lend to visually-impaired children in 120 schools and this number is increasing as more people hear about the new service. Some schools have written to tell us how much they appreciate the books.



Many visually-impaired children in the UK are integrated into mainstream schools; there might be just one blind child in a class of sighted children. Our tactile books are of great interest to sighted children; they are much more exciting and attractive than most normal books. This is good for the visually-impaired child's morale and encourages interaction with sighted classmates.



The future

We have recently reached our initial target of one thousand books but we now hope to expand the collection to meet particular needs. We have so far concentrated on young visually-impaired children and those with additional learning difficulties. It has become clear that older children would also appreciate books with tactile illustrations.

Different formats and different kinds of illustrations may well be needed and we are looking into various possibilities. We would also like more books on non-fiction topics and more books

of particular appeal to boys. I am also interested in developing appropriate books for children with profound learning difficulties as well as visual impairment.

Many of the tactile books in our library are works of art. Whenever they are on display they are a source of great interest and admiration. They also serve the purpose of raising awareness of the needs of children with little or no sight. I would like to see some of them on temporary display at mainstream exhibitions, book fairs and art galleries where they can be admired by the general public.

**These are wonderful books
and we want everyone
to know about them !**



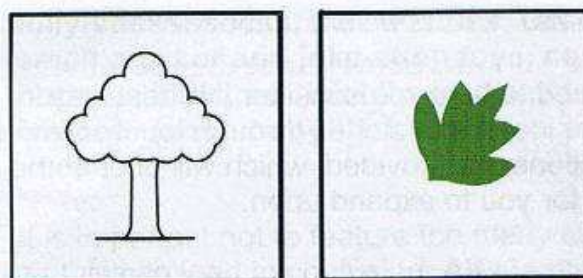
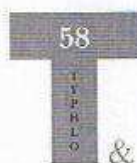
Telling stories through touch

Communicating tactile story ideas to young visually impaired children.

What do you think is a more meaningful representation of a tree for a young blind child - a raised outline silhouette shape of the whole tree or a single, touchable leaf?

We naturally identify the outline shape as being a representation for a tree, however this depiction would be challenging for a blind child to interpret.

The scaled down shape is based essentially on visual knowledge; it is only a schematic representation and actually has very little to do with a real tree.



Blind individuals gain much of their experience and knowledge of the world around them through touch. Therefore, the **tactile** quality of a leaf or a piece of bark can provide a much more meaningful representation for a blind child, based on the experience of rustling leaves in the park, for example, or touching the rough bark of a tree.

The previous example shows that, with a little extra consideration, books can be illustrated with **meaningful 'tactile' representations** for blind children, which enhance the text in much the same way as pictures do for sighted children. As within all books for children, pictures not only provide a source of interest and entertainment, but also help with education and literacy.

Tactile picture books feature illustrations that can be explored and perceived purely through touch. Tactile elements allow blind children to **feel, stroke, pull, lift, shake, rattle and squeak** their way through the story. These features are also enjoyed by children with some sight, as well as children with other learning difficulties.

This article is designed to help you consider the best way in which to communicate ideas and stories through touch. Simple examples and illustrations are provided, which will offer some inspiration and ideas for you to expand upon.

A story can be brought to life with a variety of **interesting and contrasting textures**. Many things can be incorporated into tactile pictures; whatever best conveys the ideas in the story or text. **Interactive features** and elements that stimulate other senses, such as smell and sound, can also be used to enhance the story. Good contrast between colours is also beneficial for children with some sight. Some visually impaired children can also enjoy the sparkle from reflective materials.



Examples of materials that can be incorporated:

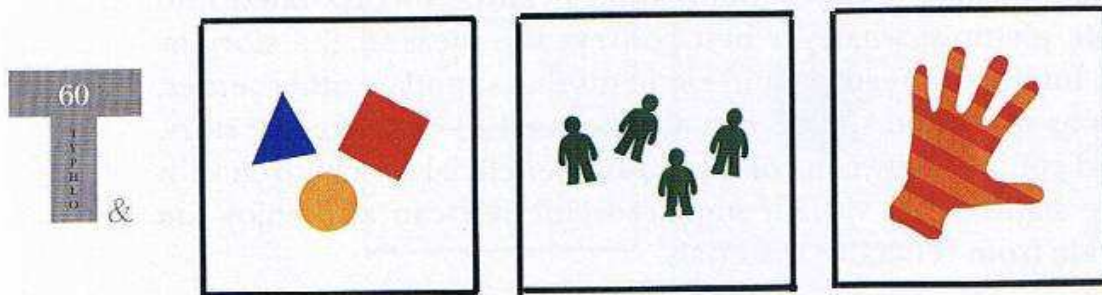
Velvet, fur fabric, PVC, netting, laces, buttons, beads, artificial leather, quilting, sponges, rubber mats, carpet, clay, balsa and sanded wood, spoons, plastic lids, lolly-sticks, socks, hair bobbles, tinsel, dolls' house items, small cracker and joke-shop toys, squeakers, sound buttons, bells, artificial flowers and leaves, pom-poms, feathers (shop bought), braid...

Note: It is important not to feature too many elements within a page as this can lead to confusion. **All elements must be securely**

attached and suitable for enthusiastic exploration (Removable objects can be fastened with velcro, or placed in pouches). **Avoid using toxic glues and anything sharp.**

Examples of materials also accompany some of the illustrations throughout this article.

As with all children's picture books, tactile pictures are suited to story lines that are **simple and easy to follow**. Stories incorporating rhyme and humour can be educational as well as being fun; many popular tactile books use step-by-step narration and strong recurring characters to help guide young readers through the book. As with the text, tactile pictures for children should be simple with not too much detail.



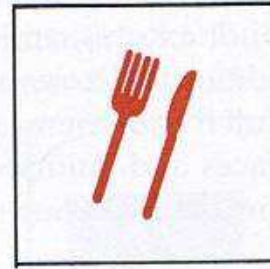
Young children's counting book

Pages feature tactile elements for counting - shapes, toys, fingers...

'Real-life' objects and textures provide an ideal basis for tactile pictures. Objects can be incorporated or attached directly onto the pages, or vacuum-formed into plastic. Raised vacuum-forms (or thermoforms) provide accurate 'touchable' copies of objects - you may have access to a vacuum-forming machine. A story accompanied by real objects will help the reader to engage

with the text; simple stories based around everyday routines can help young children with literacy, and familiar references can provide a foundation for introducing ideas.

Simple tactile objects can be used to represent more difficult concepts. For example, a small ceramic tile or piece of towelling can represent the entire bathroom. A thermoform of a real knife and fork can represent a trip to a restaurant.



A raised version of a printed picture will often not make sense as a tactile picture. Images conveyed through print include variations in shading, subtle details and stylisation. Many of these details will be confusing in tactile form. Stylised and illusory representations, such as 'sketched' illustrations, thought bubbles and strokes indicating movement will be less obvious for visually impaired children to interpret.

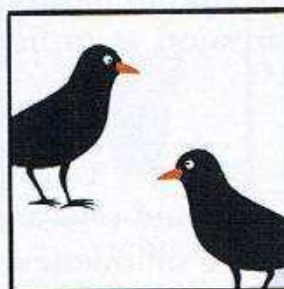
61

TACTILES

Objects, people and animals are easier to decipher if shown in their entirety. Sometimes, however, it may be appropriate to choose one feature to represent the whole subject, such as a cat's head or piglet's curly tail.



wrong

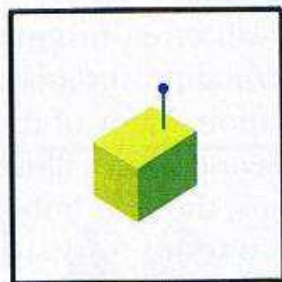


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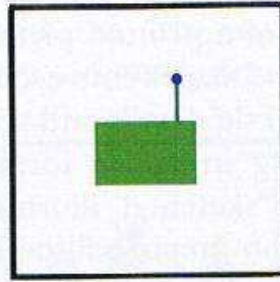


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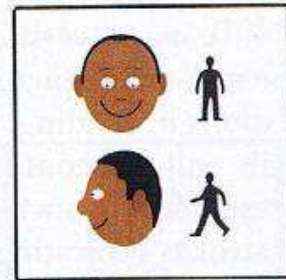
Objects and figures illustrated at an 'angle', for example using angles of perspective or foreshortening, will be challenging for a young visually impaired reader to interpret (a relief display of a three-dimensional object may seem like a muddle of lines and textures, and a figure turned at an angle may seem physically 'deformed' to a young blind reader). It is best to illustrate objects in full frontal view (as if they are facing you), on a flat plane. Figures, faces and animals are easier to identify in **full frontal view**, or in **profile** (side on).



wrong



right



right

Tip: When designing and making your illustration try feeling the page as you work on the image. It is beneficial to ask somebody to try and interpret the page blindfolded (or ask a visually impaired person) without having seen it in advance. This way you can get an impression as to how easy your image is to comprehend.

Representational shapes can be more successfully interpreted with a **solid infill and relevant textures**. For example, a fur texture can be cut into a silhouette shape of a cat. This shape can be used to illustrate, as simply as possible, the features of a cat: four legs, paws, a tail, a head with whiskers and pointed ears.

A simple, accurate representation can illustrate the key features of an object, which a blind child may have learnt through touch. A visually impaired child, through touch, may recognise that a table has four legs and a flat top. Therefore, a depiction with four 'touchable' legs and a top surface will make more sense than a 'side-on' depiction with two visible legs.

Cat: Fur - long-haired fabric, plastic eye or button

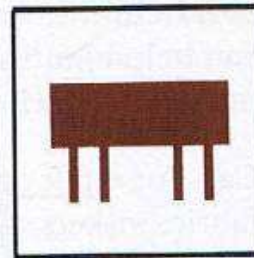
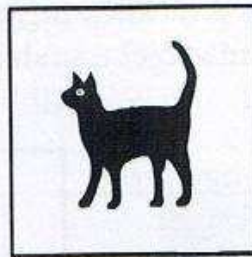


Table: Smooth wooden strips or robust card

Thinking about processes which involve touch can help when narrating and illustrating your story. **Relevant tactile references** can be a substitute for well known 'visual' references.

For example: 'It was a hot, sunny day'.

A sun symbol with radiating lines will mean little to a blind child. Using a relevant reference can provide a solution:

'It was a hot, sunny day. "I need a nice cold drink." said Amy'.

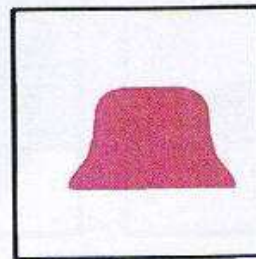
A glass and straw depiction would thus provide a meaningful tactile illustration for the 'sunny day'.



wrong



right



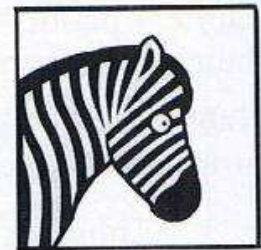
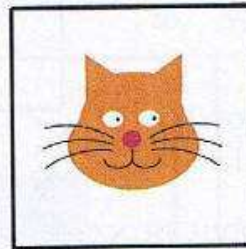
wrong

Glass and straw : Glass -shaped plastic or glossy card, Plastic straw
Sun hat : Attached small hat or sewn fabric shape.

When thinking about story lines, characters and illustrations, **consider a young blind child's experience of the world.** Sighted children are naturally digesting information and learning through looking at the world around them. Many of the observations we make to easily distinguish between 'cat' and 'dog', 'bus' and 'truck', or 'zebra' and 'horse', for example, a blind child cannot. Emphasising particular elements or features can help identify the subject, such as a cat's whiskers, a bus's steps, or a zebra's stripes.

Cat: Fur = felt or long-haired fabric; whiskers = string or flexible plastic

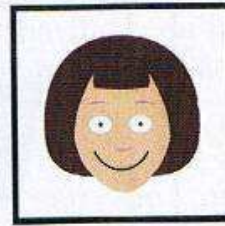
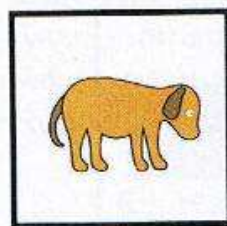
Zebra: Stripes emphasised with contrasting texture or height button or plastic eye



64

&

As with visual representations, the features of a face can be used to successfully convey emotion. Simplified features can depict the essence of an emotion, such as a large smile for happiness, tears for sadness and bared teeth for anger. Simple bodily gestures can also be used to show emotion, such as a lowered head for sadness. These will, of course, need to be explained to the child.



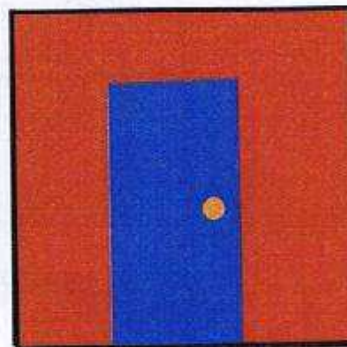
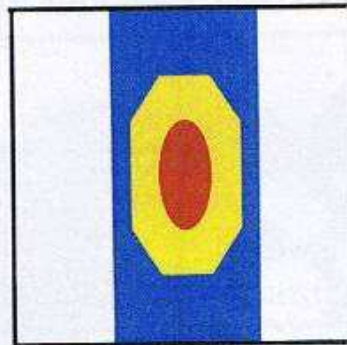
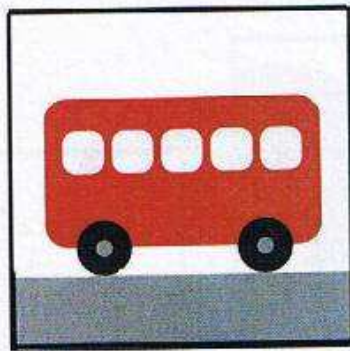
Wolf

Teeth-shaped plastic, beads or shiny card

Tears

Shiny card or sequins

Based on touch and experience, a blind child will recognise aspects of a journey or routine differently to a sighted child, who will more naturally recognise the visual aspects. Using the bus example, emphasising the seat and the bell push will **provide a relevant reference** based on the experience of getting onto a bus, opposed to a typical sighted representation such as a rectangular shape with circles to represent the wheels. A door with a handle can be a more meaningful reference for a 'house' than a scaled down representation of the building.



Door

Ice-lolly sticks for panels, or painted hardboard.
Hinged or glued on one side for opening
Bead for the handle.

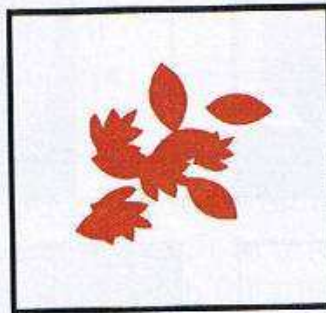
Overlapping shapes and outlines on a page can lead to **confusion**, especially if little contrast is provided between the texture or height of each shape. Tracing the shape of one element may accidentally lead onto the shape of another. It is beneficial to have all elements as clear, **separate shapes**, and a layout which relates easily to the story or narration.

For example : *'It was autumn, with lots of leaves on the ground'*. It would be difficult to distinguish the shape of each leaf within a pile of leaves. Providing space between the leaves would enable the reader to trace each individual shape.

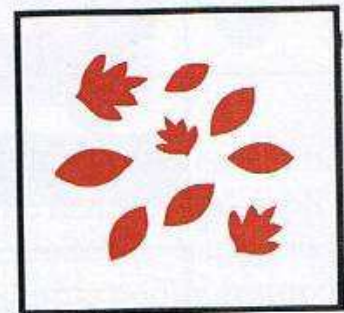


Leaves

Synthetic leaves
Textured fabric



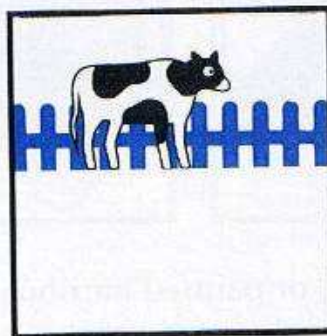
wrong



right

Fence

Ice-lolly sticks
Plastic strips



wrong



right

It is very difficult to understand depth in tactile pictures; many believe that it is virtually impossible for a blind child to read 3 D scenes and perspective in pictures through touch. **Simple 2 D viewpoints**, with clear spacing between areas, are much easier to interpret. An alternative way of showing distance is to provide 'step-by-step' narration within the story, which takes the reader 'through' the picture.

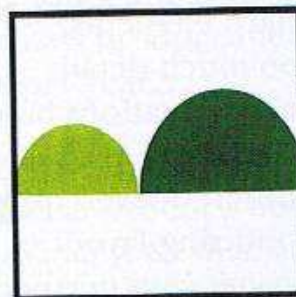
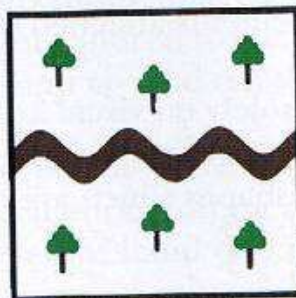
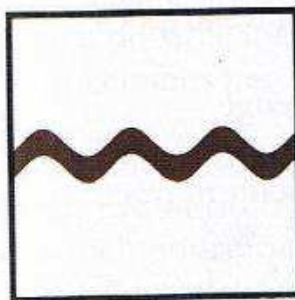
For example: 'It was a long, winding path, with trees all around. Ahead were two steep hills'.



wrong



right



Path

Sand paper or painted woodchip

Tree

Artificial leaves and bark.

Summary

In tactile picture books for children, aim to have ...

- a variety of textures and touchable elements, which convey the essence of ideas, objects and characters
- elements which are securely attached and safe for enthusiastic exploration
- a simple and easy to follow story line
- colourful, simple and 'complete' shapes
- clear spacing and discrimination between elements
- details which are easy to comprehend
- meaningful references based on a blind child's experience of the world (elements conveyed through a touch perspective, opposed to vision)
- simple 2-D viewpoints



Try to avoid ...

- too many textures and elements on a page
- linear outlines of shapes
- sharp elements, and elements attached using toxic glues
- too much detail
- representations based solely on visual knowledge
- illusionary, abstract and 'stylised' images
- cluttered, overlapping shapes which are difficult to trace
- confusing layout
- images with perspective



Design and compilation: Neil Johnston, North Wales School of Art and Design (2005) for ClearVision. Photos : Richard N. Tucker of the Force Foundation and Marion Ripley.

V

France

Mass production of tactile illustrated books

Philippe Claudet

Our Tactile Illustrated Books (TiB), accessible to visually impaired children¹ (V.I.), ought to be named differently to take into account their particularity. We call them *texturillustrated* books, because they are made in textures and relief (and not just in raised lines or thermoform), quite simply because only textures can translate the diversity of the image and colours which visually make it possible for visual children to see. To mass produce means 300 specimens per title and around ten titles per year.



This involves a specific workshop because no structure within the world of mechanical editing is able to produce books with such enormous levels of hand crafting. Finally, all this leads to our administrative status of a non profit organisation and it is possible for our publishing house to profit from subsidies intended to compensate for the high cost of this type of edition and to lower the selling price as far as possible so as to reach a non-discriminatory amount for the families concerned.

1. Partially sighted and Blind children.

Specifically in France

1524: First « livre à systèmes- interactive books »: *Cosmographie* by Pierre Apian, with mobile disks showing celestial movements.

1749: Denis Diderot published *La lettre sur les aveugles*.

1766: The first book was printed for a blind person (one example copy) in Paris by Prault, printed for Melanie de Salignac.

1784: The first school for blind people was created by Valentin Haüy, in Paris.

1829: Invention of BRAILLE by Louis Braille.



1880: Martin Kunz (1847-1923) from Mulhouse started the largest production of tactile images and tactile cards maps in Europe.

1931: Invention of the white stick by Guilly d'Herbemont.

1972: Olivier Four & Chardon Bleu, the first private editor to mass produce books which were tactile illustrated by thermoform and in colour, accessible to blind children until 1987.

1975: The government decreed the obligation « educative » (but non school) for blind children.

1990: Policy of the Ministry of Culture – introduced a policy make reading accessible to all the public.

1994: Creation of 'Les Doigts Qui Rêvent', the first independent (association) publishing house, specialised in *texturillustrated* books.

The National Association of the Parents of Blind Children (ANPEA) deplored the lack of access to books; the experience of the editors Four & Chardon Bleu had shown that it was possible to produce in mass; the Ministry of culture encouraged «the adapted edition» towards the public who were prevented from reading; the first teachers of the V.I. children integrated in mainstream schools started to request the books as did the parents of these children. Add to this, the French culture of children's books and typically Latin countries approach to books, and the work of Yvette Hatwell², and it is at this point that a group of parents and teachers decided to create the 'Les Doigts Qui Rêvent' – Dreaming Fingers in order to put in place a mass production of texturillustrated tactile books **with the same criteria of demand and literary quality** as for sighted children's books in France.

Paradox

It has been known since Comenius³ that books make it possible for a seeing sighted child to gain knowledge that it cannot discover in his own environment. Also books provide for the younger child, non-readers, to imagine the world without danger and create live imaginary adventures, to name reality.

But isn't then a TiB for a blind child, a paradox? Not for Polly K. Edman⁴. She finds this an extremely effective tool to enable discovery because it gives access to information which the tactile modality does not allow: inaccessible objects (star, building) or of objects with too large a size (mountain) or

2. Hatwell Yvette, *Toucher pour connaître, Psychologie cognitive de la cécité précoce*, Dunod 2003, and a lot of articles.

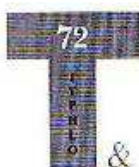
3. Comenius, *Orbis sensualium pictus*, 1658

4. Edman.K. Polly, *Tactile graphics*, American Foundation for the Blind Press, 1992

too small (insect) or fragile (soap bubble, snowflake) or dangerous (fire) or complex (solar system).

The history of the tactile image for V.I. children is relatively recent⁵. And if judging by the research of the INLB and the "Jacques-Quellette" school in Quebec⁶, books are also a formidable tool to develop the consciousness of writing as v. mp. children have rarely the occasion to be in contact with writing in relief in their daily life hence tactile books being the only possible place to experience this.

The tactile images in the books are also an effective aid to help memorise a text⁷ and to stimulate appetite, curiosity and tactile sensitivity and finally they are a pleasure to share between sighted and V.I..



It is not possible to imagine today, a sighted child arriving at primary school having never touched a book ! This is however the case for the majority of v.imp. children in our rich countries.

Definition

A TiB is firstly a book, that is a series of connected pages, composed of text and pictures none some saying 'two languages'⁸ and all bound together with a protective cover.

5. Eriksson Yvonne, *Tactile pictures : representation for the Blind 1784-1940*, Göteborg University, 1998; in French, *Images tactiles : représentations pour les aveugles 1784-1940*, Les Doigts Qui Rêvent, Coll. Corpus Tactilis, 2008.

6. *Le développement de la conscience de l'écrit chez l'enfant aveugle de 0 à 5 ans, recension des écrits*, collectif ss la dir. de Jalbert Yves et Champagne Pierre-Olivier, INLB 2005, Les Doigts Qui Rêvent, coll. Corpus Tactilis, 2007.

7. Lewi-Dumont Nathalie, *L'apprentissage de la lecture chez les enfants aveugles: difficultés et évolution des compétences*, Septentrion, 1997.

8. Van der Linden Sophie, *Lire l'album*, L'Atelier du poisson soluble, 2006.

At this point the TiBs are particular due to:

- an assembly of pages but to connect bound them poses a technical problem due to the thickness of the pages of illustrations in relief;

- the text must appear in print AND Braille and so creates the problem of space in the page-setting, and of the cost of the two prints;

- the covers usually used to protect and identify the book are entirely carried out by machines which refuse any relief and Braille.

The following are the 6 key points of our books.

- 1- Double writing (print and Braille) on ivory paper (to take into account photophobia);

- 2- The colours and contrasts to stimulate low vision readers;

- 3-The illustrations are cut out and stuck materials and textures;

- 4 Special binding allowing the pages to be set flat, giving hands ample freedom reading with fingers;

- 5- An overall look (aesthetic) giving a positive image to the child;

- 6- That the book is a tool for integration;



The authors

The first producers of these types of books, similarly to *monks hand-copying* were always the parents and the teachers of the V.I. children. They were our first authors and they are still the principal ones. They know VI children perfectly but however,

they are not necessarily good writers, good graphic designers or good handymen. This leaves the editor to transform their excellent ideas or concepts into the beautiful picture books and to be solid as possible.

For a few years now we have called upon professional authors and illustrators to whom we have given advice on the specificities of touch. The experiment shows that they are then able to redesign the tactile album and to find very original tactile plastic solutions according to the tactile modality. In short, they design splendid albums which are beautiful and visually aesthetic and above all tactilely efficient.⁹

Copyright



Certain countries profit from a law systematically granting the right of tactile adaptation. This is not the case in France. Permission must be obtained from the editors for each title that we wish to adapt; unfortunately some refuse our request but fortunately they are but few.

In spite of these difficulties, we adapt a certain number of books that have already been published because it seems important to us that v. imp children have access to the same children's 'favourites'¹⁰ in order to share the same culture as that their sighted friends; if this is not the case how can we speak about real integration? All of our books are subjected to copyright registration and comprise an ISBN.

9. Curtil Sophie, *Ali ou Léo ?*, (Co-édition) Les Doigts Qui Rêvent, Les 3 Ourses, 2002.

10. For instance, *Little-Blue, Little-Yellow*, L. Lionni; *The very hungry Caterpillar*, E. Carle

The Mock Up

Regardless of the primary source whether it be a manuscript and an outline of illustrations or a rough mock up, or ever a commercial book which we wish to adapt, we start with a «mock up meeting» with all of the team. Here we decide the main trends for each book.

The first job is page-setting the text into print (Black) and Braille which will determine the format of the album, Braille takes up much more space than the print. Then, in this established format, the model maker carries out a pre mock up in order to propose to the team various possibilities of presentations, materials, etc., and we then work on the complexity of the image according to the target age bracket.

As of this moment, the decisions are more precise, for example which Braille printing technique which involves the choice of paper for the text, what weight for the paper for the illustrations, which type of binding, which materials and textures, which colours. This process of creation of the mock up lasts approximately 6 to 8 months and it constantly will be modified according to for example, the feasibility and the criteria of the technical and economical nature. Not all material cuts out or sticks down in the same way or as easily and so it is necessary to check.



Ergonomics

Throughout the creation of the mock up we must maintain tactile legibility while respecting the visual aesthetic aspect because the purchasers of these albums are sighted parents, teachers,

librarians. This means that to achieve the aims for social integration of VI children, our albums are constrained by the mixture of two methods modality, namely visual and tactile. This poses enormous problems which are noted in the paragraph «adaptation». Ergonomics relates to but is not limited to...

- the weight of the pages and of the books,
- solidity,
- if interactive systems are present they must function perfectly,
- comfort, quality and durability of the Braille points etc.,
- the presence of the title and the name of the author on the cover which must be easily readable.



The text

The print or *Black*

Often we ask the professional writers to rewrite or to simplify the text in order to have the quality required for younger readers in youth literacy. The printing is generally in Arial 24 because this type fits most visual pathologies.

The Braille¹¹

The target age groups impose a Braille Grade 1 and we use the two different printing types ordered in two main groups:

1 Deforming the support (page)

PVC or paper embossing – the page is pressed between two male and female aluminium matrices.

11. In France Braille Grade 2 is taught at the end of primary school.

Thermoform – the plastic foil is placed on a matrix. The machine will vacuum and will heat to press the foil on the matrix.

Micro capsule paper – Photo sensitive paper (micro capsules) that is copied and that is put in the oven to create black printed relief.

Embossing – The fibre paper (dry or wet made out of fabric) is pressed onto a matrix.

2- By deposit

Thermography

Just after the ink deposit by Offset or typography the sheets go through a tunnel where thin resin powder is applied in a fine spray and it glues on the damp ink which is then heated quickly to melt and amalgamate the grain. Print on both side is impossible. This is a rare technique.

Silkscreen

The support is passed through a screen with some parts obstructed to represent a figure and thick ink is applied and then dried.

ToM's3D¹²

Appears the same as the silkscreen but the material deposited is thicker, providing excellent quality, in particular on smooth surfaces and back to back both sides.

Page Format setting (Lay out)

On all cases, the print (Arial 24) is places above the Braille

12. ToM's3D is a relief deposit technique on any material which doesn't transform the material it covers that we created ourself: <http://www.toms3d.com>

because if not the hands of the tactile reader will hide the text from the sighted reader.

Another solution is to print on an additional transparent sheet placed in between the pages. The sighted reader could be a parent or teacher helping a VI child to read or a sighted child being helped by a VI parent or teacher. Without text the book would be inaccessible to anyone who does not read Braille.

Either line by line

Once upon a time in a wood
a lonely small girl
&

or in blocks



Once upon a time in the forest
a lonely small girl was running
&

The paging (folio) is present in print and Braille.

The text is very important in a tactile album because it will make it possible to categorise and give indicators to understand the image. It is often spoken about verbalism¹³ i.e. the fact of naming a word without having any experience of it; Clara Linders¹⁴ speaks about *slipping* or *floating* language and classifies the vocabulary in three categories:

13. Cutsforth, 1932

14. Linders Clara, *Zweetfaal*, Visio, 1998, soon translated at Les Doigts Qui Rêvent in Corpus Tactilis coll.. See also *Language development & social interaction in Blind Children*, Pérez-Pereira, M., Conti-Ramsden, G., Psychology Press, 1999.

-**BiTiB** (Blind Infants Tactile Illustrated Books) early intervention & multihandicap research group created and organised by Ldqr (France, Italy, Netherlands, Quebec, Czeck rep., Switzland), universities of Grenoble, Padova. Directed by E. Gentaz & R. Caldin.

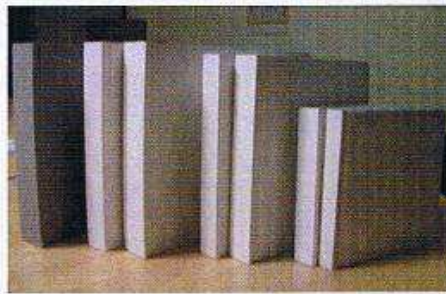
-**IMADOI**, Tactile strategies and inter-relationship Blind child/ TiB/mother. (France) Universities of Dijon, Grenoble, Paris 1, Rennes. Directed by Annie Vinter.

-**Tactile iconotypes** (France, Brazil). University Paris 1. Directed by Danyelle Valente.

-**Typicality** (International). Directed by Anne Theurel

Our collections

-BiTiB



Pre-bokks: Empty tactile books to file by the Blind child and his/her mother. 3 size & pages.



Emy goes to bed, Lanners Josée, Fanan Alessandro, Les Doigts Qui Rêvent 2009, prototype 15x15 cm

-Eveil & Péda (pre-school books),



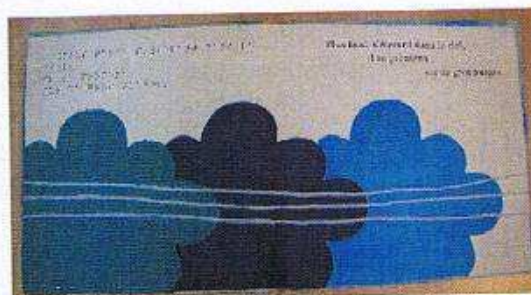
School books, collection directed by Caffier, N., Ldqr 2009, 21x29,7 cm.

Petipoint, 7 titles, Caffier N., Ldqr 2006, 2009, 15x15cm), full card without wirow



-A Tâtons (first year school)

Petit Souffle de vent, Lodolo E., Ldqr 2009,
23x23 cm, (co-ed Fr/it).



-Brailli-Braila (young readers)

In Amandine, dine, dine Land, Claudet Ph.,
Dufresne, D., Ldqr 1994, 1999, 2005

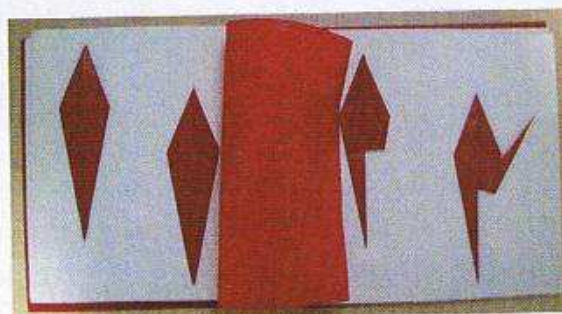
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-Points d'Or (good readers), artist TiB.

Quatre pliages pour Tamami, Taki,
2008, 21x21cm, 4 titles (origami)
in a case.



-Corpus Tactilis (for professionals)

Language & visualisation, Eriksson Y.,
Holmqvist K., Ldqr 2008,
(International collection, 9 other titles),
16x21cm.



On our catalogue, 36 TiB for sale, 9 essays for professionals, and many pedagogical materials from abroad we distribute.

Conclusion

The production of this type of book is very recent in the history of book publication and editing and there is still much more to be done. It is imperative to improve the quality of the contents, the solidity of the cover and of course the ever present preoccupation of a non discriminatory selling price which contradicts integration.

The mass production of tactile illustrated books meets the need of integration for visually impaired children. They must be able to find books in the same places as other children such as district libraries, ordinary schools where they are integrated and also in their families and so on. In France some people speak about *the generation of children with Les Doigts Qui Rêvent*,* that is children who have always had since birth, illustrated tactile books contrary to preceding generations. They have more appetite for reading, they are curious, have the desire to touch and access to facilities at school to create drawings in relief, etc..

What is our biggest reward? When sighted children prefer our tactile adaptations to the original commercial books. This offers a huge amount of pride to the visually impaired children and their families.



*In India, a publishing house took our name *Dreaming Fingers* long after *Les Doigts Qui Rêvent* was created, copying even our website. We have nothing to do with it.

- close words, direct experience possible,
- remote words, concrete words but no experience,
- abstract words.

This classification is used to facilitate the discovery of the images according to the age of the children concerned. The younger the child is the easier it is for the child to understand the picture if the situation in the book is connected with their daily experience.

The tactile picture¹⁵

This is the most difficult part of the album, during the design phases and the production. As sighted, when we create a tactile picture and then *translate* it into another language, a tactile language, we are *re-writing* this picture. It is not as simple as making a visual image in relief as this is not enough to make it comprehensible by touch.



Ziolo, M., *Le Roi de misère*,
Les Doigts Qui Rêvent, 2002
10 elements

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The visual perception of a visual picture image uses a sensory channel capturing remote reality, in an instantaneous and synthetic way. However, the tactile perception of a tactile picture uses a sensory channel which will only capture reality if

15. Claudet Philippe, *Now I know what white means*, forthcoming at Les Doigts Qui Rêvent, coll. Corpus Tactilis

there is contact between the body and this reality (if it exists, if it is tangible), in a sequential way (that takes time) and analytical (detail by detail).

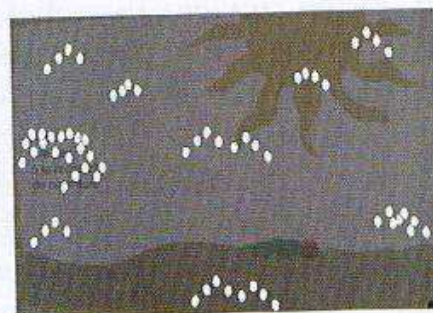
Modern psychology showed the fundamental role of the memory in the reading of an image. The discovery of a tactile image picture takes place in two phases: a perceptive awareness (forms, textures...) then a phase of recognition if the tactile picture corresponds to a mental image; if not the tactile image will only start developing knowledge of this object. The cerebral mechanism allowing recognition requires the constitution of a library of images so that the act of recognising can take place.¹⁶

When the fingers of a child discover a tactile image picture, a chart is made which constitutes the contact points between its finger tips and the image picture. To touch something, is to touch a matter or textures, to discover the form (contour), its orientation, its localisation and its report/ratio (distance, size, orientation) with the other elements illustrated on this picture. The child will have to memorise an impressive amount of information and at the end of its exploration an enormous cognitive effort must be made to create ONE picture with all its elements.

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Carle, Eric, *The very hungry caterpillar*, tactile adaptation of Ldqr.
Simulation of fingers exploring a tactile picture.



16. Hatwell, Yvette

The image is often inferred from perceived indications rather than recognized. The number of tactile elements in the picture must be created depending on the tactile modality specification and according the age of the child. Moreover the value of the imagery value* must also be taken into account:

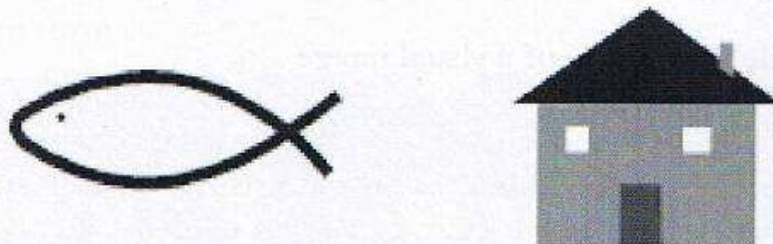
Hi: (High Imagery Value), objects names with a strong imagery value which evoke experience for VI people = concrete words like kee.

Li: (Low Imagery Value), this is the abstract and is just as difficult to associate with an object for sighted people as for VI people = abstract words.

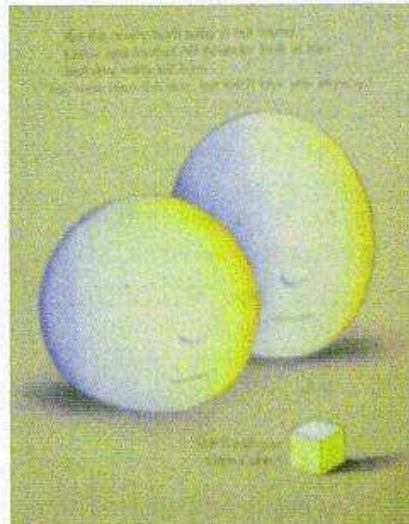
Hi-NE: (High Imagery-no experience) objects names with a high imagery value but where no direct experience with this object has been established = volcano.

Codes and the analogical concept

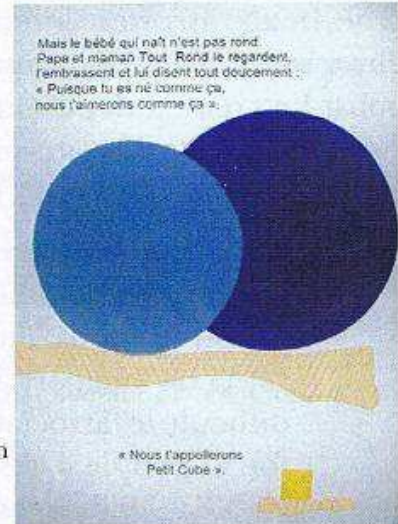
When a sighted person recognised the image of a house or a fish it is because there are one or many analogies between this image of the house or fish and real houses or fish already seen. This house and fish are not codes because there is a real visual resemblance with what the person knows about houses and fish.



* Cornoldi Classification quoted in Hatwell Yvette, *Psychologie cognitive de la cécité précoce*, Dunod, 2003



Original



Adaptation

Merveille, Ch., Goffin, J., *Petit Cube chez les Tout Ronds*, Mijade 2000, Ldqr 2002

82 To be able to recognise objects, the VI child must also find one (or many) tactile analogies between the proposed tactile image and there its experience. This analogy could be found in the shape or in the texture. However, it is sometime difficult to represent real size and original texture on the pages of a tactile book. The child must build their its *representation* from the indications given by the tactile picture and verbal explanations given by the adult (mediator).

The tactile adaptation of a visual image

It is a long and difficult exercise to adapt a visual image into a tactile image. This process consists of keeping only the pertinent elements which characterise an object, a character, an animal or the intention of the illustrator must be respected and not damaged or changed in terms of the visual sense of the image when making it readable by touch.

This task is carried out to deliberately choose pertinent elements of an object to allow the child touch to recognize and identify them, satisfying at the same time sighted readers. This is a compromise.

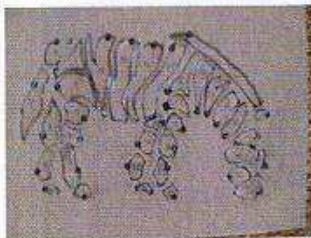
Texturillustrated books production

The workshop

This is indispensable because this fabrication even in mass production is totally handmade. People must be trained in this specific type of production. Our workshops which started in 1996, are 'induction workshops' welcomes people with social disabilities for a 12 month period.

Cutting tools

Each piece stuck into a book has been cut using a cutting tool with a strong, steel blade which has been curved (bend) by a special bending machine to give it the required form. After this the steel blade is inserted into wood or is reinforced by welding it with metal bars. The cutting area is filled with foam to eject the cut out form.



Tool seen in the
cutting sens



Back side with ejec-
tors foam ruber



Paper cut with that
tool

Cutting

Once the pieces are ready, that is, cut and the glue applied, the cutting tool is place on the paper and then pressed to release the piece. Depending on the materials it is possible to layer several pieces and then cut several forms at the same time.



Cutting machine



Operator
at the machine

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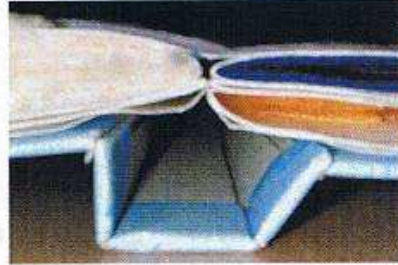
Binding

It is necessary that the TiB open horizontally to allow the child's hands to be free to touch the text and illustrations. Spiral binding or Wiro or Koï is the form of binding most used. A hole puncher is used to make the holes in each page and a spiral binding tool to close the spiral. There is also a type of page assembly which uses glue to paste each page on top of the other and so allowing horizontal opening of the pages, but it takes more time.

Joining

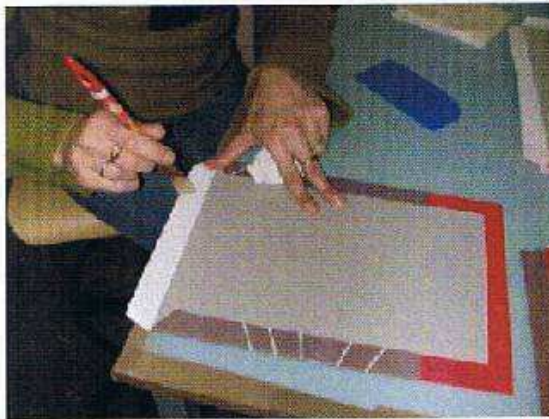
The pages printed and brailled are assembled into a book without the illustrations. They are assembled and spiral bound. Following this all the cut out elements are then glued on the pages.

There is also another way of binding by gluing each page on the other one, which allows the free horizontal pages opening without spiral.



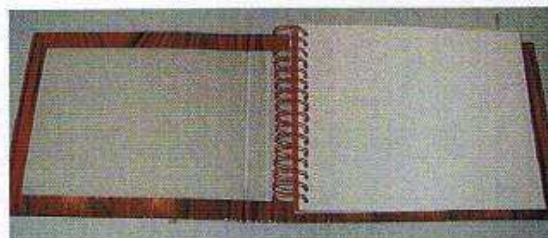
The cover

The cover is printed onto paper and then pasted onto thick cardboard, and held in a press until it is dry.



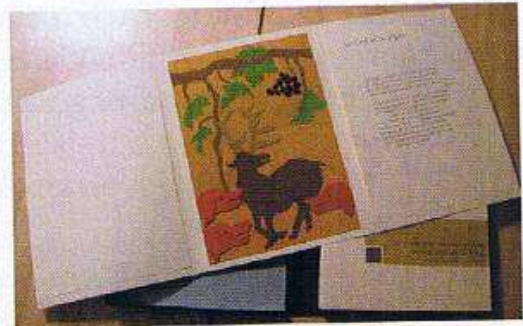
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The final task is to put the name of the author and the title in Braille onto the now dry cover using the process ToM's3D. Following this the first and the last flyleaf (guard page) are stuck onto the cover respectively and are pressed for 48h.

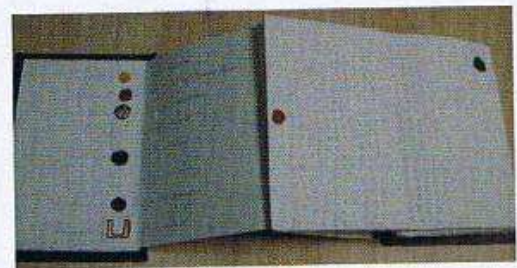


Figures

Our workshop of ten people carries out approximately 3000 specimens copies per year and it takes on average 3h30 (record is 12h/copy) of labour per book copy. Since 1994, we have produced 25 000 books, consisting of approximately 75 titles, including the 7 600 Tactus books, in 16 titles and 8 languages. 75% of original creation, 25% of adaptation from commercial picture books. Among our production, 8 artist tactile books, in order to make the Blind children touch aesthetic since they can't touch in museums.



10 Fables of La Fontaine, tactually illustrated by 10 famous illustrators. Size A3, in a case. Here, illustration of Sara.



Little Red Riding Hood, Lavater, W, Maeght 1963, tactile adaptation Colin Myriam, Les Doigts Qui Rêvent 2009, 13x21cm.

Our main customers are the public libraries : first because TiB are quite expansive and so parents and schools can loan them, but also for social integration. In France, a Blind child can loan a TiB at the library of the part of the town where he lives. We are much helped for that by our Culture Minister.

Research

In order to increase the efficiency of our TiB, since 2004 we started several partnerships with the universities of Dijon, Grenoble, Paris 1, Rennes, Padova. All those essays are then published in our collection Corpus. Several research in progress:

VI

Poland

Filling the Gap : from Tactile Picture Books to Tactile Graphics

Boguslaw Marek

Pictures made of bits of fabric or using real objects are an ideal way to introduce totally blind children to books with tactile illustrations. But even such “near-real” pictures may not be free from errors made by sighted designers. What looks simple may be very difficult to understand for someone who has never seen. But with the right approach and certain educational tools it is possible to explain the relation between objects and drawings and the conventions used in two dimensional representations of the three-dimensional world even to very young children. This way simple tactile picture books can play an important role, providing stress-free transition to “tactile graphics proper” – diagrams, maps and drawings which blind learners are likely to find in different subjects and at various levels of education.



Understanding tactile illustrations.

“What is the main difference between books for sighted children and those for children who cannot see?”

Until not all that long ago the most likely answer to this question would have been: "The main difference is that books for sighted readers are simply there, ready to buy or pick from the local library, while Braille users have access to just a fraction of what is available in ordinary print". Although in most countries this may no longer be true, the fact remains that while in print editions colourful pictures, drawings or photos are at least as important as the text, books for blind children are usually made of just lines and pages of Braille characters (Figure 1). Accessible tactile illustrations (if available at all) are still a rare and precious treat which not many young blind readers have been given the chance to enjoy.

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In recent years, projects such as "TACTUS competition", and initiatives undertaken by individual libraries and (much more often) by individual teachers and parents, the awareness of the importance of illustrations for blind children has increased considerably, and the number of books with tactile pictures is beginning to grow. It is therefore important to ensure that alongside with availability their accessibility is given primary attention. It is extremely important to make sure that tactile illustrations are meaningful and can be interpreted (or "read") by totally blind readers, and can be a source of enjoyment rather than frustration.

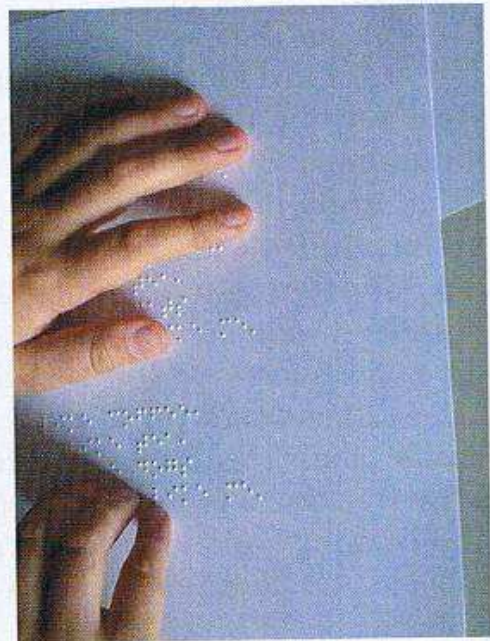


Figure 1

It is not surprising that pictures made of bits of fabrics, wood, paper and other materials or with small real objects attached to the pages are the most popular type of books with tactile illustrations. Such pictures are either easy to recognize or help by bringing “the right” associations – a bit of fur will be more readily accepted as a picture of, say, a bear than if the outline of a bear is cut out from a sheet of plastic.

Unfortunately, even such “near-real” illustrations are not free from potential danger of being totally unrecognizable. A tactile adaptation, perfectly obvious to a sighted person, may remain a mystery, or may be misinterpreted by a totally blind child, due, for example to various gaps in the child’s knowledge of the world. Worse still, an incorrectly designed adaptation (though “obvious” to a sighted person) may contribute to a mistaken picture of the world in the child’s mind. A picture showing sheep grazing under a sunny sky with a few fluffy clouds made of the same materials (wool) as the sheep, carries a serious risk of being interpreted as an illustration of “flying sheep”, and will certainly not help the child understand the concept of “a cloud”. Similarly, without proper guidance distorted proportions between items included in an illustration (for example a monstrous bee sitting on a flower) can work as another cognitive trap, with additional consequences and side effects demonstrated by fear of bees.

From the few remarks above, it becomes clear that simplicity should be one of the most important criteria in designing tactile illustrations for children who have never seen. But what is or looks simple to a sighted designer may be extremely difficult, perhaps even impossible to understand for a totally blind child.

The well known story of „Goldilocks” is a good example of how tactile illustrations can be a source of both enjoyment



but also of potential stress caused by lack of understanding of the conventions used in two-dimensional drawings – conventions difficult to avoid even in “near real” tactile picture books. For a moment we shall limit ourselves to a discussion of the furniture playing a crucial role in the story.

Designers of both adaptations shown below have decided on a side view of a table, chairs and beds, relying on the assumption that this is the most simple and the most common way of drawing objects.

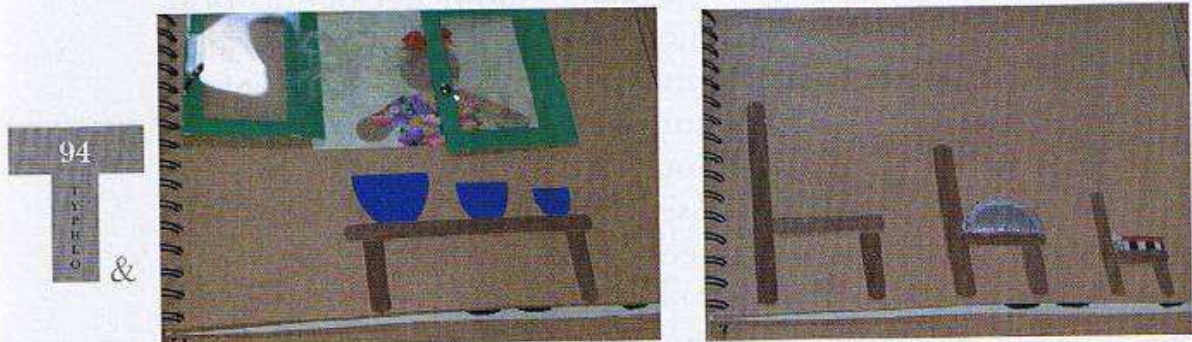


Figure 2 and Figure 3 – adaptation by M. Ballavoisine, *Les Doigts Qui Rêvent* (Fr)

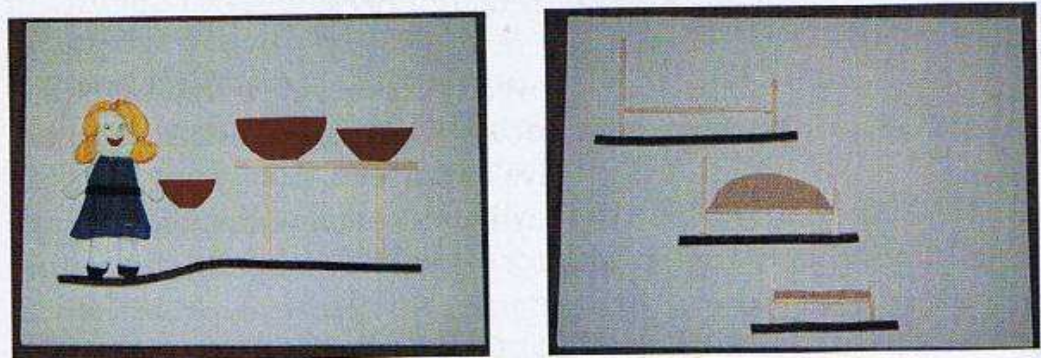


Figure 4 and Figure 5 - adaptation by Jolanta Sak-Wernicka and Wojciech Wernicki. (Pl)

The assumption is certainly correct on the condition that the blind child receives clear explanation of this particular convention of representing objects. Otherwise, the drawings of the table, the chairs and the beds will remain “just three lines”, as one blind child described the drawing shown in Figure 6 below, very different from his own drawing of a table illustrated by Figure 7 – a perfect representation of the different stages of tactile exploration of the object.



Figure 6

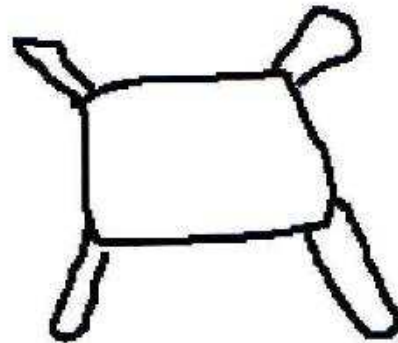


Figure 7

Drawings of familiar objects : How can three lines represent a table ?

To fully understand the problems which a person born blind may have with recognizing Figure 6 as a drawing of a table, it is enough to look at Figure 8 and the drawing of a bus made by a blind child (original source unknown). Here, too, the



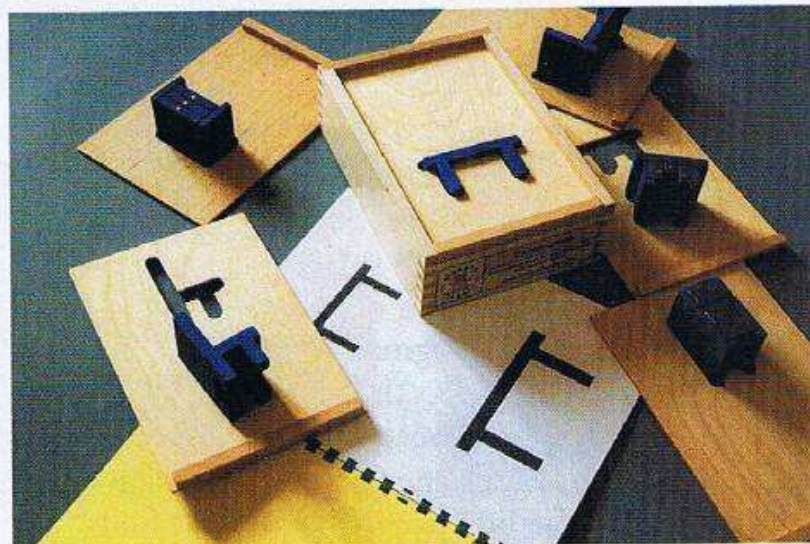
Figure 8

picture is made of just three lines – one for the step, one for the vertical pole to hold on to and one for the seat – each line showing one of the “details” of the bus, accessible to the child.

Figure 8 prompts an idea of how “sighted” conventions of drawing objects can be explained and how one can help a child born blind understand the relation between three-dimensional objects and two-dimensional graphics and the very concept of a drawing.

TRANSFOGRAPH - a tool designed for this particular purpose and described in greater detail at www.hungryfingers.com has proved extremely useful in showing why it is possible to draw a table, a bed or a chair by means of just three lines. Models of these objects inserted into a box “change” instantly into side views or projections of each item. All one needs to do is to explain that there is no need to draw all four legs of a table because those in the back “hide” behind the two table legs on the front side. A book with tactile illustrations makes it possible for the child to compare the “visible” parts of the model inserted into the box with its tactile two dimensional representation – as shown in Figure 9.

Figure 9



Explaining the conventions used in two-dimensional representations of three-dimensional objects such as a table, chair or a bed is important for helping the child recognize drawings of the same objects shown from different angles, and is crucial for building a blind child's confidence with tactile graphics in general. What one must not forget is that no matter how simple a tactile drawing looks to a sighted person, one must not assume that it will be equally obvious to someone relying solely on the sense of touch. One way to avoid possible complications is to ensure that the child knows and understands the context in which a particular drawing is to be interpreted. Models or intermediate shapes (intermediate between an object and a drawing) can be one of the ways to provide such a context. The story of "Goldilocks" and the tactile pictures of the three bears will illustrate the point we are trying to make.

Drawings of a teddy bear



Figure 10

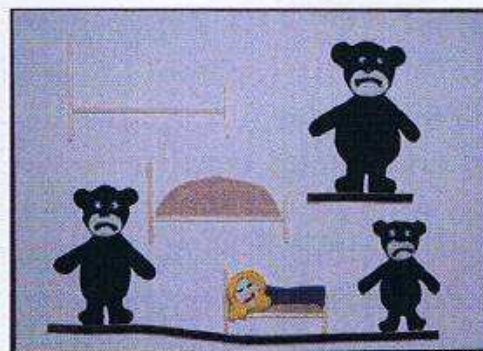


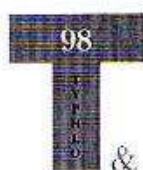
Figure 11

Figures 10 and 11 illustrate two seemingly conflicting principles followed by designers of tactile pictures:

- a. tactile pictures must be as simple as possible and free of unnecessary details.
- b. tactile pictures must resemble real objects as much as possible.

The picture in Figure 10 shows simple shapes resembling outlines of bears. With no eyes nose or mouth the shapes should perhaps be interpreted as showing the back side of each bear. Figure 11, on the other hand, shows the frontal view of each bear, with clearly discernible eyes, nose and even a “worried look” achieved by the downward curve of the mouth. The eyes made of beads, a prominent “bump” standing for the nose, a clearly felt line of the mouth and the furry fabric make these illustrations the closest one can probably get to flat intermediate shapes between a real toy and a tactile drawing of a teddy bear.

It would be difficult to say which of these two adaptations is “better”. To what extent they are meaningful depends on the experience which a totally blind reader may have had with tactile illustrations. At first glance, it seems that the adaptation shown in Figure 10 is more abstract than the one shown in Figure 11, and is therefore suitable for an experienced user of tactile pictures.



Whatever level of experience is required to interpret the pictures shown in figures 10 – 11, they are certainly a lot easier to understand than tactile graphics representing a bear. Without knowing what the drawings below represent, a blind child may find it difficult to decide which of the two shows the head of a teddy bear and which one shows a breakfast set for two persons, with two round stools pushed under the table.

Telling the child what a particular picture represents may not always be enough and will not remove all of the potential problems. A possible way to help understand a complex drawing (say, of a teddy bear) is to introduce it as a sequence of “steps”, as in the approach proposed in Hungry Fingers Listen and touch book 1 – “The title of this book is...” As the story about a teddy bear

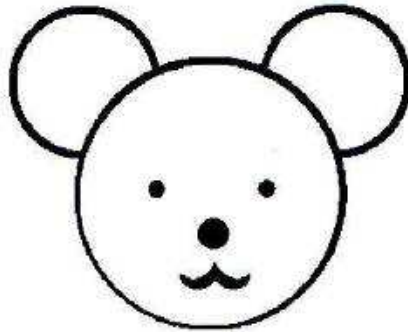


Figure 12

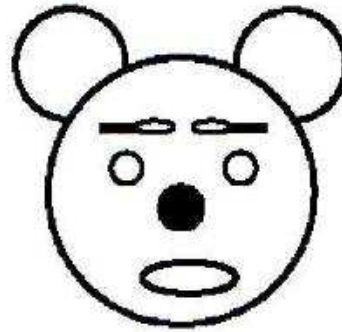


Figure 13

develops, the picture appears, with just one element added at a time. This way the child can take as much time as is needed for recognizing the head, then the head with two ears, the head with ears and eyes etc. until a complete picture of a teddy bear appears, as in Figure 14. A wooden magnetic teddy bear puzzle which comes with this educational set plays the role of an intermediate stage between the drawings and a real teddy bear.

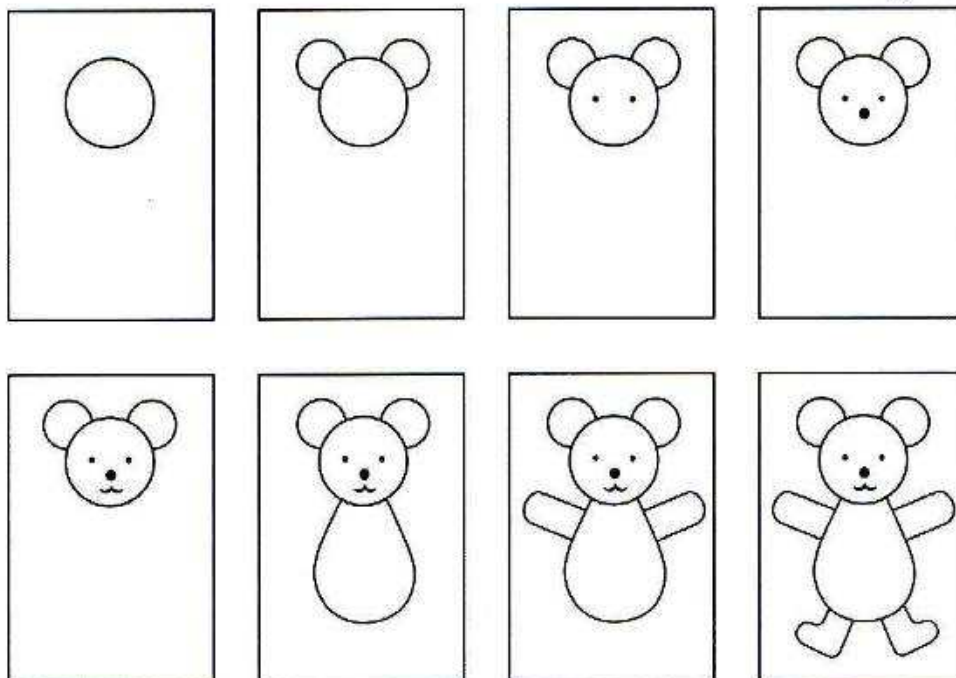
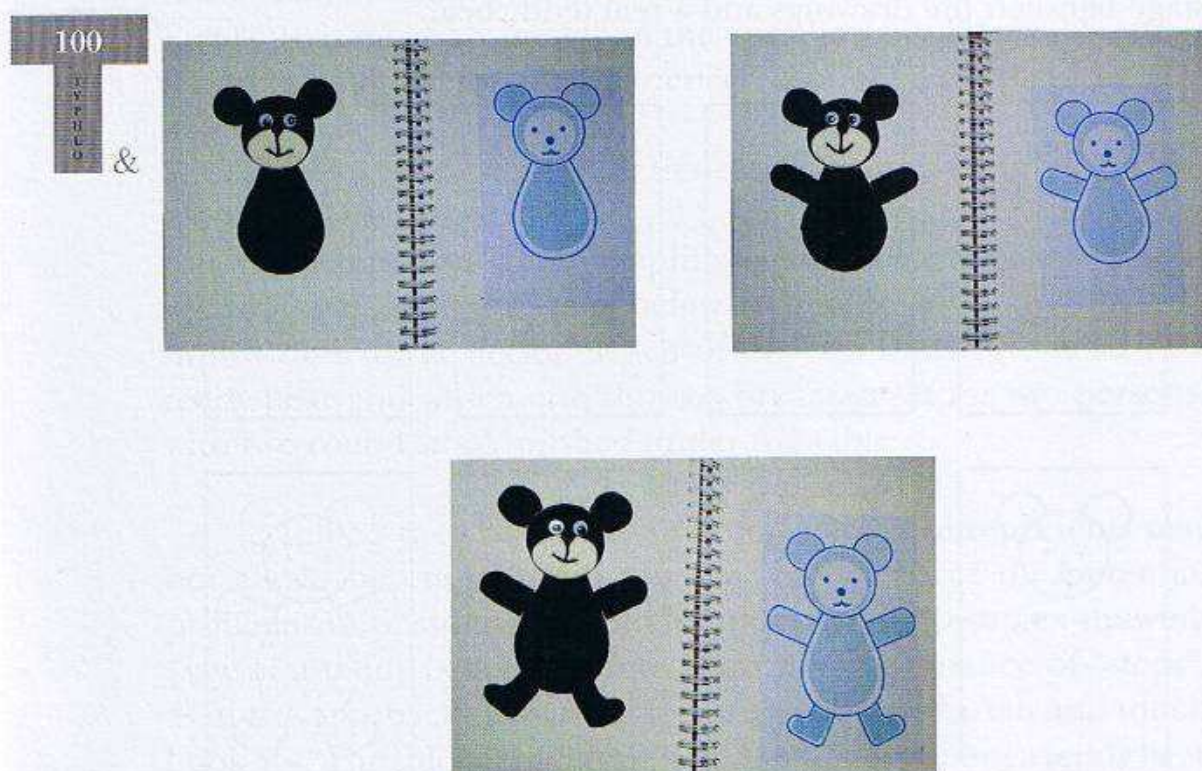


Figure 14

A similar “sequence” approach is used in “Pam, Sam and Something” – another tactile book from Hungry Fingers (fragments shown in Figure 15.). This time, alongside with a tactile drawing, a fabric-made picture of a teddy bear appears one step at a time, giving a totally blind child a chance to compare each stage of creating the two versions. Explored together with tactile drawings, the picture made of bits of fabric acquires a new important additional function – that of an intermediate stage between a real object and tactile graphics “proper”. Another version of the book (in preparation) will include two additional sequences – a wooden teddy bear puzzle and a puppet teddy – a kind of DIY teddy bear.

Figure 15

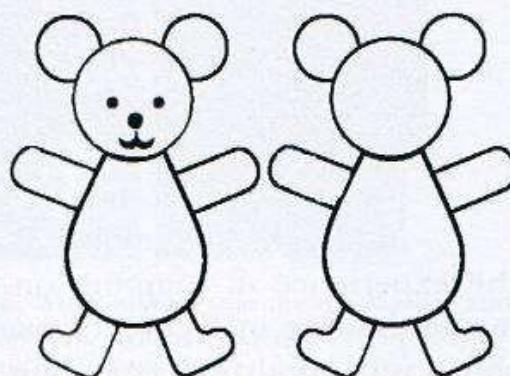


The remarks above about potential problems which a blind child may experience with pictures must not be taken as arguments against tactile illustrations. On the contrary, the importance of giving totally blind children numerous opportunities to explore tactile books will be emphasized throughout this article. It is important to remember, however, that tactile books should be carefully selected and introduced following the criterion of appropriateness and graded difficulty. Books involving a high level of abstractness must be preceded by books with illustrations requiring less extensive knowledge of the world. But the relation between the knowledge of the world and ability to understand tactile illustrations works both ways. Just as the child's experience and knowledge of the world contributes towards understanding tactile illustrations, so can drawings, diagrams and tactile picture books expand the child's understanding of new concepts. One child's problem with recognizing left and right arm, left and right leg etc. depending on someone's position relative to the child was only discovered when playing with teddy bear puzzles and tactile drawings shown below Figures 16 – 17).

Figure 16



Figure 17



The big conceptual gap in the child's knowledge of the world filled through this exercise was the child's discovery that "when people walk, they walk in the direction shown by their faces". This should not be surprising if one realizes that for someone who cannot see, the fact that people are approaching or walking away can only be determined by referring to the loudness of footsteps – either increasing or fading away.

The drawing below, "Ski jumping", provides another good argument supporting the claim that tactile illustrations can contribute towards expanding a blind person's knowledge of the world.

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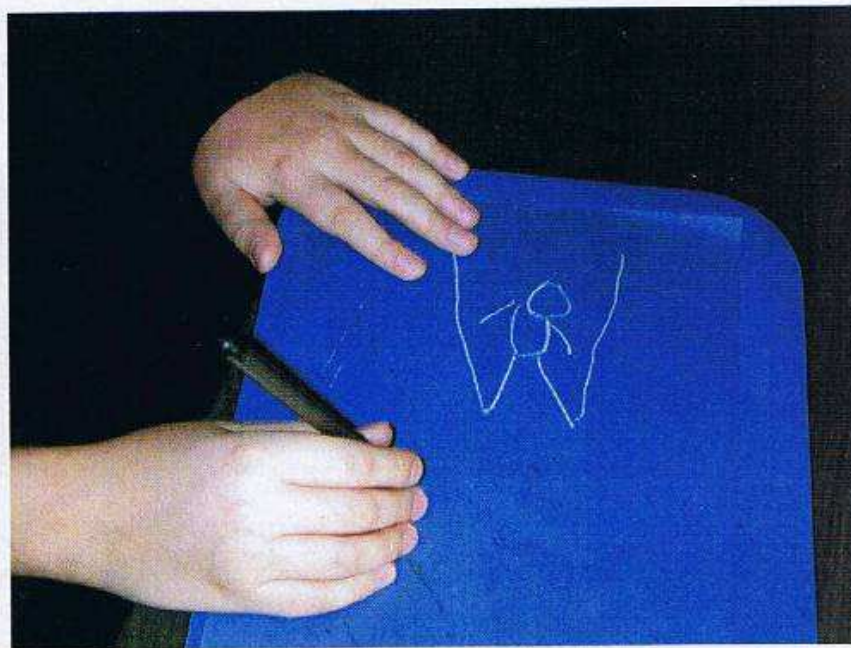


Figure 18

Although it is unlikely that a totally blind child will have the experience of jumping on an Olympic size ski jump, the tactile drawing in Figure 18 made by a congenitally blind child shows very good understanding of what a ski jump "champion"

looks like when he is up in the air. All that was needed was careful explanation supported by a series of classroom sessions involving real skis, a model of a ski jump, toy skiers and practicing all components of ski jumping in pretend play.

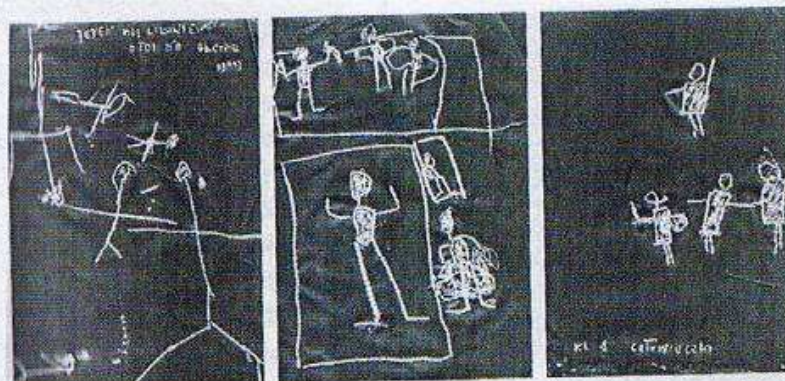
Drawings of a person

"I can only draw someone standing. I am not good at drawing people doing things."

This remark made by a totally blind child could easily be expanded to cover the difficulties connected with recognizing drawings of persons performing different activities.

Although most of the drawings in Figure 19 show frontal views of people standing, not all of them would be easy to recognize for a blind "reader" of tactile graphics other than the author. And yet the ability to recognize a particular activity shown in a tactile drawing could be of great use not only in developing blind children's mobility and independence skills but in their education in general – physical training, foreign language teaching, dance lessons or just for the pleasure of recognizing and enjoying tactile illustrations in books.

Figure 19



A. Chojecka, M. Magner, E. Szwedowska, E. Wieckowska. *Nauczanie niewidomych dzieci rysunku. Przewodnik dla nauczyciela. Towarzystwo Opieki nad Ociemniałymi*. Łaski 2008 p. 27. (Teaching blind children to draw. A guidebook for teachers.)

Two educational tools have proved particularly useful in developing this ability.



Figure 20

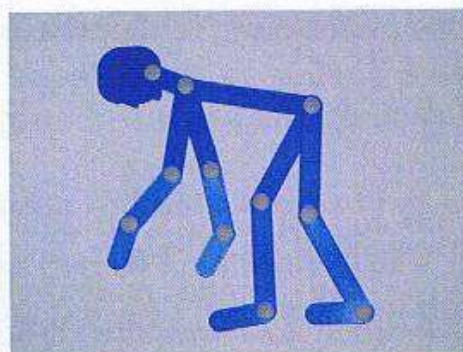


Figure 21

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Figure 22

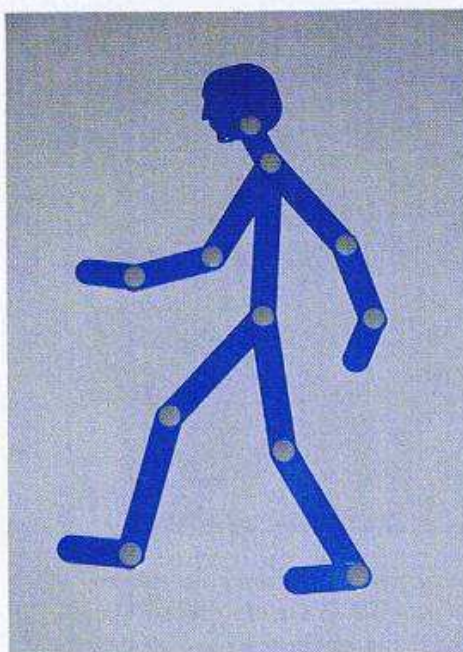
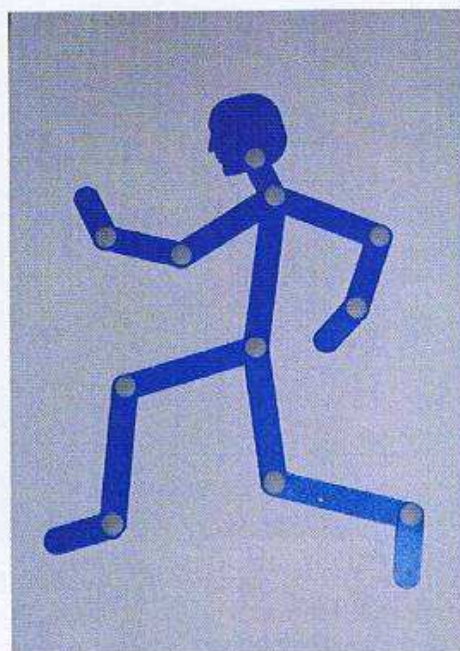
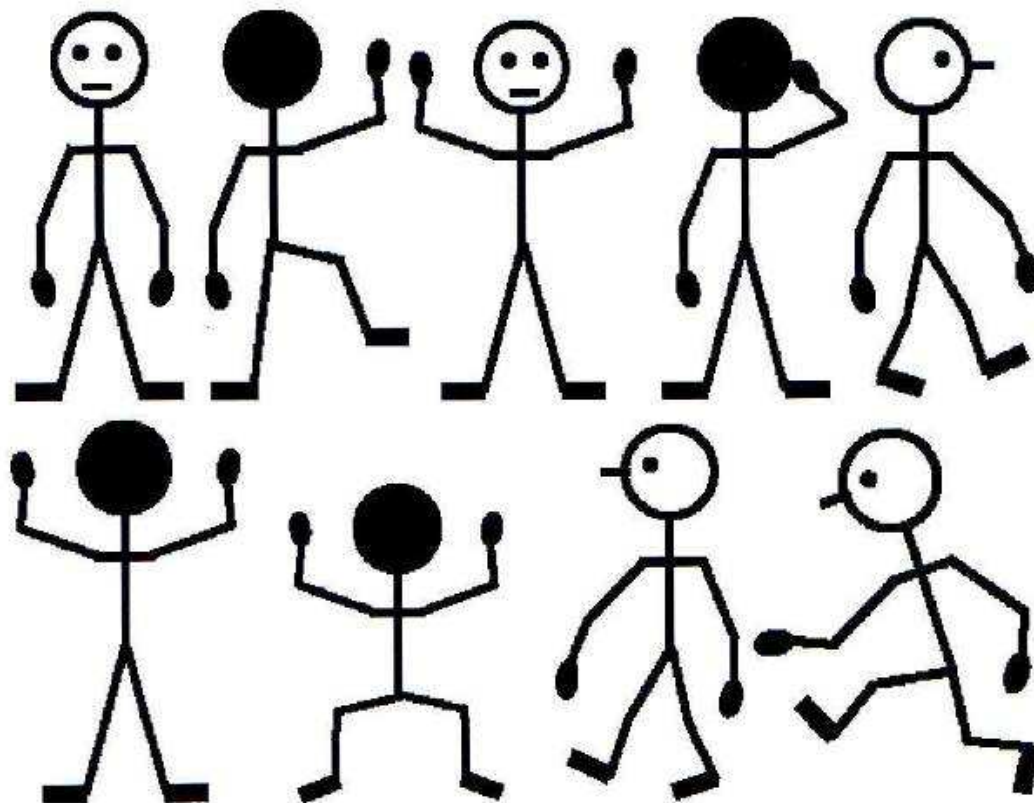


Figure 23

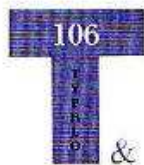


The model of a man (Figure 20) available in all art supplies shops can be “twisted” to take different positions which are easy to explore for a blind child. “Fleximan” (Figures 21 – 23) a magnetic flat stick figure from Hungry Fingers is the closest one can get to a tactile drawing of a person bending down, walking, running or performing a range of other exercises. The child’s ability to correctly identify a particular activity in a “Fleximan” or tactile drawing can be instantly checked by asking the child to perform that activity or by engaging the child in a tactile graphics game in which one must recognize, describe (and imitate) shapes of stick figures representing a person shown from different perspectives (Figure 24).

Figure 24



Although just three types of drawings were covered in this article (side view of different pieces of furniture), teddy bear and a human being), it is easy to imagine other areas of child's development and education in which tactile graphics can play an important role. For example, drawing a breakfast or lunch set for one or more persons is an ideal way to introduce a child to the concept of a map. Moving from different arrangements of cups, plates, forks and spoons to drawings of floor plans of rooms and familiar buildings allows the child to learn the meaning of "scale" and "plan" and to move in a natural way from small, easily accessible fragments of space to large areas well beyond one's reach. But before a child born blind acquires a level of confidence with tactile maps, cross-sections of plants and instruments and other diagrams, it is necessary to raise the child's interest in simple graphics and tactile pictures and to ensure that they bring joy, fun and entertainment and do not become a source of frustration.



VII

A tactile game library

Belgium

Lydia Gonzalez

A game adapted to persons with visual impairment.

Let us first of all warn you that some games accessible to persons with visual impairment are currently available on the market and that some games simply can't be adapted.

First of all, it is necessary to check whether an adaptation is feasible. The game must be analysed under various aspects:

- its content
- its rules

When this analysis meets the standards you have set, you can start listing the changes to be brought.

Then there will be tests on glues, paints, materials, colours and a model can be built. The latter will preferably be tested by several persons of various ages and visual impairments.



In our games library, we try to develop tools suited both for the blind and the visual impaired. This is not always possible. Sometimes we choose to adapt one or the other.

We also privilege durability and beautiful appearance, people being better attracted by a beautiful game. Bringing together players with or without visual impairment in leisure activities is a wonderful way to socialize and get integrated.

In the following document, we provide you with a few hints for a better outcome, knowing that a perfect adaptation is the one specially suited to an individual. Therefore be aware that these changes have been brought for a wide range of people.

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"The earth worm" game

original game



adapted game



1. Analyse the content

a. Observing the game

Some games having designs or courses that are too complicated cannot be used. Too many cards, pictures or squares will make the work difficult.

Representing “actions”, monuments, paintings, etc., in a tactile way or even through symbols is not always relevant.

Work will be easier if the game has the following features:

- A clear course (large squares)
- Contrasted colours
- Simple pictures
- Not too much in writing (Braille writing or enlarged letters cover more space than black and white writing)
- Large-sized pieces
- Objects or figures easily recognizable

Let us note that if the game has all these features from the very start, it will be accessible to some people with visual impairment.

b. Testing the rules

Beyond the appearance, one should consider the complexity of rules. To understand the objectives, one should play three full games. It will make it possible to test whether the game is fun and whether the strategies required are not too difficult to develop for a player with visual impairment. Let us not forget that playing should be a pleasure. Too many constraints will discourage most players. This is an effort that will result from a way to react that is due to blindness and that is not required for players without impairment.

2. The rules of the game

The text will be copied in Braille writing and enlarged letters. It can also be put on an audio medium.

In all cases let us not forget to mention the changes and add a little "landmark" that will include the new tactile symbols used. If colour-action matches are replaced by texture-action matches, specify the link between the three representations. The reference to colours remains important, be it is for people with or without visual impairment.

3. The game-board

a. The course



- It will be magnetized or equipped with little holes, little sticks or pieces of hook and pile tape to make sure that pieces do not fall out (they will be transformed as required).

Experience has shown that magnets gradually lose their attraction, that hook and pile tape gets easily deteriorated and that the wooden tips placed on the game-board sometimes make it difficult to explore it with the fingers. Holes in the game-board is a very good idea.

- Squares are large and their outline is clear :

- with contrasting colours (visual impaired).
- wooden or plastic tongues, wires or special markers with embossed lines (the result obtained with string and markets is not perfect).
- for checkerboard, the thickness or some squares can be modified and they can be covered with different textile materials.

b. Designs and illustrations

Depending on the situation, it will be necessary to :

- contrast colours
- darken the outlines or make them thicker
- enlarge the size
- replace the symbols with forms covered with different textures or embossings
- highlight the outline of a "subject" if its representation is meaningful (not too small, not too many details)
- add a 3-D element that can be recognized with the fingers (objects, animals, etc.)
- choose symbols for pictures that are too abstract or complicated like actions, trades, etc.
- make a clear design by removing any useless detail.

Note : It is important to submit your ideas to the people concerned before you achieve them. Very often, what seems obvious to a person with no visual impairment is not to the people impaired. They will provide you with good advice. On the other hand, the tactile exploration of the game and the explanation of the adaptations are indispensable before you use it.

c. The text

It will be copied in Braille writing and/or with enlarged letters or on an audio medium. Once again, the size of the enlargement will vary with the type of impairment.

d. Light signals

Matching sound systems will be included (different types of sounds, animal calls, daily life sounds, etc.)

4. The pieces

They will be

- equipped with a magnet, hook and pile tape, wooden tips or holes at their base.
- easy to use: provide for larger pieces if they are too small.
- easy recognized by the fingers: if the representation given by the piece (figure, fruit, etc.) is not explicit enough, use Braille landmarks, glue different textures and grooves, carve the surfaces, replace pieces with different shapes, drill holes into some pieces if the game allows it.

5. The dices

One may



- add recognition elements, as is done for the pieces.
 - make one's own dices that have to be durable and easy to move
 - buy adapted dices (different sizes, embossing).
- & They are available from many associations.

6. Cards, cardboards and notes

They can easily be recognized :

- by adding Braille writing or enlarged letters. Braille writing will sometimes be at the back of the card to keep information secret.
- with tactile pictures.
- by cutting-off one or several corners or the edges in different ways (to identify the meaning of the cards).

Plastic laminating will make them longer lasting.

Note : adapted cards do exist on the market but the codes used are not the same everywhere and are sometimes unknown to the players.

7. Game boxes

In games libraries, they will have to be durable. Laminating them will make them longer lasting. A specific technique will reinforce the corners.

Titles are in Braille writing and in large letters if required. At the back of the cover, stick a list of the content. This will make it possible for the player or the person working at the games library to check-up the content rapidly.

Some advice

- Preferably use a large table
- Avoid too large game-boards, children exploring them with their fingers are limited by their arms length. A player with visual impairment cannot see beyond a distance
- The sound environment shouldn't be too noisy
- Adapt in accordance with targeted audience
- Use heavy duty material. Hook and pile materials do not all provide the same type of sticking (sometimes too strong or not enough). Magnets do not all have the same attraction power.
- Assess rightly the effort required for the game to be adapted. This requires sometimes time and investment. Sometimes a few landmarks are enough to make the game accessible to all.
- Several forms of adaptation (Braille writing, enlarged letters, tactile materials, colours) will allow all categories of people to use it (whether with or without visual impairment).
- Wood provides a lot of advantages but requires special tools and specific training.
- Adapted games are available on the market.
- Privilege contacts with retailers who allow you to open the boxes and discover what is in them.



- Check regularly in do-it-yourself and art shops to find new products.
- Do not refuse access to a game because it hasn't been adapted. The presence of leaders or people without visual impairment may be enough to be able to play.

Conclusions

"Touche à tout", the games library of Oeuvre Nationale des Aveugles, has been adapting games since 1998. It is specific in that it continuously develops new working techniques.

Its team is composed of creative trainers with experience in socials with visually impaired people. In addition to welcoming its members, it informs any person wishing to have a practical or theoretical support in this field.

Today, there are in the library more that 400 games accessible to people with visual impairment.

It aims at providing those people with the possibility of playing and therefore living and sharing a moment of fun.

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Taboo Junior game



original game



adapted game



VIII

Italy

Ruvidino (Sandy) and other stories... A brief history of tactile graphic techniques

Anna Soldati

How important are books in the life of a child ? Think of your own experience. Have you ever given a child a picture book as a gift ? Have you ever pointed at pictures from books and commented on them with your son or daughter, grandchild, niece or nephew ? And how important were picture books in your own experience as a child ?



This experience, unfortunately, has too often been denied to visually impaired children. Until a few decades ago picture books for visually impaired children did not exist. Even after the invention of Braille, in the 19th century, and its expanded use, which opened to blind people the possibility for a broadly expanded access to education, texts made for visually impaired people still had no pictures, both because people didn't think a tactile way of experiencing pictorial representations would be useful, and also because at the time there were no efficient and cheap ways for producing pictures in a medium like Braille. Only at the end of the 19th century,

thanks to progress in research studies on the haptic sense (the process of systematic and active tactile exploration that allows blind people to know and recognize, discern and use the "objects" of a physical world), the experience of raised illustrations for the first time became possible, and in a few years evolved in new ways. A brief look at the historical development of this technology will demonstrate how this came about.

Historical methods

Vitali ink

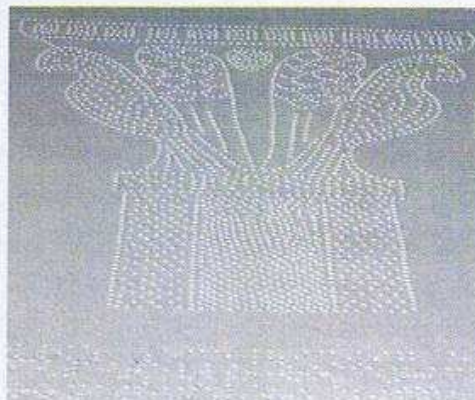
One of the first methods for the creation of suitable illustrations for the tactile pictures involved the use of a special ink that, once dried, would be raised in relief. This ink was invented by Bishop Luigi Vitali, director of the Institute of the Blind of Milan from 1876 to 1914, who first demonstrated it at the International Congress of Amsterdam in 1885. There he showed some books illustrated in this manner on geography, geometry, and astronomy. An example of the Vitali ink method of drawing is shown on the right.



Gaufrage (Blind stamp)

Sometime later, in some European countries, the gaufrage method was developed. In this case the paper is compressed, under several tons of pressure, between a «male» master and a «female» mould to create a tactile image.





Dot Drawing Technique

At the same time the dot drawing technique was being developed. It was the same technique used to print Braille texts but simply adapted to produce tactile drawings. This technique, which was used for some time, is however limited by its dependence on raised dots at fixed distances from each other which results in a low resolution image.

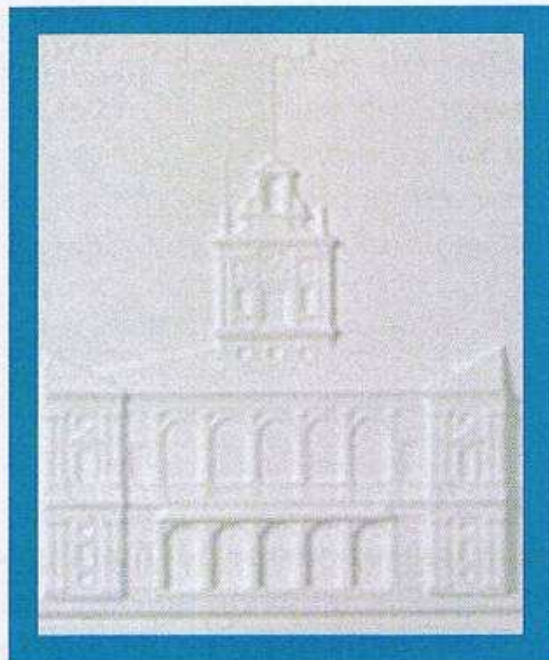
Contemporary methods

Nowadays, the specialized institutes for the creation of tactile picture books and tactile teaching materials use methods and technologies that offer tactile images that are easy and economical to produce and, above all, are greatly improved in terms of quality and content of images.

Thermoform (vacuum forming method)

This technique is considered by the experts to be the best one as it allows the realization of illustrated tables with raised areas, ranging from a few millimetres to several centimetres. In this method, the picture is printed onto a sheet of plastic.

Thermoforming is a very versatile technique and for this reason it has become widely known throughout the world. It is suitable for printing a range of numbers of copies: simple hand machines can produce a small number of copies, while more expensive and more elaborated machines can produce a large number of copies. The precision of the produced relief varies with the quality of the master and the technique used to produce it. Masters may be cut by hand, with a machine, or through computerized equipment. As mentioned before, thermoform



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can reproduce reliefs of different heights in the same drawing - from 0.5mm to a few centimetres. Thermoform's plastic moulds produce precise reliefs, especially from the more sophisticated machines.

«Minolta» Method (microcapsule paper)

In this technique, the relief is produced by the swelling of large numbers of tiny heat-sensitive capsules which have been laid onto the paper (first put on the market by Minolta). Cells which are covered by the black ink used to draw the dots, lines and surfaces of a drawing absorb heat and expand, while cells in the white background do not. The swelling of the relief is obtained by running the paper briefly through a small infrared heater. The height of the relief cannot be

varied with the Minolta method, but remains constant at about 1 mm. The profile of the relief is somewhat rounded in profile, so not very distinct. The greatest advantage of microcapsule paper, however, is the ease with which a drawing can be produced. The only equipment needed is a normal photocopier and an inexpensive heater, which is easy for anyone to use. The main effort is that of designing graphics suitable for haptic perception (and not for visual one !). For above reasons, this method is especially advisable to reproduce schematic drawings such as geometrical or topographical figures, but not effective for pictures. A simple method like this is obviously suited to in-house production and small numbers of copies. The paper is expensive and so cost per copy is high.

Children's novels in the experience of the Institute for the Blind

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In the field of tactile picture books, the Institute for the Blind of Milan has many years of experience in the methodological, educational and technical research developed first in special schools (primary and High school) and secondly, since 1975, in the activity of typhlopedagogical advice for academic institutions that promote the integration of visually impaired children and teenagers with non-impaired students. In this cooperation with "normal" schools, the comparison with the iconography daily used by sighted children in any educational activity and at different age levels, made typhlologists understand the need to improve the research and experimentation on pictures for no sighted children.

In this context the first challenge to be faced is in tactile picture books for children, as this is the field in which drafts men and illustrators spend more time and in which the gap between

choices for children who cannot see and those who can is greater.

This is how in the 70s tactile books for children were born. Books such as *At the Dinner Table*, *Tom Long-Tail*, *My Face*, *Playing with Rocks*, *My Garden* and others, are all based on characters inspired by daily life situations, include one picture for each page, and use real materials in order for the children to recognize them straight away, the picture being directly linked to actual experiences.



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This technique, called collage, has been utilized mainly by educators and teachers of visually impaired children to create extemporaneous illustrations in the context of educational activities for blind children, but it was also adopted by some books produced by the Institute of the Blind because of the great significance that this level of illustration –so realistic, lively and close to the real experience -has in the process of acquisition of the tactile ability and the development of the imagination.

Over the past few years the provision of tactile books has improved, being enriched with new stories and offering books with different levels of representation :

- From basic illustrations to more complex images, more richly detailed and with more elements
- From collage to thermoforming

Whatever the technique used in the creation of tactile books, it is important that the illustrations are planned following typhlological criteria:

- proportionated dimensions to facilitate a simultaneous tactile control (that is the space occupied by the two hands on an open book)
- thickness and texture of different surfaces
- essentiality and non-overlapping of the illustrated parts

It has to be remarked that attempts to communicate the third dimension via perspective techniques cannot normally be incorporated into tactile drawings (i.e. images to be drawn in frontal position).



The adventures of Sandy

Sandy is the character of book collection created by the typhlological team of the Institute of the Blind of Milan and it's a character represented by a small relief texture square, involved in different situations : going to the pool with his friends Spongee and Velveteen or getting on the train, playing at the gym, or going to school.

In the most recent episodes he goes on holiday to the sea or in the mountains.

Other books reproduce in a tactile version some existing children's stories and tales already published for libraries and schools such as *Il gatto con gli stivali* [Le chat botté], *Cipì...*

Some other books illustrate different subjects of interest such as *La storia della lana, del vino, del miele* (The history of wool, wine, honey), *Tra le mura del castello* (In the castle), *Dal petrolio alla plastica* (From oil to plastic).



IX

Italy

The International project Tactus

Pietro Vecchiarelli

Tactus is a European project created in order to encourage the planning, production and circulation of tactile picture books for children and to allow the countries taking part in it to share all the experiences linked to the complex realization of these special aids that are so important for the educational and social integration of the people with visual impairments.



In the Tactus project, born in 2000, institutions from 19 different European and non-European countries were involved. Besides the members countries of the project (France, Italy, Belgium, Finland, Holland, Poland, Germany, Great Britain), several partners and guests have taken part in the many promotional activities and highly specialised workshops that have taken place throughout Europe.

The main focus of the Tactus project has been the annual competition, organised in Dijon, in which every citizen or association can take part in the creation of a handmade prototype of a tactile picture book for children.

Every year a jury, consisting of 50% sighted and 50% visually impaired persons, has given a prize to two or three of the many prototypes received from the participants. These titles were then produced in series by LDQR (Les Doigts Qui Rêvent, France), a publishing company specialising in illustrated tactile books; the books were published in the different languages of each of the countries participating in the project. Every country then distributed and sold the copies within its territory at a special price.

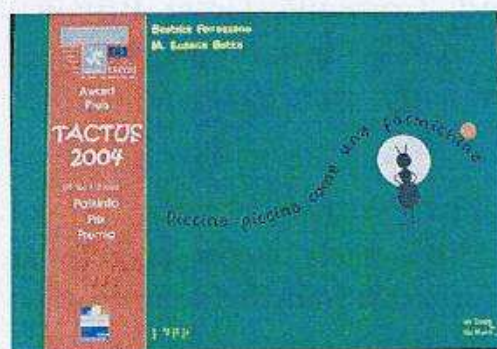
The National Federation of the Institutions for the Blind was responsible for the project in Italy and made use of the collaboration of the Institute of the Blind of Milan and the Foundation Robert Hollman, both also actively participating as members of the jury and of the technical and plenary annual meetings.

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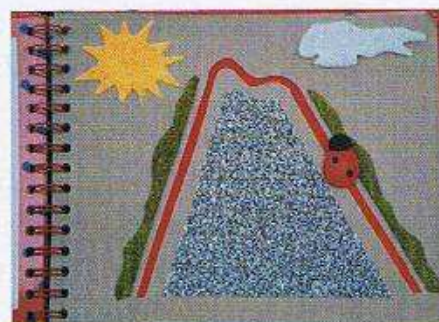
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In the 8 years of activity of the Tactus team, among the 521 patterns received for the competition coming from all of the European countries, over 60 of them have been sent from our country, showing that Italy can greet the challenge enthusiastically. Also, of the awarded 16 books 4 of them came from Italy.

Little as an ant, by the typhlogologist Beatrice Ferrazzano (2004, category 6-12 years)



Ladybird go to the mountain, Tiziana Matachetti (2004, category 0-5)





Too much order and too much disorder (2005, category "open")



Heart of stone by the Roman illustrator Mauro L. Evangelista (2007, category "open")

These acknowledgments highlighted the high artistic and typhlological level of our authors, most of whom have engaged for the first time in the creation of these special books.

In these last 8 years of the project and the 7600 tactile books produced in 7 languages, 1200 were those translated and distributed in Italy.

Italy has organized and chaired several initiatives to the purpose of promoting the Tactus project. Among these initiatives there are:

- The participation to the fair Docet (Bologna) Italia;
- The organization of promotional events on the subjects of blindness and tactile publishing industry in some Italian public libraries ("See you at the library");
- The organization of workshops of the Library Sala Borsa in Bologna in 2007;
- Several workshops on the tactile publishing industry in schools of different rankings;

After the success that tactile books (TiB) have had among families, students and specialists in the field, and following the example of Tactus books, the National Federation of the Institutions for the blind began producing its new collection of books

called "It's your turn" in its Centre of creational production of the educational material.

The main feature of the collection "It's your turn" is specifically created to make it possible for even visually impaired children to own a book and glance through it, a book in which images are in relief and recognisable at the touch. The features of this product also allow the interaction/integration between visually impaired adults and children.

TiB products have the following features:

- The presence of tactile illustrations made using different textures linked to a text;
- The presence of a double font, black and Braille. The text in black, in large print, also allows partially sighted children to read. The Braille printed on transparent PVC is placed on top of the black text so that the book can be read by sighted and no sighted persons in the same way;
- A spiral binding that allows a full opening of the book in order to facilitate the reading of the text and of the tactile illustrations at the same time;
- The use in the illustrations of real objects, the simplicity of the chosen shapes and the type of textures used are bound to the daily life experiences, helping in the haptical analysis of the images. The contrast in the colours used also helps partially sighted children understand the text;
- The typographical format makes these books captivating and easy to use also to sighted children, therefore allowing them to enjoy the books also with their family



and friends. An aid in understanding the tactile pictures is always required in order to stimulate the child's imagination, to avoid an improper use of the images and finally to share the pleasure of reading with her/him.

The first titles in the collection "It's your turn" are:



Gaia and the sea (it)
by Costanza Longo

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Lino the caterpillar (it)
by Tiziana Mantacheti



Wind blow (it)
by Elisa Lodolo,
Co-edition with
Les Doigts Qui Rêvent.



Giorgetto the changing colour pet
(Fr) by Claudette Kraemer (re-
print of the Tactus Prize 2000)
Co-edition with
Les Doigts Qui Rêvent.



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Germany

Raising awareness of the need of tactile books

Anja Strobach

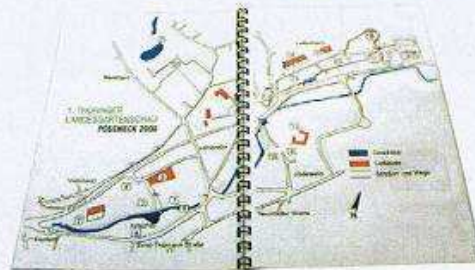
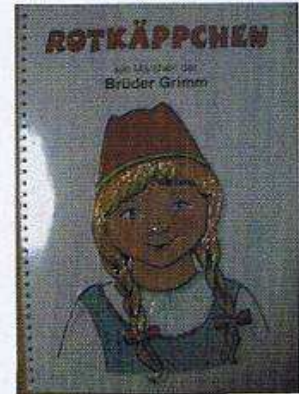
When raising awareness of the need of tactile books, each country has to find its own method, way. The situation regarding tactile books in Lithuania for example might not be the same as in Italy or France : each country has to find out how it can sensitise its people.



This is about how we did it in Germany.

Grenzenlos is a non-profit-making, subsidiary company of the Association for the Disabled in Erfurt. Being an integration firm, we primarily employ handicapped people as well as people with social needs.

An important part of the company is the Publishing and Printing House for the Blind and Visually Impaired, which supports people affected to live independently by producing tactile orientation guides, books, calendars, greeting cards etc., in Braille and large print.



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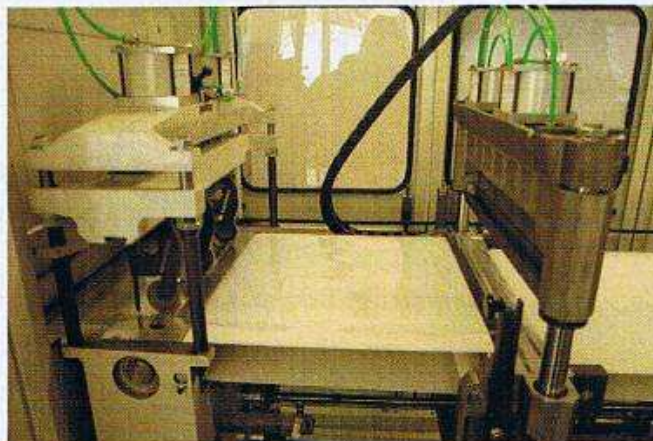
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Put in a few words, our products consist of pictures and texts (large print) covered with a tactile relief and Braille printed on transparent films.



The thermoforming machine we use is called "SB 74E". We use transparent films (PVC films with a width of 53 cm), one roll has a length of about 380 m and a thickness of 150 µ.

The tactile drafts (pictures and Braille texts) are put on the workbench of the machine. When the transparent film is pulled over the tactile drafts, it gets heated (about 500 °C). Because of this low pressure, the PVC film pulls directly on the drafts – for each tactile draft, a relief develops from this procedure. A compressor cools the relief off, which separates now from the drafts. The PVC film is carried on and gets cut, depending on the format/size of the book, calendar etc.. Once the transparent film pages are folded, the coloured or black/white prints are inserted. Last but not least, the pages get punched and bound (ring binding), and the book/calendar is done.



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By using this technique, everybody can read and look at our products, no matter if the person is sighted or not. Furthermore, the book is easy to handle and hard to destroy/smash up. If a page gets dirty, it could easily be cleaned, and therefore books, calendars etc.. made of this technique can be used for years !

Nevertheless, we have decided to join the Typhlo & Tactus project in order to add different kind of books to our range and therefore give German children affected the possibility to discover a totally new type of tactile books !

Germany has been a Typhlo & Tactus member since 2003, but wasn't as active as every member should be at that time. When I joined Grenzenlos in December 2004, the responsibility of the project "changed hands" and I was (and still am) in charge of T&T. The aim was to sensitise the public for the need of tactile illustrated books, to inform interested people about T&T and, last but not least, to call for entries.

At first, we got a general idea of the situation in Germany and found out that age-appropriate tactile books are hard to find. Specialist libraries, for example in Leipzig and Marburg, lend books for free, but mostly these books are just texts in Braille. Some books include pictures as well, but they are only a plastic or thermoform relief and not illustrated with different material. So for children who are just beginning to explore their imagination, tactile illustrated books are very important. Some organisations and schools for the Blind produce books for their own purposes, but their quality is far away from the one of T&T books. The German public wasn't sensitised at all about this topic.



Secondly, we set up a data base with relevant addresses – schools, organisations and associations, governmental institutions, early intervention centres, training centres, universities with courses for the blind and visually impaired, art and design classes etc..

We prepared a brochure which informed about the background of T&T and the rules for making a tactile book. Together with the 2004 poster, it was sent out to more than 200 addresses of the data base. Both were also handed out within our participation at important exhibitions, for example the education exhibition "Didacta" in February, "Leipzig book fair" in March, "Sight City" in May and "ICEVI" in August 2005.

Furthermore, we contacted regional social organisations (e.g. the ministry of education in Thuringia) and asked for their support regarding promotion of the project.

Heidi Hasse, our new colleague for public relations, joined Grenzenlos in April 2005 and sent press releases to relevant magazines for the Blind and VI (like "Gegenwart") as well as for the Disabled, to regional and national daily newspapers, to specialized web sites, regional TVstations etc..

We organised a press conference in April in Erfurt, where we officially started the competition in Germany, together with Connie Maaß, president of the Erfurt Association for the Blind and Visually Impaired.

In May, we organised a workshop about "How to make a tactile illustrated book" (presented by Bob Marek) for people interested in the topic. About 20 participants came, and learned a lot. This was a very successful event, as some participants sent in entries some months later.

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Some 2005 entries



Of course, it was necessary to include all information about T&T as well as the registration form on our web site –many people used the possibility to down load it. This made us very proud, and so we decided to

organise another workshop. This time, it was for the people who actually had sent books to us. During this day, we got to know the participants in person, asked them to introduce their books and to talk about their motivation. It was also a possibility for all of us to exchange experiences – what was the difficult part in the book-making-process, what was easy etc.. The local press partly reported about this event and raised awareness to this topic again.

In Dijon, we were very surprised and proud that one of our entries even was awarded in one category – “Das Huhn Alberta” [Alberta the Hen] by Annett Giebichenstein from Erfurt. This encouraged us afterwards to present “our” winner and the results to the local press.

After the successful year of 2005, we generally did the same in 2006: Mailing a modified call for entries, the rules and registration form to relevant addresses from the data base and 2005 participants, press releases and articles on web sites etc..

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We set up a cooperation with the German National Association for the Blind (DBSV), who helped us to inform its members about T&T and organised blind members who supported us during press conferences (like the one at Leipzig book fair, where we also



presented Annett, the 2005 winner - and the judging session in Dijon.

A. Giebichenstein here at the centre, is V.I

On request, we presented T&T in a school class and encouraged the pupils to create their own tactile books for the competition – at the end, they have sent in 4 entries.



We participated at an integrational book event for children where we exhibited T&T books, talked about the competition, and were supported by the young blind girl Lisa who explained the Braille-Abc to the sighted children and talked about her life, being a blind teenager.

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Furthermore, we exhibited T&T books during days of open doors at schools for the Blind and Visually Impaired, e.g. at Schloss Schule Ilvesheim.



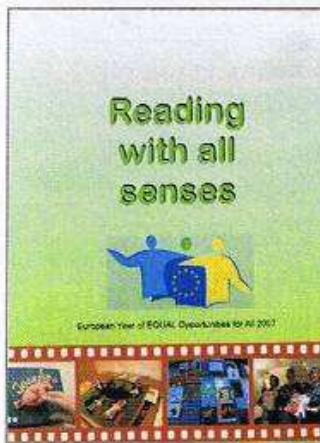
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After the deadline in September 2006, we organised a German competition with a competent jury and awarded the best German entries. Again, the local press was very interested in the results.



We followed the same procedure in 2007, and cooperated again with Connie Maaß (Erfurt Association for the Blind and VI), the young blind girl Lisa Schmidt, the school for the Blind and VI in Weimar etc..

Furthermore, Grenzenlos produced a documentary about our participation in T&T as one of the German contributions to the "Year of equal opportunities for everybody 2007". This movie also contributes a lot to raise awareness to the topic, in Germany as well as in Europe.



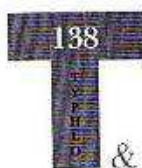
DVD from Heidi & Wolfgang Hasse, produced by SITECO realmultimedia.

Generally, it is important to get a general idea of the situation in the country. Does the public and people affected know about tactile books? How are they designed, are they appropriate for young children, and is there a great demand for these books? Is the public sensitised of the topic 'Blindness/Visual Impairment'? What possibilities do I have to inform people about T&T?

Furthermore, it helps a lot to get support from relevant organisations and institutions for information, promotion etc.. If possible, use all kinds of media for public relations.

And last but not least, try to get support from people affected – children, parents, teachers, friends etc., who know what they talk about, why tactile books are so important for blind and visually impaired children!

We are very grateful that, with our membership in T&T, we could help to reduce the lack of tactile illustrated books in Germany a bit, to sensitise the public, that we could encourage people to make beautiful books, and, most important, that we could inspire blind/visually impaired children to read books and activate all their senses!



Part II

Typhlo & Tactus Working Partners



Culture 2000 Program

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XI

Czech Republic

“Books in Boxes” and glued objects

Jana Vachulová

These are all the first books intended for very young blind children – meaning those who are already able to listen attentively but can not yet read or use relief pictures.

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Once parents start to tell stories to their children they should also start developing their touch from the very early age.

This is the first step: we encourage parents and their children to collect objects that have connection with everyday situations



(for example a pebble picked up on a walk, a lid from a pot of fruit compote the child ate in the afternoon etc..) and keep them carefully in a special box or basket.

In the evening parents can talk with their children about things that happened during that day, using the objects to help the child to remember

and also to develop his touch. Like this the child learns to identify an object as a symbol of some situation, activity, experience.

The next step, half way between real three dimensional objects and the same objects represented as a relief picture, consists of gluing the real object to a piece of cardboard. If the child can not move and manipulate the object, make its typical sound with it, it becomes hard or impossible to recognise the object at first (for example scissors, a peg etc..).



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To talk about a week spend at grandmother's it's possible to create a kind of a diary in a shape of a book with objects glued inside.



It requires a large number of pictures made with glued objects to develop in the child the ability to recognise **JUST A LITTLE** the real relief pictures (having the same shape like real

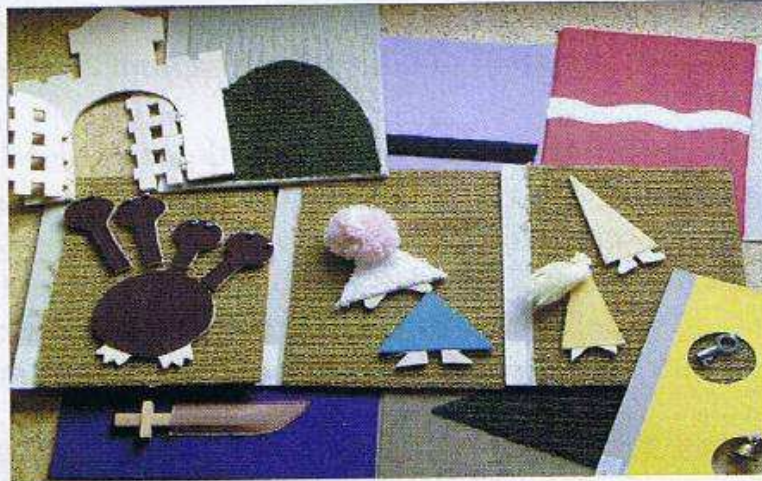
objects, but made of paper, plastic etc.. But in my opinion these relief pictures are not at all suitable for pre-school children).

At the same time parents can start with reading of fairytales. For each story they can create a bag of objects corresponding to the story (for example for *The Little Red Cap*: a doll representing the Little Red Cap, a piece of furry fabric for the wolf, a pine cone for the forest etc... While listening to the story, the child can manipulate with the objects, imitate the characters, etc...



The next step is the already mentioned "book in the box". The pages are not bound which allows children to take only one page at a time. Attention span of young children is very short and they become easily distracted, but this way they can concentrate on just the part of the story they are listening to right now.

This is also the reason why I put pictures only on the front side of the page, not on the back, like in the "book in the box" *The Two Princes*.



I would like to mention that the back side of the pictures needs to be smooth without any tactile details that could disturb child's tactile perception. The books in boxes allow to glue relatively massive real objects that are more clear and easy to recognise for even a very young children – this is a big advantage of this kind of books.

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With the youngest ones it is recommended to start with just a small number of pages and then to enrich the story gradually with new objects. (But attention, some children tend to be very “conservative” at this age). The relief shapes should be very simple in the first books intended for very young children. I'm confident that the shapes of the first objects drawn by sighted children (the Sun, a house, a tree, a face) are acquired symbols. The child does not invent them, he learns them. This is why in my stories I use basic geometric shapes like circle or triangle, and some first symbols: a house, a flower...

While creating the stories we need of course to use imagination, but still it is very important to pay close attention to the tactile effect of the final product. We should not let ourselves to be derived by the visual aspect, however nice. At the same time it's necessary to use colours and contrasts suitable for children

with some residual vision, and attractive for sighted children of the same age – brothers and sisters etc..

Most of modern toys allow children to manipulate them in many different ways. Motivated by action, all the manipulations in the books in boxes are connected to the story and pull the child into the imaginary world. Children often identify with the heroes of the story – for example while cutting off dragon's heads.



Every book in the box needs to be not only resistant to endure everyday manipulation, but also easily reparable in case of damage. Sewing and gluing are the most frequent techniques of production of those books. The materials used would be mostly fabric and paper. While the story is told, the movable figures pass from one page to another, attached by Velcro. The book has page numbers in Braille, although children can not yet read it. We proceed from the fact that sighted children are in similar situation: picture books are often accompanied by printed words, which, although meant to be read aloud by an adult, attract attention of the young child from the very beginning, showing him reading as a new skill that he too will learn when he grows up.

It's hard to imagine that a sighted child would encounter writing for the first time in his life only after starting school. Blind children are exactly in this situation because Braille writing is not present in their everyday life and often unfortunately even their parents do not know it. It is then not surprising that blind people often resort to talking books that can not replace Braille books because they do not help to acquire the skill of reading and writing.

It is advisable that all books for pre-school children are accompanied by complete text in Braille corresponding to large printed letters. Blind children will be in contact with written text and at the same time these books may be used by blind parents who also want to read a bed time stories to their children.



“Book in the box” is only one of many ways and the impact it will have on the child always depends on capacity and imagination of his parents or teachers.



XII

New Zealand

Collage picture books

Robin Nation

Why use collage ?

All children have the right to engage in the learning process, access the regular curriculum at early childhood and school levels and develop skills alongside their sighted peers. Pictures and books play an important role in education for all learners from an early age. Vision is assumed as the primary sense for acquiring knowledge and skills in today's world. The educational settings children find themselves in, whether at early childhood or school level, are full of visual images.

Children who are blind or low vision are unable to avail themselves of quality visual information and yet they are very capable of learning and have a right to access. From birth the infant who is blind or low vision needs to be encouraged and reinforced for using their other senses to gather the information they require if they are to develop skills and knowledge alongside their sighted peers. The Resource Teacher Vision has the role of advising parents and other educators in this area.

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There are many avenues for learning concepts and skills including hands on experiences, models (moving and static), auditory such as tapes, and talk. The most powerful of all is the first hand experience. Nothing can quite capture the experience of the beach like the smell of the sea, the texture of the sand between your toes, the sound of the waves crashing on the stones the way in which a trip to the beach can. But life and learning cannot always take place with the real experience or object at hand. At times it is necessary to bring the world to the child.

As well as concept development the child needs to develop fine motor skills, tactile search patterns and enhanced levels of tactile sensitivity if they are to become effective at gathering tactile information.

Collage is one tool which parents and educators have adopted to bring experiences to the child. Use of collage is wide spread not only within New Zealand but across the developed world. The addition of strong colours and outlines to collage illustrations provides additional information for the learner with

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low vision.

Collage illustrations are frequently used:

- When the user cannot access print
- When the user has some tactual ability
- When the real life object is unavailable
- When the shape, form or pattern is important
- As a reference or as a reminder (www.nctd.org.uk, 2003)

It should be acknowledged that at this time no formal study has been taken within New Zealand to determine the actual impact of collage illustrations. The reasons people give for using this medium are varied but some common threads across parents,

specialist educators and collage producers have been identified in a survey asking for reasons why collage would be used. Some of their responses are listed below:

Interest

- To promote interest in books/stories, leading on to the development of reading skills.
- As motivation to read
- Collage creates interest
- To provide a stimulating introduction to touch experiences
- Collage illustrates the book, thus the child relates to the story

Skills Capacities

- To encourage hand movements
- To provide tactile input to assist visual clarification
- To increase sensory information, tactile & visual
- To aid understanding of print and graphics
- To develop comprehension of Braille text
- As an aid to social interaction with peers

Cues Indices

- To give a cue about the text
- As cues to support concept development
- To provide a tactile clue of interest words – aiding discussion

Pleasure

- For enjoyment
- For the child's enjoyment of a story
- To make books attractive to other children & family members and last but far from least - Equality to sighted peers.

Before using actual books potential Braille users benefit

from early experiences that assist them to develop:

- Awareness of tactile experiences
- Attention to a tactile experience
- Purposeful search by touch
- Recognition of objects by touch
- An understanding of the use of objects by touch

(Vision and Doing Scottish Sensory Centre – www.ssc.uk.org)

A collage page or book can be a stepping stone between the three dimensional or real world / real objects and the two dimensional abstract world of words in books. Collage activities and books are not intended to be presented in isolation. Parents and other educators will support the child in accessing the material and provide other experiences to introduce, reinforce and add to the child's understanding.

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What is produced ?

You will see from the range of examples presented that there is great potential for being creative in addressing the needs of the learner. However you will also note that each of the examples follow the five's documented by Marion Ripley (2002).

Teachers tell us that books for young children must be:

SIMPLE, SHORT, SAFE, STURDY and STIMULATING.

Pegboard Books

The Pegboard Book helps to develop early literacy skills such as turning pages, touching and identifying pictures, and real objects. It is especially useful for students who have limited fine



motor skills. The Pegboard Book can be set up with objects, which are attached by elastic, e.g. real objects such as spoons, keys, cups, plate's etceteras. The Pegboard Book can also be set up as a Tactile/Auditory experience with interchangeable velcro boards attached to each page. The Pegboard Book sits well on a Standing Frame or a Wheelchair Tray. They are a sturdy, durable resource.

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Lilli Nielsen's Little Room

Children with a visual impairment need to learn through specific individual development programmes. These programmes often need to be supported by the use of specific equipment, which promotes vital early learning and development. Often young children who have impaired vision and/or other disabilities are unaware of toys or objects away from their body space, depriving them of the opportunities to spontaneously interact with, and learn through meaningful motoric movements and repetitive playful exploration. Ways of interacting with relevant everyday objects have to be facilitated to foster such learning. Through the use of a "S.O.A.P. Box" children begin to learn about space the toys/objects in this space and their properties and values.



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Providing a Little Room with a variety of changeable objects suspended from the clear top promotes this. The objects need to be visually and tactually stimulating, produce sound that provides the opportunity to experiment with manipulation and develop object permanence. Children also need to be able to compare the contrast factors such as shape, size, and texture, as well as being encouraged to reach and grasp. The Little Room provides the opportunity to interact with everyday objects within a defined consistent space. The sides of the Little Room are visually and tactually motivating. A child who makes an accidental gross movement will come in contact with these various textures, also helping develop awareness of space around them.

Book Bags and Boxes

Books are carefully analyzed keeping in mind the student's experiential base. Specific objects are chosen that relate to the story. The objects support concept development and can also be used to plan and provide supportive activities to increase the students understanding of the book. They can be made in either a bag or a box as illustrated.



Book Bags and Boxes



Moon Resources



Moon Alphabet

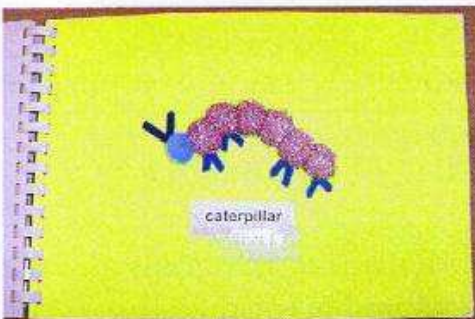


Moon Flash Cards

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Pictures books



Guidelines for production

Who Decides What is to be Produced ?

Collage is produced to support children's access, and to achieve appropriate goals set in the curricula. The key person therefore is the Resource Teacher Vision (RTV) who is trained in supporting the infant, child and young person who is blind or low vision. However, the process of developing collage is truly one which involves team work. Although the collage producer will primarily be working with the RTV, they in turn will have drawn on both their own specialist expertise and the knowledge of the child's Individual Education Plan (IEP) team who are involved in the education of the learner. This team can be drawn from parents, whanau (family) and a wide range of regular and specialist educators and therapists. The response of the child is also critical in informing the team on the effectiveness of the resource. The RTV will work with the team to identify the goals to be achieved by the learner and the resources required to assist them in achieving those goals. They will in turn approach the local producer to develop and supply these resources.

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Who Produces Collage Resources ?

The production process also involves a range of people and organizations including:

-Collage producers

.There are a number of collage producers working in a paid or voluntary capacity across the country;

-Homai Special Format Librarian

.This librarian has a pivotal role in identifying materials already available or previously produced in accessible formats;

Accessible Formats Production Team at RNZFB Auckland

Can supply text files and tactile diagrams

Employ a fulltime collage producer who develops books for the library based at the national school;

Proof readers

Read through large print material and Braille material checking it against the original print version. They are essential in main training a high level of accuracy;

Braillists

Produce Braille and require certification at either Proficiency or Transcriber Level if they are to have confidence in their ability to produce Braille beyond that of Grade One. Many collage producers are also braillists.

RTV

Resource Teachers Vision frequently produce accessible formats on the spot as part of their day to day teaching practice.



Points For Consideration

Is it to be Produced for an Individual
or
is it to be Recycled?

If a resource is to be produced as a specific teaching aid for an individual learner then it is likely that the resource will target very individual requirements and preferences of that learner. Font size can be produced specific to the individual's preference. Frequently resources such as this are produced as throw away items with less time and resource invested in the products as they need only survive the interest of the one learner.

In saying this there are some resources that, although produced for an individual, may have to sustain some very tough usage and therefore quality materials and construction will be essential.

If the resource produced is to be recycled for use with other learners then it is worth spending time and effort to produce a long lasting collage illustration that can be recycled long after the Braille or large print has been renewed. It is also logical to invest in stronger quality card and to use a standard font which is accessible to a wider range of learners.

Throughout the development process it is essential that the collage producer liaise closely with the RTV to ensure the resource that is developed meets the learner's requirements, as specified by the RTV. It is possible to produce a beautiful resource which does not address the intended learning outcome.

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What is the Learner's Degree of Vision Loss

It is important that the collage producer is aware of the degree of vision loss of the intended users of the resource as there may be different considerations if developing a resource for learners with some useful residual vision or for use by both blind and low vision learners.

When is it Required By?

When is the resource required by? If a child receives a resource after the rest of the class is finished with it, it may never be used, and it will not matter that it was of the highest quality and very well thought out. When a quick turn around is required it will be necessary to work closely with the RTV to determine what is absolutely essential to ensure a timely and relevant quality learning tool. This is the time in which 'quick cues' may be the most efficient illustrations. A number of these types of cues are highlighted on the CD.

Can You Identify the Costs?

During the development of a resource it is easy to expend several hours, take the time to discuss with the RTV the time it is anticipated to take to produce so that labour costs can be considered alongside the material costs involved. This can assist in setting realistic plans for resource development and also helps advise the centre of the amount of funds needed for the development of accessible format materials. When identifying costs, consider all factors, it is possible to develop false economies by funding extra labour to avoid the cost of a more expensive glue, tape or cover.

Fonts

It is critical that fonts selected should be clear and easily read. Arial, Century Gothic and Comic Sans are the three most popular fonts. For younger readers N30 font size is a typically produced font. Samples can be found in the first sample book.

Braille

Braille can be produced as either Contracted (Grade 2) or Uncontracted (Grade 1) Braille. Qualifications at Proficiency or Transcribers level are available to those whose responsibility it is to produce Braille. Uncontracted Braille tends to be used with the learner who is at an earlier level of development. Teachers across New Zealand use either Contracted or Uncontracted Braille with learners. Frequently teachers choose to use Uncontracted Braille with limited punctuation. It is recommended that this grade of Braille, for use with children, should only incorporate the following punctuation signs:

- The single capital sign -Fullstop -Comma
- Number sign -Question Mark

Text should be double spaced, single sided with one space between words. For further information please refer to the resources section of this text.

Contracted Braille

If a learner is learning through contracted Braille they are generally exposed to the entire Braille code with full punctuation as it appears in the print version.

Transition from Uncontracted to Contracted Braille

It is generally accepted that if a learner commences with uncontracted Braille with limited punctuation it can be anticipated that they will have progressed to contracted Braille by the time that they are fluent readers.

The RTV has the responsibility of overseeing the reading programme and teaching reading to the Braille user. In this role they will have planned and implemented a programme to introduce the Braille contractions to the reader.

Line Spacing



To ensure that lines of Braille can be interspersed with print ensure that Braille is double spaced and line spacing on the computer is set at 57.5. Further information can be found in the Sample Book-Techniques.

Size of the Book

Give consideration to what:

- Is accessible and manageable for the size of the learner;
- Other children have the opportunity to experience, books do come in all shapes and sizes;
- Degree an alternative shape can provide a tactual cue for the child e.g. a round book for a book about circles etc..

Page Layout

Always ensure that enough space has been allowed for binding. It is recommended that either the fold of the book's spine is scored, if stapling, or the holes are punched on the binder prior to commencing work on the page.

How it Feels - Not How it Looks

Interpreting a picture by touch is a very different experience than viewing it. This sounds obvious but sighted people, when producing collage, will be constantly drawn to make something look good and that can come at the expense of the tactile experience for the child. It is important to remember that collage illustrations are often not:

- Exact replicas of the original illustration
- Good for depicting detail
- Good without training
- Good without support materials (www.nctd.org.uk, 2003)

Collage producers are primarily in the business of producing resources to be felt not to be viewed. The ultimate test is through finger tips. No matter how experienced a collage producer becomes it is useful to experience an unknown illustration under blindfold. The experience will help people to reflect on the usefulness of the images they are producing. Expose yourselves to the comments of children who are using the resources, they will provide you with valuable feedback.

The accompanying sample books provide detailed demonstrations of production techniques and materials to use as a guide for collage production.

Safety

While resources are recommended to be used under adult supervision, collage producers need to be working to the highest safety standards. The sample and exemplar books provide further information and detail around production techniques.

Fund Raising

The reality for all Visual and Sensory Resource Centres as well as the RNZFB is that Accessible Format Production is subsidised

heavily by the charity dollar and the donation of tangible resources such as materials, cards, glues and labour.

Collage producers have realised that many resources can be discovered in the community by raising awareness of their work through activities such as public speaking.

Collage Picture Books

A young child's experiences with collage illustrations will lay the foundations for them to use the tactile diagrams, maps, graphs and pictures they will encounter throughout their education.

The main ingredient of good picture making is YOU. So, enjoy what you are doing and be assured that what you produce will be appreciated by parents and teachers alike, and enjoyed by your readers.



Making tactile illustrations is about turning pictures into experiences. This is achieved through illustrations that use texture, colour, shape and sound to support the text.

1. What to illustrate?

Seeing is a learning process, whether done with eyes or fingers. In producing tactile illustrations, the aim is to offer the child as much information in the most accessible way possible.

Start by reading the book thoroughly. It is not necessary to recreate every print illustration in tactile format in order to tell a story.

Ask yourself, "What is important?"

Picture books should be portrayed in the simplest way, with minimum detail to carry the theme. Pick out the main or most interesting points to illustrate and omit unnecessary details. The pictures should be simple enough for the child to recognise at later, independent viewing.

When considering an image for tactile illustration, think about how it might be produced. What sort of textures, shapes, colours

and sounds could be used? Remember that every picture is to be felt, not seen.

2. Page layout

Keep it simple! However tempting it is to fill in all the 'fun' details, it will simply make the illustration confusing and less useful to the tactile reader. Using a simple page layout will make it easier for the child to identify individual objects and will help them to recognise the objects when reading for themselves

Careful placement of several uncomplicated items on a page is better than one large, complicated picture.

If there are several items, make sure that the child can feel a space between objects and can feel where each one finishes. The child must have enough room to track around the picture.

Where possible, bear in mind left to right concepts and organise the pictures so they can be read like text.

If print or Braille is to be applied to the page, leave adequate space beneath the reference line.

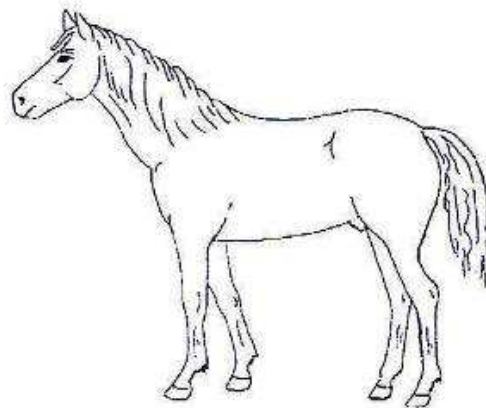


3. Tactile illustrations - general guidelines

Use the original illustrations to develop your templates, if those created by the book's illustrator work as a tactile. You may need to alter some images or change angles shown in perspective.

Alternatively search the Template CD for other options.

Look for helpful descriptions in the text such as black horse, fluffy, orange cat etc.. when choosing materials and textures.



Original Illustration reduced to a line drawing

Keep the basic form of the object, animal or person. Try to stress the most characteristic element in the figure. (feathers, fur, etc..).

Variation in height, such as that between a child and an adult, gives a significant amount of information to a blind reader.

Keep illustrations in proportion to the size of the page – it is better to have a small representation that shows overall shape than try to add too much detail.

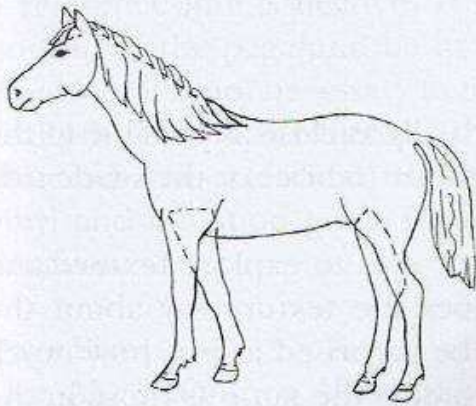
Children have small hands, and shorter memories, so illustrations should not be too big. A good rule of thumb is to keep each illustration within the size of a child's hand span.

The amount by which parts of an object are raised from the page can be a useful source of information.

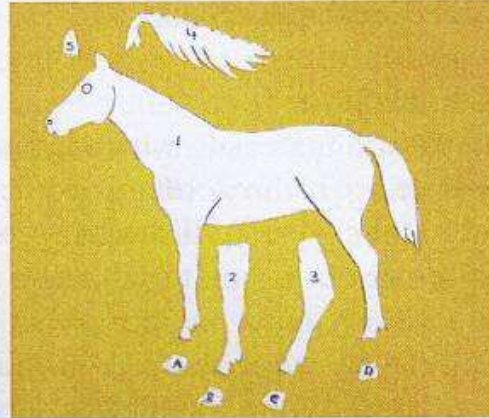
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& Raised areas stand out and can be read as being 'closer' to the reader and therefore 'in front of' those areas around them. Features can be raised by gluing small pieces of card underneath. Remember that the aim is to make the illustration clearer—decide if it will help the child to understand the picture or will simply be confusing.

Be consistent. Keep objects and figures the same, using the same materials, whenever they appear throughout the book. If using brown leather for a cow, don't switch to brown felt half way through the book. This makes it difficult for the reader to identify the object and could indicate a different animal altogether.

Keep illustrations neat. It is most important to cut neatly and smoothly, not hacking around the shape.

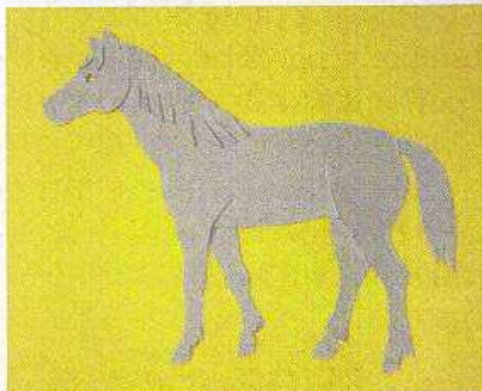


Template Guide



Template Pieces

Horse: 1 Main Body, 2 Front leg (far side), 3 Back leg (far side), 4 Mane, 5 Ear (far side), A-D Hooves

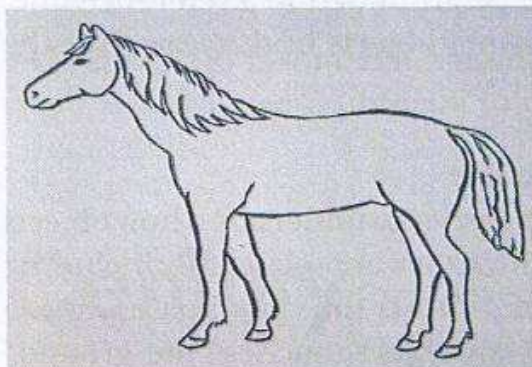


Thermoform Master

using template pieces to form the subject



Illustrated Thermoform Page



Original Line drawing applied to Piaff (or Swell) Paper

4. Practical guidelines

Textures

Try to use materials, which are tactually as close as possible to the real thing. If the animal has fur, use fur (fabric) or the suede side of leather for the illustration.

When choosing material, close your eyes to explore texture and use your tactual memory-what does the texture say about the object you are making? You may be surprised at just how much you know. Where possible, keep colours the same as those in the print illustrations. Collage pictures must look as well as feel right. Remember that sighted people will be sharing these books too.

Do not overlay textures unless absolutely necessary—it can be confusing. If a cow is inside a pen, perhaps just show a small part of the pen overlapping the cow.

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Do not use the same texture for totally different things. If the same texture were used for clothes and hair, it would make it seem as if the person was wearing his clothes over his head.

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Perspective

This is a very difficult concept for tactile readers to interpret, therefore avoid using perspective in tactile illustrations. Animals, chairs, beds, tables etc.. should show all legs of equal length and correct proportions, and should be grounded to a reference line. It may look silly to you, but showing objects in this way gives the information most clearly.

Ground objects with a reference line

A reference line will help a tactile reader to understand how objects on the page are positioned and how they are related. By including a ground line, questions such as "Why is the dog floating in the air?" can be avoided. Whenever an object touches "the ground"

a reference line is needed. It should be placed on or near the bottom of the page and be in contact with the relevant objects. However, it is not necessary to use a reference line for objects that really are floating or flying such as fish or birds in flight. Suitable materials for reference lines include cardboard strips, carpet, vinyl and imitation grass. Choose a material appropriate to the situation.

Page Size

Use A5 (210mm x 150mm) when producing books for small children, A4 (250mm x 210mm) for older children.

Print Fonts

The print must be very clear and for this reason only some fonts are suitable for use in collage picture books. For clarity, the font used must be sans serifs and in a large size—font size 30 works well. Text may be bolded to increase definition. Comic sans, Arial and Century Gothic are all suitable for use in collage books.



Comic sans (N24) is also frequently used and a legible font

Arial (N18) is sometimes used, but young learners may find the letter 'a' difficult to read.

Century (Gothic N30) is a legible font and has a legible letter 'a'

Line Spacing

If interlining print with Braille, line spacing is set to exactly 57.5, font size 30. If no Braille is to be inserted, use single line spacing.

Cardboard Weights

For Library or High Use Books = 1550 microns Formakote, Pasted

Resource Centre Readers and Poem Cards = 1000 microns Formakote, Pasted

Template card = 700 microns Formakote, manila backed

Quick Cue Readers = Braille Paper

Adhesives

Tactile illustrations must be very firmly attached to the page. Use either double sided sticky tape (100mm wide) available either directly from the producer Sellotape or from RNZFB Accessible Format Production, or wet glues such as PVA, Ultrapro (industrial strength) Aquadhere, or a Hot Glue gun.

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& Fabric 'Puffy Paints'

... are excellent for a wide variety of things such as ice cream, eyes, birds feet and legs, flower stamens, insects etc.. Always over-paint with clear nail varnish or it will stick to the opposing page or surface even after it is dry. 'Puffy Paint' is best applied with a toothpick, as it is difficult to control the flow from the nozzle. They tend to 'burp' out big blobs when you only want a fine line.

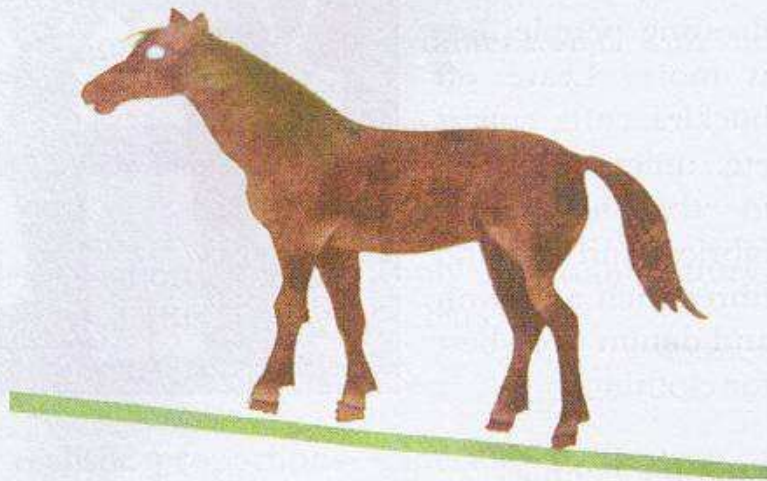
Animals

Always show the correct number of legs and any important identifying features (horns, tail, mane etc..). It is more important to show clearly what type of animal it is than to show movement. Define the correct number of insects' legs from the antennae. Where it would be useful, it doesn't hurt to add a life sized 'speck'

Animals should be grounded with a reference line. Define all the legs separately, make the tail distinguishable from the legs (by using layers, shape or texture), and the ears distinguishable from the horns. Where possible, show both eyes and both ears. These features are important as children use them to orientate the picture.

Limbs on the far side of the animal can be indicated by tucking them under the main body piece where they meet the body. This implies that there is a far side to the animal and therefore that it is a 3 dimensional form.

Make sure that the lie (nap) of the fur or the grain of the fabric runs from top to bottom, or nose to tail. Refer to Materials for suggestions for fabrics and textures.



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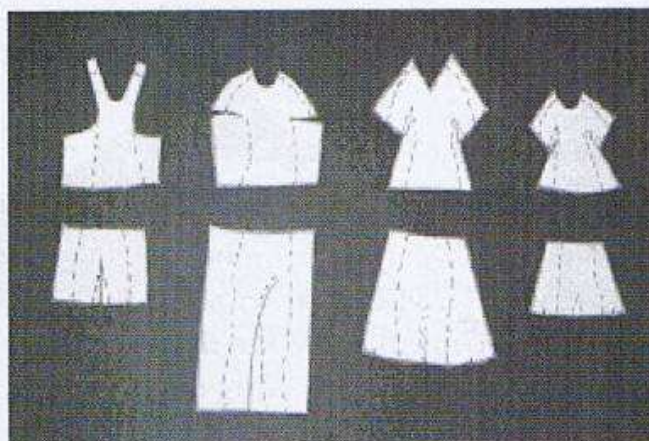
Collage Illustration using template pieces as a pattern, to cut from suitable tactile material, to form the subject.

People

Make people with two arms and two legs that can be clearly felt. Position the arms slightly away from the body, with hands showing the fingers. The legs need sufficient space to enable the child to feel between and around them and they should be grounded to a reference line.

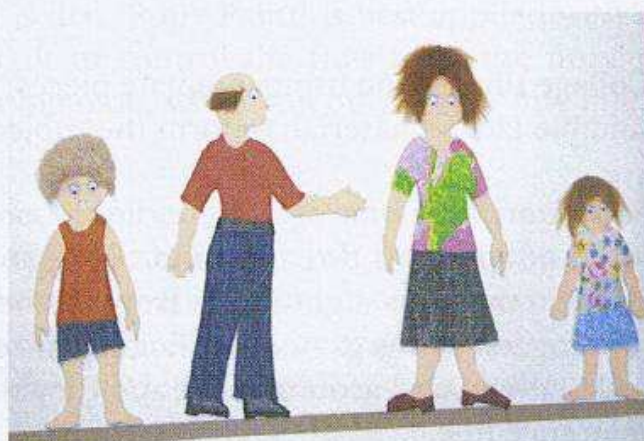
Faces should either be in full profile or front on. Facial features must be modeled rather than drawn. For eyes, punch holes in the material and push eyes through from the back so that they cannot be picked off. Use clothing and hair styles to suggest the gender of the subject. Girls in dresses and skirts, boys in trousers, jeans or shorts, unless particularly described in the story. Men should not have beards unless mentioned in the text- Santa definitely needs a beard.

When dressing people, less is more. Leave off buckles, cuffs, collars etc.. unless described in the text. Knit fabrics and natural fibres such as cotton and denim work best for clothing.



Clothing People

To create clothing, place the people templates (reversed) onto the back of material that has already had double-sided tape applied. Mark out the shape required, remembering to allow enough to fold over. When the figure



is dressed apply D/S sticky tape again (or glue) and attach firmly to the page. The following illustration shows how templates were developed to clothe the figures on the previous page.

Cupboards and Appliances

It is possible to make excellent hinges with double fold bias tape (or masking tape). Glue the tape on both sides of the moveable parts with enough play between to allow movement.

Avoid bulky 'handles' such as beads. A carefully placed staple is fine.

Appliances and furniture should be 2 dimensional with no perspective angles.

All furniture legs should rest on the reference line.

Vehicles

Should be 2 dimensional only and show only important features such as windows, doors, lights and bumper bars.

Vegetation

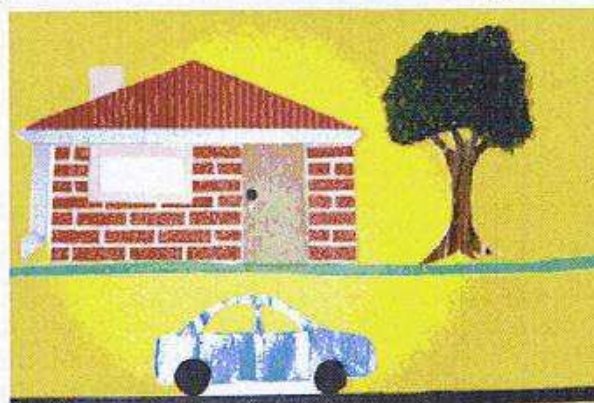
Try to maintain realistic proportions—especially if the tree or plant appears alongside other objects.

Make sure that foliage isn't too bulky or overwhelming.

Painted and flattened corrugated cardboard or cork sheeting make excellent tree trunks.

Buildings

Design buildings that are 2 dimensional only. Refer to Materials for suggested textures for surfaces such as weatherboard, brick and stone.



Clouds and Smoke

Use cotton wool or quilt batting. Use double-sided tape to attach soft or filmy materials and felts, as the material will absorb the wet glues, and form hard lumps as the glue dries.

Fire and Water

Coloured cellophane that has been bunched, stapled at the base, and left free at the top makes wonderful fire because of the sound it makes when handled. It is also visually successful.

Similarly, rainproof, parka nylon material presented in the same way will make a sound like running water or waves.

Tinted glue makes good rivers, oceans and puddles and PVA glue in spots is ideal for rain.



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The producers of this manual (full version available on CD) :
Aven Pecor ; Carol van Deursen ; Gail Carsen ; Karen Stobbs ; Robin Nation

XIII

Lithuania

Typhlographics in Lithuania, 1958-2008

Audronė Gendvilienė

The term *typhlographics* was coined by the Russian typhlo-pedagogue (teacher of the blind) Nikolai Semevsky (1898-1971). Typhlographics includes two notions: that of tactile drawings, and of tactile diagrams. In 1933, Nikolai Semevsky started working as a teacher for the Institute of the Blind in Moscow, and spent the rest of his life teaching blind children to draw and make tactile diagrams. He invented a device, named after him, which capacitated typhlopedagogues to teach blind persons how to make relief drawings and diagrams on waxed plates or paper sheets. (Baltramiejūnas & Plepys, 1985:16). The term *typhlografics* has taken root in Lithuania and is commonly used in the field of blindness.

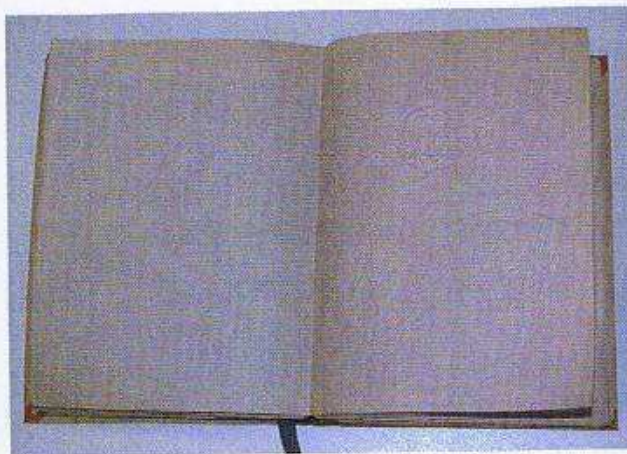
The first Braille books containing tactile illustrations were published in the post-II world war Lithuania. After the WW II, there was a growing demand for Braille books, especially with tactile pictures, because the number of war-blinded children, as well as adults, has dramatically increased, and several blind young people



entered the University. To satisfy the demand, on 10 February 1958, the Editorial Office for Braille textbooks was established within the already existing State Publishing House for Educational Materials. The same year, on July 21, the Braille printing house was established in the Kaunas enterprise for the blind, and on 15 May 1963, the Publishing house of the Lithuanian Union of the Blind was opened (LAD Leidykla). (Toločka, 1997:32, 36).

The first Braille books with tactile illustrations

The ABC-book for I-II grades *Saulutė* (*The Sun*, by A. Čiplys and S. Pupeikis) was the first Braille book with tactile illustrations, edited by the newly established Editorial Office for Braille textbooks, which was published in 1958. It was the ordinary ABC-book for sighted pupils, adapted for the blind by two editors – Mrs. A. Poznanskienė, the blind editor, and Mrs.



Saulutė [The sun], alphabet book from A. Čiplys and S. Pupeikis. 1958

Z. Onuskevičienė, the sighted one, who was later substituted by Miss E. Davalgaitė (Tamulionienė). Mrs. A. Poznanskienė wrote in her memoirs:

'Our task was to adapt *Saulutė* for the Blind. It was then that we sat and started thinking on how the book should be edited, how the pictures should be rendered for blind readers? Director of the Publishing House, Pranas Ulevičius, advised us to go on a

mission to Riga, where people had long been publishing such books. Upon our return, we invited graphic artists working for the Publishing House - Mr. L. Rymeikis, Mrs. S. Juknienė, Mrs. M. Paplauskienė – and undertook our task. It was a completely new sphere for everyone, and not everything went smoothly. For example, we received the book for proofreading only to find that all tactile illustrations had been inverted. But the graphic artists soon got a grip of the problem and improved the illustrations.’ In October 1958, *Saulutė* was printed in a relatively large run of 50 copies on an original printing-machine constructed by Lithuanian engineer Mr. J. Boreika. (Venckevičius, 1977:71-72).

When issued, *Saulutė* soon received appreciation, as well as constructive criticism. Director of the Kaunas boarding school for the blind Mr. J. Kasperavičius, who reviewed *Saulutė* in press, said this ABC-book would render a much needed assistance for the teachers of blind first- and second-graders. He stressed that publishers had attained adequate protuberance of dots, and what made this book especially valuable, were its tactile illustrations, which totalled over 60 in the book. However, the reviewer also pointed out to several drawbacks:

- some of tactile illustrations were needlessly filled with protuberant dots or dashes, which made them confusing for the blind young readers;

- in the number of cases, tactile pictures and their underlying text varied in meaning;

- text accompanying certain tactile pictures was too complex for beginner Braille readers. (Šukys, 1979:14).

In addition to *Saulutė*, there were other kinds of typhlographic material made ready for printing by the staff of

the Editorial Office for Braille textbooks: tactile maps, Russian alphabet with tactile pictures, etc.. Strictly adhering to secondary school syllabus requirements set by the Lithuanian Ministry of Education (syllabuses were identical for mainstream secondary schools and schools for the blind), the Editorial Office edited other textbooks, often more complex than *Saulutė*.

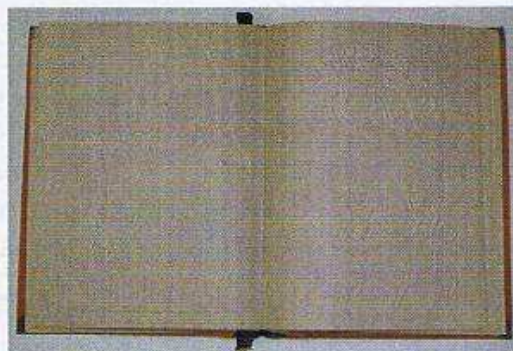
The Editorial Office for Braille textbooks was in operation for five years, from February 1958 to May 1963. In these years, it produced 38 Braille books, including 21 Braille textbook, which were subsequently printed by the LUB Printing House. Part of these books had tactile pictures, diagrams, or maps. Blind and visually impaired pupils were provided with textbooks of Lithuanian grammar, Lithuanian literature, Russian grammar, arithmetic, nature study, geography, and history. The success of the Editorial Office for Braille textbooks proved that it was capable of publishing even more textbooks and fiction for the blind, only it needed additional qualified staff, or even a special publishing house. (Šukys, 1979:15).

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Braille books with tactile pictures in 1963 - 1991

On 15 May 1963, the Publishing House of the Lithuanian Union of the Blind (LUB Publishing House, LAD leidykla) was established with a mission to publish Braille textbooks, fiction, musical scores, magazine *Mūsų Žodis*, tactile teaching aids, as well as talking books. One of the first



The Twinkle, ABC-book by A. Baltramiejūnienė and A. Dekerienė 1964

textbooks produced by the LUB Publishing House in 1964 was another ABC-book with tactile pictures *Žiburelis* [The Twinkle] by Mrs. A. Baltramiejūnienė and Mrs. A. Dekerienė, teachers from Kaunas school for the blind). It came in three volumes; one was entirely devoted to tactile pictures, and the remaining two - to learning the Braille alphabet (Šukys, 1979:64).

Two years later, on 16 April 1965, LUB Printing House with Audio Recording Studio was opened. The new Printing House was an economically autonomous enterprise with adequate printing capacity, and consequently, the production of the Publishing House markedly increased. Especially varied range of typhlographic teaching aids was produced in the period of 1965-1972, when a group of artists-typhlotechnicians were employed at the LUB Publishing House (Šukys, 1979: 61-62). In 1973, the Experimental Enterprise of the Lithuanian Union of the Blind produced the first plastic bas-relief outline maps of the Lithuanian Soviet Republic (also called thermoforms). A year later it produced tactile maps of the USSR and continental maps of the World. The author of these maps was professional artist Mr. Petrulis (Navalinskas, 1978). Soon new, previously unseen typhlographic publications appeared: postcards, sets of portraits of famous scientists and politicians, typhlographic maps, books for colouring and cutting. Based on the outline tactile drawing principle, numerous tactile teaching aids were produced: historic, geographical maps, schemes, diagrams, perspective drawings, illustrations for books, sets of portraits, typhlographic games, books for colouring and cutting, various posters (Navalinskas, 1978).

Year by year, the LUB Publishing House grew and developed. On 1 January 1964, there were just 6 editors and the head manager employed at the editorial office for books, textbooks, musical scores and pictorial aids. [...] By 15 May 1978, there were already

5 editorial offices [...] with 45 editors, of whom 14 were visually impaired. From the opening in 1963 to 1 January 1979, LUB Publishing House published 981 Braille titles. Textbook titles usually came in 30-65 copies, and political, scientific material, fiction, material for children and youth came in 12-20 copies. (Šukys 1979:58-62).

Many professional graphic artists, such as Mrs. Taida Balčiūnienė, Mr. Juozas Petrauskas, Mr. Vytautas Jurkūnas, Mr. Algirdas Steponavičius, contributed to the production of tactile illustrations. One of the first such contributors was renown Lithuanian illustrator of books for children Mrs. Taida Balčiūnienė [1925-] who made drawings for *A Set of Pictures* consisting 5 tactile books (for colouring): *In the Forest, At Home, Animals and Birds, Fruit, Flowers* (1964; in 20 copies; a copy is kept at LAB), and a book of poems *The Workers* by Mr. Kostas Kubilinskas (1965, 10 tactile illustr.).

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Lithuanian Library for the Blind still stores many other books published by the LUB Publishing House in its early years: *Letters, birds, animals* (1967; 44 tactile illustr.; by L. Navalinskienė); *Collection of ancient history monuments* (1967; 26 tactile. illustr. by J. Petrauskas); *Armamaent, household and working tools of ancient Lithuanians* (1968; 27 tactile illustr. by A. Šeduikis); *Kaunas tour* (1968; tactile illustr. by R. Binevičienė); *Vilnius tour* (1968; tactile illustr. by J. Petrauskas); *What belongs to what* (1968; tactile illustr. by E. Jasinskienė); *How bread is grown* (1969; 11 tactile. illustr. by J. Petrauskas); *Children* (1969; 21 tactile illustr. for colouring by J. Petrauskas); *Sport* (1969; 23 tactile illustr. by P. Navalinskas). The purpose of tactile books for colouring was to instil knowledge of the world, familiarise blind and visually impaired children with Lithuanian fairy-tales (people, birds, animals, household appliances), as well as Lithuanian history and monuments of historical heritage.

The editorial staff of the LUB Publishing House had always included an artistic editor. Mr. Zigmas Binevičius served as the first artistic editor in 1967-1978. During these years, he trained several professional artists as illustrators of books for the blind, such as Mr. Petras Navalinskas, Mrs. Liucija Rožė Navalinskiene and others. Together they looked for new ways of making tactile pictures, improved methods and techniques, for varied topics, and how to make these pictures understandable and not too complex for blind readers. (Šukys, 1979: 63). Besides his work as artistic editor, Zigmas Binevičius was also the organizer of production of Braille books with tactile pictures and author of many tactile pictures.

On 1 June 1978, Mr. Petras Navalinskas was appointed for a position of artistic editor at the LUB Publishing House (Šukys, 1979:57). He appeared to be a highly productive member of the staff: in 1985, his 100th children's book with tactile pictures was published. According to Mrs. Audronė Maksimaitienė, deputy director of the A. Jonynas school for the blind and visually impaired, 'graphic artist Petras Navalinskas does not use unnecessary details in his tactile pictures, he highlights only the main features'. (Valenta, 1986:12.).

Heaps of tactile pictures for Braille books were made by ceramic artist Liucija Rožė Navalinskiene. In 1965-1988, the LUB Publishing house produced Braille books with interleaved tactile pictures, and also approximately 20 portfolios of tactile pictures, where particular attention was paid to low-sighted children: these illustrations were designated for colouring, cutting and gluing.

In order to equip teachers and visually impaired children with educational material on understanding tactile pictures, Petras Navalinskas wrote two books in Lithuanian printed in



Braille: *Learning to understand tactile pictures* (1970), and *Tactile pictures: educational material for schools for the blind* (1976). Petras Navalinskas would often come to the school and check whether visually impaired children understood what was depicted in certain tactile pictures. Blind journalist Mr. Alvydas Valenta later wrote in his article :

'Perhaps we would not find a children's book without at least one tactile picture. And many of them contain as many as 10-15 pictures. One special encounter with tactile pictures is vividly imprinted in my mind. Once someone, perhaps Petras Navalinskas himself, came to our school to check how we could understand tactile pictures. With difficulty, but I managed to recognize a rabbit, but when it came to identifying the same rabbit wearing pants, the picture became unrecognizable.' (Valenta, 1986:12).

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Year by year, the staff of the LUB Publishing House gained more theoretic and practical knowledge on typhlographics, and soon the time was ripe to share knowledge with publishing houses of other unions of the blind in the former USSR. Thus a seminar "Typhlographic matters" was jointly organized by the LUB Publishing House and the LUB Central Board, which took place in Vilnius on 16-17 November 1978. It was the first theoretic seminar on typhlographics in the USSR, attended by delegates from Latvia, Lithuania, Russia and the Ukraine. The language of the seminar was Russian. Mr. Saulius Plepys, director of the LUB Publishing House, summarized the achievements of the company in the past 14 years:

"Each year, the quality of Braille fiction books and textbooks is better and better. In terms of the successful get-up of Braille books, it is mainly connected to tactile pictures. During 14 years (this year we celebrate our 15th anniversary), we have published 232 publications with illustrations. Of these, 54 are textbooks of mathematics, physics, chemistry, 57 textbooks of Lithuanian,

Russian, German languages, 49 textbooks of history and geography, and 47 other tactile teaching aids. Besides textbooks, we also produce fiction books for children with tactile pictures. At present, nearly all our textbooks are published with tactile illustrations". (Seminar on typhlographics in Vilnius, 1978. Audio file).

In the seminar, Mr. Petras Navalinskas was one of the key speakers. His presentation was "*Analysis of tactile teaching aids and tactile drawings, their types and production modes*". Navalinskas reviewed the main three types of tactile drawings – tactile outline drawings, bas-reliefs and appliqués and devoted considerable time to analysing the usage of perspective in tactile pictures for the blind. He also introduced his own way of rendering shape of objects by applying varied density of dots or dashes. And finally, he presented the advantages of zinc matrixes used for making tactile pictures at the LUB Printing House.

The same 1978 year the design of the new building for LUB publishing house was started (Šukys, 1979: 80). The LUB publishing House moved into the new building in December 1984 and worked from here until its closure on 31 December 1991. During the years when the LUB Publishing House was in existence, visually impaired people had plenty of tactile illustrated books and other kinds of typhlographic material. Most of tactile pictures were produced by means of zincography, which allows to print distinct relief of outline drawings, but unfortunately, these pictures are of one colour, that of the Braille paper. Examples of such books are:

- *Just three little wolves*, 1988, 10 tactile illustr. by P. Navalinskas, story by Vytautas Petkevičius, in 9 copies ;
- *I am Doggy Bariukas*, 1989; 12 tactile illustr. by R. Okunauskas, story by Frantisek Nepil ;

-*Mickey, the little liar*, 1989, 6 tactile illustr. by P. Navalinskas, in 8 copies. (LAB's catalogue).

Besides zincography, graphic artists of the Publishing House also gave swell-paper a try. Such pictures were more attractive to low-sighted readers, because besides relief, they had an outline drawing printed in black ink. An example of a Braille book with interleaved tactile pictures is a story by Dagmar Normet *The sea of dolphins* (1987, 4 tactile illustr. by P. Navalinskas; in 13 copies). (LAB's catalogue).

In November 1988, Petras Navalinskas made his last tactile picture: it was the picture made on swell-paper for the cover of the Braille book by Saulius Plepys *Sketches of the renown blind*, published in 1989 by the LUB Printing House. And perhaps the last book with tactile pictures published by the LUB Publishing House was *The Braille textbook of physics for XII-grade* by Myakishev and Bukhovcev, with 150 tactile illustrations by Ronaldas Petras Kondratas, published in 1989. (Navalinskas. Notes on orders for tactile graphics).

When the Singing Revolution broke and Lithuania declared its independency from the USSR on 11 March 1990, the Lithuanian Union of the Blind was pressed to get its finances from different programmes or charity, rather than being financed directly from the state budget. Due to economic necessity, the LUB Publishing House was closed on 31 December 1991. (Toločka, 1997:58).

Tactile pictures after 1991

When the LUB's Publishing House was closed at the end of December 1991, publication of Braille textbooks was given to the Lithuanian Education Centre for the Blind and Visually Impaired,

and fiction went to the Braille Press and the Lithuanian Library for the Blind. Unfortunately, production of any typhlographic material in Lithuania discontinued for nearly 10 years. In 2000, publication of fiction with tactile illustrations was revived by the efforts of closed company Brailio Spauda (Braille Press, the closed company established by the Lithuanian Association of the Blind and Visually Handicapped which edits and produces *Mūsų Žodis*, magazine for the Lithuanian blind, in Braille, large print, and e-text

The technique of zincography being rather expensive, a cheaper way was chosen by Brailio Spauda for making tactile pictures – that of printing Braille dots on lists of Braille paper. Using this technique, in 2000-2002, Brailio Spauda produced four Braille books with tactile pictures:

- My favourite readings* (2000);
- Panama is very beautiful* by Janosh (2000);
- A little dog and a little cat* by Josef Capek (2001, 14 tactile illustr.);
- Wonders of the green garden* by Margarita Stāraste (2002, 15 tactile illustr.).

The pictures were sketched by Vytautas Gendvilas and printed on Everest Braille printer.

One more poetry book for children with dotted tactile pictures was published in 2006 by the Lithuanian Library for the Blind: *The flowers of childhood dreams* by Zenė Sadauskaitė (2006, 5 tactile illustr. by Vytautas Gendvilas, in 25 copies). At present, everyone can sketch tactile pictures using software BrlPaint (created by Sergej Mech, Brailio Spauda IT engineer). BrlPaint can be downloaded freely from the Internet site of the Lithuanian Association of the Blind and Visually Handicapped http://www.lass.lt/soft/brlpaint_lt.htm. Then you will need a list of Braille paper and a Braille printer, and a tactile picture is yours!



In March 2007, a personal exhibition of tactile pictures by Vytautas Gendvilas was held in Litexpo exhibition centre during Vilnius Book Fair. These were dotted tactile pictures, drawn by Vytautas Gendvilas for children's Braille books and printed on Everest Braille printer.

Using another technique – tactile pictures on microcapsule paper – Brailio Spauda in 2002 produced two more books with tactile pictures:

- Animals and birds living in the wild* (16 tactile illustr.)
- Otfried Preussler's Little Ghost* (2004, tactile illustr. by Audronė Gendvilienė).

In 2006, Lithuanian Library for the Blind also gave microcapsule paper a try, and produced a poetry book for children *Alphabet of leaves* (2007, 5 tactile illustr. by Mira Genė Giedrienė, in 17 copies). These books put to the end the tactile reading famine, badly suffered by visually impaired children in Lithuania.



Getting ideas from Typhlo & Tactus

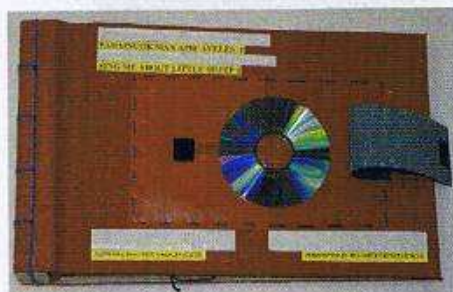
That such tactile books exist, we at the Lithuanian Library for the Blind learned from Marion Ripley's article published in RNIB's magazine *The New Beacon*, probably in 2000. As far as we understood, tactile books were the variety of tyhlographics: books produced in one copy by anyone interested in making them. Marion Ripley kindly gave us Tactus organisation's contacts, and soon we were invited to join Tactus project, and later Typhlo-Tactus, within the boundaries of E.U. Culture 2000 programme. However, LAB could not afford joining any of the Tactus due to financial reasons, but we were happy to participate in the projects as the associate member or the guest country.

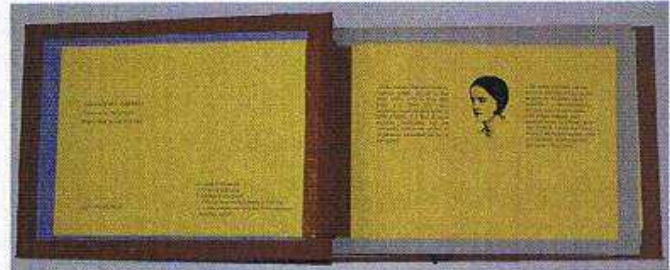
Being part of Tactus meant getting interesting ideas: we were advised to organize the tactile book competition in Lithuania and to hold a workshop on making such books. Since then, the Lithuanian Library for the blind is determined to organise such competitions each year. The seven year (2000–2007) international project Typhlo-Tactus, part of the E.U. Culture 2000 programme, will be resumed in 2009.

The first competition was announced by the Lithuanian Library for the Blind in autumn 2005; in early 2006, we received eleven tactile books. On 13 April 2006, a group of staff of the Library for the Blind met to select the best books in two categories: for children up to 7 years, and for children of 7-12 years. In each category, three best books were awarded. Tactile book by Inga Praprovaite *Taste of Marmalade* was awarded the first prize in the category under 7 years, and another first prize in the category over 7 years went to the Beatričė Grincevičiūtė museum (the museum established in 1993 in the Grincevičiūtė's flat, Vilnius, where she

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*Sing me about little sheep.
Tactile book plus CD, soloist Beatričė
Grincevičiūtė. 2006*

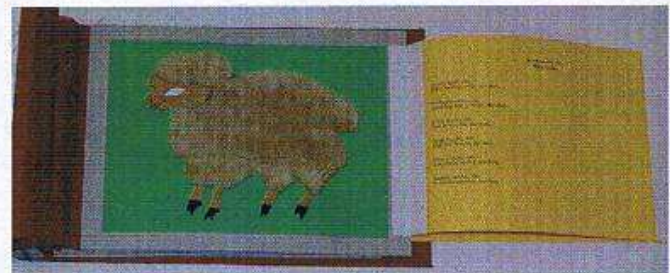




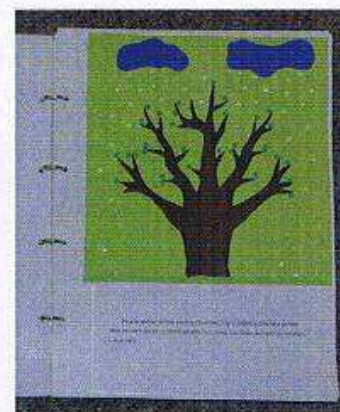
Sing me about little sheep

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Tactile illustrations from the book *"The travel of the little Acorn over the cycle of seasons"* submitted to this competition.



lived until her death in 1988) for a tactile book with a CD *Sing me about little sheep*. while exploring tactile pictures, one can listen to songs for children performed by the renown Lithuanian blind singer Beatrice Grincevičiūtė. The prizes were awarded on 24 April 2006.

25 April 2006, under the initiative of Tactus members, Päivi Voutilainen (Finnish T&T member and Marion Ripley T&T British member), a workshop on tactile books named 'Typhlographics in libraries for the blind' was held at the Library for the Blind in Vilnius. During the workshop, besides vivid oral presentations, tactile books were on the show at the library reading-room downstairs. It was mainly the books brought by Päivi and Marion, with a nice addition of Lithuanian-made and Estonian-Finnish ones made by Sülvi Sarapuu. Most of the tactile books on display were textile books made in the appliqué technique.

Teacher-expert of the blind Mrs. Giedrė Rečiūnienė got interested in sewn tactile books and immediately initiated her own project for secondary schools in Vilnius '*I want to help you*'. In autumn 2006, she organised a workshop for teachers of secondary schools with the title '*Fostering cognition of the blind and visually impaired by providing unconventional teaching aids*', in which she introduced teachers how to make textile tactile books, what materials are needed, talked about their format, number of pages, topics, etc.. She was advised by Mrs. Jadvyga Kuolienė, LAB directress, to stuff pages with some soft material to make books easily washable, and passed this idea on during her workshop.

After the workshop, the teachers gave their pupils the task to make tactile books in the patchwork or appliqué technique. Most of the books were sewn by groups of children, where each child made one list page for a book; other tactile books were sewn by teachers themselves, and even one final-year student of the



Vilnius College of Arts made such a book for her diploma. These textile tactile books of varied quality were exhibited in March 2007 at the Simonas Daukantas secondary school. On 7 April 2007, the best 18 tactile books were brought to the Lithuanian Library for the Blind, and exhibited at the reading-room till September. However, the Braille texts were rather poor, with lots of spelling mistakes. Despite of that, the illustrations were much appreciated by the visually impaired children – library users.

On 26 April 2007, tactile books were given publicity on the nationwide Lithuania's TV channel by journalist Henrikas Vaitekūnas; the message of the broadcast was that visually impaired children need books with tactile pictures, and people were invited to sew them.

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The second competition was announced in June 2007 in LAB's website <http://labiblioteka.lt>. It yielded just one tactile book, *The Iron Wolf*, sewn in the patchwork technique by Giedrė Rečiūnienė. Her book was awarded the first prize and submitted by LAB to the Typhlo-Tactus tactile book competition held in Dijon, France, 8-10 November 2007.



The panel of judges, reading-room, Lithuanian library for the blind. 2008.

The third LAB's tactile book competition was announced in May 2008, again in LAB's website, with the deadline of October 15, the White Cane Day. As many as 20 tactile books were submitted to this competition, 14 of them being sewn from textile. The five-strong commission chaired by Mrs. Audronė Gendvilienė and

comprised of two blind, one visually impaired and one sighted judge, all LAB's staff members, chose three winning books.

Again, the Braille texts in many of the books contained lots of spelling mistakes. Besides Braille, the commission evaluated the quality of tactile pictures, the contrast of colours for the convenience of low sighted viewers, and the sturdiness of books. After hard work, three best books were chosen. The award ceremony took place on 7 November 2008. Here are the winners:

I place - *The Moth*. Textile tactile book made by Lina Norkienė (low sighted participant) based on the poem by Degėsys. 5 tactile pictures, knitted illustrations, 24 x 30 cm. Vilnius, October 2008.



The Moth, Lina Norkienė. 2008

II place - *The Bread Scraping*. Textile tactile book by Rūta Dyčmonienė, sighted. 5 tactile illustrations, 24 x 33 cm. Vilnius, 2008.

III place - *We are making the vegetable salad*. Textile tactile book made by the sighted pupils of the Salininkai secondary school. Teacher Mrs. Rima Žiukienė; 6 tactile pictures, 24 x 30 cm. Vilnius, 2008.

In the meantime, LAB's tactile books were exhibited in the Best Western Vilnius hotel during the international conference "Quality education – recognized right of visually impaired people", on

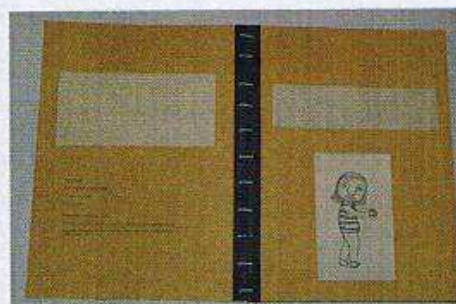
16-17 October 2008. The exhibition, prepared by Audronė Gendvilienė and Ina Praprovienė, attracted lots of the delegates, many of whom were teachers of the blind in special or mainstream schools; they all claimed that such books were valuable teaching aids and should be collected by school resource rooms. However, some of the teachers saw such books for the first time in their lives.

In November 2008, the group of 38 students from Vilnius College of Technologies and Design who study the graphic design came to the library to see our tactile books for their project of tactile book-making. Several of the students were much interested in producing tactile illustrations on Braille paper by means of BrlPaint software because of its simplicity, others were attracted by the applique technique on thick paper. The 37 books produced by the students will add to the LAB's tactile book collection.

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We at the Library for the Blind sincerely hope that tactile book movement will spread on among sighted students, teachers of the blind as well as the general society, who will appreciate the advantages of tactile books for the blind who learn to read and write in Braille, and who can learn much about the world from such books. And it is our hope that more and more people will be encouraged to make such books.



Paula is leaving the kindergarten by Aino Pervik. Tactile pictures by Diana Raudonienė. 2008



Pictures : Mrs. Julija Plepienė and Mr. Vytautas Gendvilas.

XIV

Slovenia

Tactile books for Blind in Slovenia

Aksinja Kermauner

Introduction

In Slovenia there are 3 943 people registered as blind and partially sighted; of these, 2 296 are totally blind. There are 102 visually impaired children up to 15 years of age; 15 of them are totally blind (Source: The Union of Associations of Blind and Visually Impaired of Slovenia, situation at 31.12.2007). In countries with a developed health service, blindness occurs in 1.5 per million of the population. The incidence in Slovenia is the European average (1.15 per mil).

In line with WHO definition, blindness in Slovenia is defined as follows: from 0-4.9% residual sight or narrowed visual field under 5° in the better eye. From the pedagogical aspect, the definitions are more complex taking into account also the successful use of residual sight. There are many blind people with residual sight or at least some perception of light (practical blindness).

The sense of touch

Because of their visual impairment, blind people are forced to discover the world with the help of their other senses. The other senses try to compensate the lack of sight. Along with the sense of hearing, tactile kinaesthetic senses are the most developed. With these senses a blind person can perceive the world and form certain ideas about it. In this way he can form an image of an object. For a blind person touch is the only way to establish a connection with the real world. To identify different objects, we use several parts of the body, especially the hands. Fingertips play the biggest role in this field. A blind person can enlarge the sensitivity up to 50% on the index finger compared to a sighted person, but that is entirely as a result of an intensive training of senses (Zovko 1995).

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Sense exercises



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Blind people do not possess higher sensitivity of their sense organs, as some wrongly suppose. The sensory organs, including residual sight if any, must constantly be trained. Therefore they need regular exercises for their sense organs (sight, hearing, smell, taste and touch).

Touch exercises

The touch exercises are systematic exercises for enlarging the tactile perception (e.g. development of the sensitivity of the fingertips); exercises for recognizing different materials, weights and compositions; perception with other parts of the body; and exercises with indirect tactile perception (Brvar 2000). Touch exercises are extremely important at an early age. We encourage our baby to start using his or hers fingers (Sinksen, Stiff).

Meissner's corpuscles are important for touching and later on for reading Braille. If we want each cell to send a stimulus to the brain, the tactile information should be at least 1 mm apart (tactile threshold).

As previously noted, in order to perceive objects we use several parts of our body, especially our hands. Fingertips are very important. According to Fieandt (1966, Zovko 1995) our fingertips are able to transfer perception extremely well, sometimes even better than an eye. By practising certain exercises, we can enormously improve our sense of touch. In 1973 Kirshman (according to Zovko 1995) wrote a thesis about the gradual acquisition of tactile skills. He identified five levels:

- Perception and differentiation between large and strong geometrical shapes;
- Perception and differentiation of small straight geometrical shapes;
- Perception and differentiation of small geometrical shapes in relief;
- Perception and differentiation between geometrical shapes, depicted by raised dotted lines;
- Perception and differentiation of Braille signs and words.



Blind people and art

Blind people can form a very clear image a sculpture if they are allowed to touch it (which is quite often not the case because of the rules of museums, which are not set up for blind people). Art pictures and paintings pose a greater problem. If the picture is simple and in one colour, it can be represented by one of the relief techniques. However, the image should be adapted, to abstract certain elements and to simplify them. Only the important

information should remain, otherwise the image is unclear. We use lines of different thickness and different surface patterns. We have to use different methods when dealing with more complex images. One method involves presenting the picture in stages. The first tactile illustration depicts the foreground; the second depicts the background and the third merges the two to show the whole picture. Another, simpler, method presents the entire composition of the image. Once the overall impression has been conveyed we can display the details in additional tactile images. Some pictures cannot be transformed into a tactile version because they have too many details. A problem occurs when the picture contains outlines which are not sharp, such as in impressionist works of art. The difficulty is even greater when talking about abstract pictures full of colours. Here, we find a way with a verbal description, but this of course is not the same as seeing the work of art in reality. We must be aware of the fact that a tactile picture is not, and could never be, a perfect reproduction of the painting that it represents.



The meaning of an illustration for children

A child's first contact with a book is obtained by illustrations which are essential for the development of his imagination. A child discovers and gets to know images made by other people. In this way his image of the world starts to develop. He learns how to combine old images with the new ones. This type of learning is happening on a cognitive level and equally in terms of artistic sensitivity.

Illustrations develop a child's creativity, joining together the real and unreal world, the world of dreams and fantasy. With their help a child goes beyond the stereotypes and develops his artistic skills.

In picture books, pictures connect with words. While a child reads a story, he connects it with artistic images. Words get a new meaning through pictures.

Margareta Dolinšek Bubnič, the author of a manual with advice on the creative use of children's picture books with the title *Beri mi in se pogovarjaj z mano!* [Read to me and talk to me!] says:

A children's picture book represents a work of art where literal and artistic parts are meeting, supporting each other, complementing each other and guiding a child in the world of fantasy and creative dialogue. (Bubnič 1999)

R. Seale wrote:

Illustrations for children are a small art which demands a lot of responsibility. (According to Bubnič 1999) [...] The unique character of a picture book as an a work of art derives from the fact that a picture book is actually a combination of two means of communication, verbal and visual. In this aspect, a picture book is a synthetic medium, as are theatre and film, where an actual point is given to the spectator by an interaction of different communication means. (Nikolajeva 2003)



All this is also true of tactile books for the blind people, but we have to follow certain rules here.

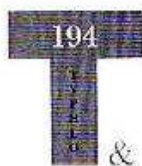
Tactile pictures

A tactile picture is any picture that is accessible to tactile perception. Even though it cannot replace pictorial material, it is frequently the only source of learning for the blind. While creating them, we must start from the differences between sight and touch: sight is a distance sense and touch is a proximal one; sight perception is synthetic which captures all the picture at once and touch is analytic, connected with details and format in a gradual way. However, we must take into account the tactile

threshold, which can be very different between blind individuals. We bear in mind the ability of the blind person, so that he can pick up information from the tactile picture, which is presented in the form of a symbol or some other element.

Some rules in making tactile pictures

- Size: tactile pictures should be made to the dimension of the hands of a blind person. A tactile picture should not be bigger than A4 format.
- Simplification: a tactile picture should be simplified so that the important features can be easily recognised by touch.
- Colour contrasts: since the majority of blind pupils still detect some stronger colours, we colour tactile pictures with strong, contrasting colours.
- Proportions: we try to keep natural proportions, for example, a cat should not be bigger than a horse.
- Material: should relate to the real materials of the represented objects on the tactile picture or it should at least support some essential characteristics (cold materials – cold colours).
- Safety – the materials and the construction should be safe.



Techniques for making tactile diagrams

- Micro-capsule technique – photocopied picture or picture drawn with a pencil lifts up and becomes tactile because of the chemical reaction in the capsules of the micro-capsule paper when it is heated.
- Thermo-vacuum technique (Thermoform)– the matrix should be made and then it is possible to print several copies, but the material is not very aesthetically pleasing (plastic).

- Drawing on the positive foil – we are using a silicon pad. We are drawing on the foil with a sharp ruling-pen or with an used ball pen, which we are holding under the angle of 45° and are pulling a certain line with the pressure. On the foil, there is a trace which is convex and is tactile.
- Computer graphic drawing (EMBOSSSED graphic)
- Typhlograph – the device enables drawing making of tactile dots review on the Braille paper.
- Working with contour colours or with glue
- Termo pencil – it is used in a combination with thermo paper. The plastified side of the paper swells up under the influence of the heat from heated point of a pencil. The lines become raised and can be touched immediately.
- Special print – more thicker gathering of the colour
- Japanese technique (terumi) – the colours which are exposed to the heat swell up
- Drawing with a Braille typewriter – making images from combinations of Braille letters, strategically placed on the page.
- Negative drawing – we drag little spurred wheel across the Braille paper
- Using self-adhesive waxed strings – (known as Wikki Stix in the UK) to form different shapes which can be stuck to the page
- Collage from different materials (tissue, paper, cork, wood, ...)
- Embossing by squeezing soaked paper between two matrix under extreme pressure
- Materials for modelling (clay, Plasticine, Fimo).
- Computer making of 3D tactile diagrams – very promising but for now, too expensive.

Text in a tactile picture book

The text in Braille is usually printed in one of several ways:

Printing with Braille embosser: we transform, by means of special translation software, the print text from a word document into Braille, then we print it out on a Braille embosser onto thicker paper which we put between the pictures or onto transparent plastic sheets which we stick on so that print text or illustrations are still visible.

- Traditional embossing with metal plates (male and female matrix). We insert paper between the two.

- Thermo-engraving: We send recently printed paper with traces of wet ink through the machine out of which a vegetable wax is being sprayed. It adheres to the ink. Afterwards we heat the wax to a high temperature so that it hardens up.

- Technique with ultraviolet light: a wax is hardened by an ultraviolet light. This technique can be used in order to print on different materials (paper, glass, metal).



The aesthetic value of a tactile picture

The question of the aesthetic value of tactile images is raised, because tactile illustration is limited to materials (plastic, tactile marker pens) which are not aesthetically pleasing. We must not forget that most blind people have a little residual sight. Above all, sighted users will also be handling tactile picture books.

That is why we should not neglect the appearance of a book. We are trying to combine clarity with a visually appealing image. The blind reader has also a right to enjoy beauty!

A meaning of a tactile picture

A tactile picture is not only a tactile representation. It aims to be more than that. As sighted people distinguish between photography, an exactly drawn image or an artistic impression, we should strive to the highest artistic values when making tactile images.

Through tactile pictures, we are aiming at:

- Development and training of touch: we start developing the sense of touch from the early years. We constantly stimulate it, develop it and protect it.
- Development of precise motor skills: just as selectivity and recognition are important when using one's sight, so is selective touch perception essential when using the sense of touch.
- Understanding of certain objects in the process of generalisation.
- Collecting new information (new concepts and new phenomena) and connecting them with the experiences of daily life.
- Tactile pictures enable blind people to enjoy pictures. Illustrations help to develop the use of language, if they are accessible to children.

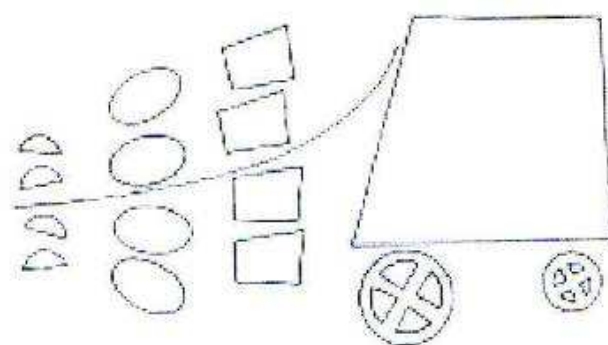
Not all tactile pictures are accessible to children, especially not to those who have never had sight. Conventional realistic pictures, even if adapted in relief, are extremely difficult to understand for children who were born blind. If we want to make pictures which children will understand it is better to draw small objects, shapes, sizes and surfaces which are known to a blind child and which he can encounter in his daily life.

Of course blind children are able to enjoy in tactile pictures even if they cannot exactly explain the things that they

are supposed to represent. It happens quite often that they need the help of a sighted person. However, it is extremely important that we give them simple illustrations which they are capable of understanding by themselves without help of another person.

Tactile picture book in Slovenia

In our country, the prototype of the picture book was designed by female professor Nina Schmidt in her final thesis. She illustrated a book called *Kočija* (Carriage) by Sloven writer Kajetan Kovič. She used a positive foil and tactile marker pens. Illustrations are simple and schematic. The text was printed in Braille as well, but the book was made in only one copy, just for the needs of her final degree.



First Slovene tactile picture book, written by Aksinja Kermauner:
Snežna roža (A Snow Flower)

It was created in order to explain colours to totally blind children. How do they mix together? How to describe a colour circle, related, opposite colours? Colour contrasts?

To explain these phenomena to blind children, we drew on the assistance of music and different materials. Related materials

= related colours; contrasting colours = contrasting materials. An artistic exercise, such as creating an object in warm/cold colour contrast, can be converted into an exercise where warm/cold contrasting colours are represented by warm/cold materials. I conducted some research with my students to ascertain which materials seemed cold or warm to them. With their eyes covered, they had to classify 33 different types of materials (glass, rock, foil, fur ...) according to their heat or coolness.



The results have shown that smoother materials are colder, and rough materials seem to be warm. That is why we can use these findings for our future work with blind and visually impaired pupils in the classroom and also in the making of tactile picture books. Therefore, when choosing materials for tactile images we match the temperature (warm or cold) of the material with a corresponding (warm or cold) colour. When making illustrations for the book *Snow flower*, I took into consideration also children with only a little sight – I used strong colours and sharp contrasts. I was attentive to the aesthetic of the tactile images because the tactile picture book is intended also for sighted people. The text is in large print (font size 25, letters Arial Narrow, bold) and in Braille.

In the tactile picture book, a simple story takes place in the north (cold colours), where a little Eskimo girl called Aja lives. One day she pricks her finger and a drop of blood (warm colours) falls on the icy ground. Overnight, a flower grows out of her blood. All the Eskimos admire this flower, but during the night, the flower almost freezes. Aja brings her warm scarf and protects the flower and this flower spreads happiness among the Eskimos with its gaudy colours. Included with the tactile picture book is a teacher's booklet on using this resource with blind pupils in a primary school art lesson. (theme: warm/cold contrast).



The Documentation Centre of Books for Disabled Young People is working within the framework of IBBY, The International Board on Books for Young People, with its headquarters in Norway. The tactile picture book, Snow flower has been evaluated as a remarkable achievement and was chosen amongst the most extraordinary books for disabled young people, which were represented at the Bologna Book Fair in 2005. Special recognition for this book is shown in the use of a photograph of one of the illustrations in the catalogue.



In the year 2004, a manual (Drawing for blind, Ivo Grebec, Roman Brvar) has been published at the Institute for Blind and visually impaired children, where colourful drawings of fully-sensed pupils are presented in three techniques: visual, thermo-vacuum technique and with a help of the Braille machine. The material used (plastic) does not work as an aesthetic one, but nevertheless this manual is important at development of the sense of touch and creating the idea of the space.

In 2006, Klara Ramljak, a student of preschool education, made a very interesting tactile picture book for her thesis. The title

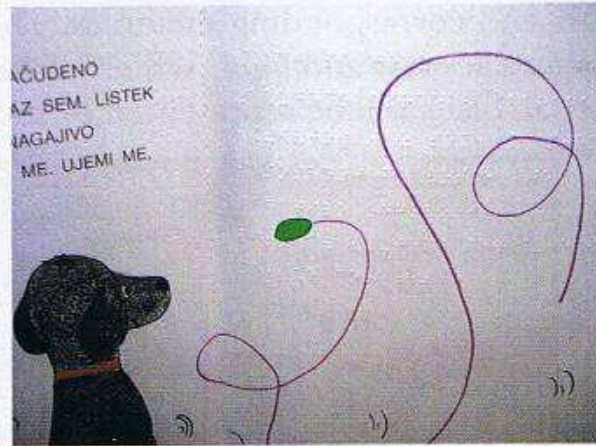
of the book is Vid na izletu (Vid's excursion). The pages are made of wood. Although objects or animals are not numerous, they are made of materials which correspond to their characteristics – the tyres of a bus are made of rubber, the terrarium is made of plastic, a spider out of wool, a snake out of synthetic snakeskin and a grasshopper out of rubber bands which make a sound when touched. The story is about a blind boy named Vid who goes on a kindergarten trip to the zoo. There, the electricity runs out and the children use their sense of touch to recognise the animals, guided by Vid.



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Books of Bojan Grum Kužek Bahalo (A Dog named Bahalo) (2006) and Poletne norčije (Summer Buffooneries) (2007) don't have tactile illustrations, so we cannot consider them as tactile picture books, but they are two of the very few books which have, the text in Braille as well as print. Here, we can also classify the books of Franci Rogac and the Braille copy of the poems of Barbara Gregoric and Zvezdana Majhen.



With the help of the Lions Club Celje, a very famous and successful writer and illustrator, Liljana Praprotnik Zupančič (Lila Prap), has also tried to create some tactile picture books.



Because her illustrations consist of clear shapes, it will not be difficult to adapt them for blind children.

A new tactile picture book, *Soj ptič in Žar ptica*, is currently in progress in a cooperation between a painter, Marija Prelog, and me. This time I am researching the connection between light

and dark colours and corresponding materials. The topic is the difference between darkness and light. White will be represented by smooth material, black will be represented by rough material.



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15 blind children up to the age of 15 in the whole of Slovenia really is a small population. Producing tactile picture books for such a small number of children is of no interest to commercial publishers. I believe that tactile picture books can be made in such a manner that sighted children could also read them.

This group is considerable bigger. We aim for tactile picture books to be available in every library in Slovenia (project: »The tactile picture book in every Slovenian library«), for only in this way can the principle of inclusion be fulfilled, which will benefit everyone. In this way a blind or visually impaired child who is integrated into a local mainstream school can read appropriate books alongside children of the same age. At the same time, tactile picture books will develop empathy towards people of the same age with special needs.



Translation: Tinkara Komar

XV

Romania

Touching, Feeling, Exploring... games and education in tactile books for v. imp children

Cornelia Cadreanu & al

Since time immemorial man has always tried to gain knowledge of what surrounds him, to explore, to perceive and to understand it, constantly asking more and more questions... about 'life'. Driven by curiosity and the necessity to meet his needs and desires – that is how man succeeded in evolving and developing as a bio-psycho-socio-cultural entity. The receiving and processing of information is a complex activity that involves the training and interconnection of the sensory-cognitive processes as well as of the affective, volitional ones.

Development and education are permanent; they are not limits and should not be limits, taking place throughout the life of each individual and in the most diverse fields of activity. Education, knowledge begins when the child is born, and the first person to be his mentor is his parent. Later, at school, the teacher takes over some of the parents' tasks in educating and bringing up the child. Furthermore, an important role in the child's development process is played by the environment and heredity factors.

For an appropriate development process, the child has to be taught from an early age to use all his resources, which is even more important in the case of a child with disabilities. Thus the child would be stimulated to use the other senses in order to compensate for the lack or the lesion of the damaged sense analyzer.

In the very first months of life the visually impaired child shows some delay in development in certain areas, such as the psychomotory development. Identifying these disabilities in time is highly important in order to be able to look for the most appropriate and interesting intervention and stimulation methods.

In a century of reform, innovations and the opening of new horizons, pre-school education is increasingly characterised by a shift of focus on following step by step the child's own development pace, his personality and age traits, using more and more active, explorative and investigative methods.

Early intervention cannot be otherwise accomplished properly but based on a good collaboration among the parents – the family – the early intervention specialists (doctors, psychologists, social workers, physiotherapists, etc..)

Tactile exploration and perception

At an early age, children learn to identify, explore and know the world. Visually impaired children are not different; they also need to become accustomed to the environment. Whereas vision makes a sighted child act, in the case of a blind child it is the touch, the sound and the movements that motivate him to act. In the case of low visual acuity, the sensorial sensitivity remains the main source of information and relation of the child with the environment. A significant part of the brain is allotted to the

hand, the skin being the largest body organ. The tactile sense, the touch is essential in integrating information and relating to all the other senses.

Tactile education remains a specific activity of compensation, correction and training of the tactile function on the one hand and an activity of stimulation of all the processes on the other hand, contributing even to the development of low vision in some cases.

However, in the case of the visually impaired, the organisation of the visual exploration regarding complex stimuli is achieved with difficulty. The perseverance in repeating long and fragmented tactile, auditory and visual explorations can facilitate, in some cases, an accurate perception of the object explored. The tactile sense allows a fine and direct perception of the objects in terms of structure and various characteristics (size, shape, texture, temperature, faces, edges, holes, concavities).

The likelihood of a poor perception can be due to the fact that the representations fund is scarce as a result of minimal practical experience or there could be discrepancies between the representations of the sighted individuals and those of the visually impaired due to the different ways of perception. The objective tactile perception of an object and its projection in space as an objective sensation is a complex function that requires special attention on the part of the subject. When the visual impairment is progressive and the representation is not formed accurately, it erases itself from the memory and gradually, as the ability to see diminishes or is lost, the exact representation of the stimulus becomes more and more difficult. Unfortunately, there are situations when a visually impaired person has other disabilities as well, such as mental, auditory or locomotory. In this case any kind of activity becomes more difficult.

The tactile sense alternates between the prevalence of 'being touched' and the activity of touching an object, the dissociation of the self and the 'outer projection' of the object in relation to the self, before the object is identified. These phenomenological considerations are at the basis of the differentiation between perception (subjective in its nature) and sensation (objective in its nature).



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By using the tactile-kinaesthetic analyser, visually impaired children are motivated to explore the world around them or even to clarify the incomplete visual information. In order to form accurate representations, the child has to perceive the objects in a concrete, real, three-dimensional way, subsequently moving on to the tactile exploration of the bi-dimensional representations, the tactile images. Being a requisite stage in the knowledge of the environment, perceptions are always related to memory, thinking and imagination and coordinated by attention.

Tactile stimulation begins with the perception of the individual's own body and its parts, gradually passing to the perception of the objects surrounding the individual.

The visually impaired child has to be educated with regard to tactile reading and perception due to the fact that he requires supplementary effort for the tactile exploration; when the objects are too big, their perception could be inaccurate (smaller models can be used in that case) or, sometimes, the child makes weak, often immobile, movements that are insufficient for an accurate perception of the shape explored. It is recommended that the adult be patient and steadily encourage the exploration, also constantly talking with the child about the explored objects.



The preschool child's hand is not flexible in its movements, the child does not coordinate or portion his effort depending on the difficulty of the task to be accomplished; he has no dexterity and skilfulness. In time he will succeed in differentiating the movements, eliminating the involuntary and useless ones. Perfecting the movements through flexibility is conditioned by the development of the hand smaller muscles (Petrică, M., Petre, M.). Therefore, at an initial stage (the training of the tactile-kinaesthetic sensitivity), the focus will be on the activities based

on movement and stimulation of the arms, shoulders, palms and fingers (the flexibility of the wrists, coordination of both hands, dexterity of the fingers, etc., in performing a range of activities such as moulding, threading beads, sorting various textures, matching objects, etc..) (Olson, Mangold).

The game : a dominant of preschool age

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Regarding special education, the highlight is on the permanent training of the teacher in the first place. The latter needs to investigate, to look for new teaching techniques that shape, correct and develop skills, that solve through methods complementary to the verbal act the disabled child's problems and frustration, making him regain his self-confidence. Thus the game becomes the most useful method of performing any teaching activity. The game is our companion at any age. It is in itself an activity of exploration, imitation, intervention or creation that takes the shape specific to the various stages of life. It is through games that the abilities to identify, recognize and express emotions are trained. For preschool children the game is the most important activity, a natural method of learning and gaining experience, the practical way for the child to explore the world. They develop mobility and manipulation/ handling skills, learn how to concentrate, how to orient themselves in time and space, to put new ideas into practice, to develop their initiative, imagination or patience, to improve their self-confidence, independence and the ability to relate to the others.

Before formal schooling, the game is as important for the child's development as homework is at school. Physical activity produces sensorial stimulations and appropriate responses that help the brain to become organized. The external results can mean nothing to the adult but for the child they represent a victory

in his own process of growth and development. A child's game involves repetition or practice of something already known. When the child has learnt everything at a certain level of the game, he will move on to the next level (growing and developing himself) (Preda, V., Şendrea, L. 2001)

The game involving actual objects and the imitation of adults (speech, attitude, posture, etc..) constitute an efficient way of learning. Some of the things are non-visual. The visually impaired child will face obstacles in imitating the adult, therefore, with regard to coordination, he needs an alternative to visual imitation. The visually impaired child goes through the development stages specific to the game and, like a sighted child, he will face limitations/ restrictions regarding the possibility to interact with his environment. The degree of the limitation depends on the degree of the disability, the real possibilities, the characteristics of the child's own personality and environment.

Tactile images in preschool education

In the case of visually impaired children, especially in the period prior to learning the Braille alphabet, it is necessary to use certain materials that make the child become accustomed to exercise of orientation and exploration in a given space. To that end one can use images and tactile books that are of real help in forming and developing the reading and writing abilities, and not only. Their use at an early age could accelerate the familiarisation with the tactile signs beforehand, knowledge that is afterwards of great importance taking into consideration the range of tactile materials used in the teaching activity (maps, diagrams, etc..).

For many visually impaired children, reading a tactile book represents the first experience involving an image and it is an important step towards the images to be found later in the

textbooks. For this reason, the introduction of tactile images at an early age is highly important. It is often difficult for the child to come into contact with these images for the first time when at school and in a formal learning context. Therefore, the process of discovering these abilities should be a pleasant one in the guise of stimulating, playful games.

Both blind and low vision children can benefit from and enjoy these books.

Tactile books can fulfil a number of functions, having both an educational role by familiarising the child with various notions, concepts and representations of objects and phenomena, and the role of relaxing and entertaining the child due to the playful and amusing quality of these books.

The book offers the child the possibility to intervene in the story, to give new connotations to the shapes or even create a different story. The interactive character of the book is highlighted in the possibilities that it offers: the intervention on shapes by moving, folding, crumpling and opening them. Thus the reading of the book acquires a playful quality, making the game become the best way to encourage the child's development.

The key objective of using tactile books is to involve the child as active participant. All the same, the current educational and teaching approaches emphasize the learning by discovery and investigation, combining the idea of personal effort with that of education based on interests and promoting the intuitive method that trains all the analysers.

The book can be a reinforcement of the previously acquired knowledge. By exploring, perceiving and experimenting with things from the environment, the children have the opportunity to make comparisons with what they will subsequently find in the book, being able to learn what it is like to feel and perceive these things as images.

Moreover, the child can gain knowledge of a new experience that has not taken place yet (for example, going to the doctor's); then, after the child has had contact with that particular experience, the book can be read again. In this manner new words can be introduced in the child's vocabulary and communication is stimulated, the child being able to talk about his new experience.

A tactile book is not necessarily the transposition of the story in images but it can furnish details not to be found in the text, or the emphasis can fall on the subject, object or phenomenon that is at the centre of the story. Therefore, tactile books for younger children should not have an intricate plot with complex tactile



elements and the text should have rhythm and be easy to remember. It is possible to build a story around a single object or a few shapes, objects or elements. The more ludicrous the object is, the funnier the story or the book can be.

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Tactile books do not present an exact replica of the real-life objects, their dimensions being reduced, stylised, with possibly different colours and textures. Thus, in the case of the blind individuals, the perception of the environment is stimulated in the guise of geometric shapes that are more easily reproduced graphically. Along with the line and the dot, the geometric shape is one of the easiest elements to be perceived. Tactile representations can also explain the shape of various elements that are difficult to be perceived in real life,

either because they are too big and cannot be perceived on the whole (trees, houses, mountains) or they belong to the realm of fantasy (dragons, etc.).

Individuals interpret images in various ways; the blind child does it in his own way. What is important is that the child understands the fact that a certain element of the image stands for something specific, and interprets the image as a meaningful thing. Afterwards, it is possible to explain to him what the various images are about. One way to make this possible is to compare the image with the real-life object.

It may take some time until the blind child understands tactile images. If he shows no interest for a certain book, it does not mean that he will not be interested in other books.

If the child is unable to associate a tactile image with his personal experience, the illustration will then be descriptive rather than useful. It can be interesting on the tactile level but it will not help the child to understand the image. However, in time, after constant trials, the image will be deciphered.

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How should a tactile book be read ?

Reading a book by means of touch is not the same as looking at an image using one's eyes. Sighted individuals perceive the image on the whole as well as the details, and they can form a mental picture and understand what it represents. When a tactile image is read, the situation is entirely different: at first the details are perceived and then the whole image. Piece by piece, segment by segment, the images become a whole and acquire meaning, the entire picture is understood. The visually impaired child is compelled to perform a more laborious mental activity in order to recreate the image step by step, by means of tactile-kinaesthetic perception. This is the reason why visually impaired individuals need verbal references and compensatory guidance in order to become oriented in the tactile-kinaesthetic exploration and in order to form representations about the object perceived as such.

The visually impaired child has to learn how to use a book because, just like the ability to read or to write, the reading of a tactile image is a skill that has to be learnt. The child should assimilate the notion of book and, in order to do that, he has to hold the book himself, being helped only to turn the pages. Describing the images verbally may encourage the child to explore them while reading the text. Some images do not have to be explained, the child should be allowed to discover, explore and identify them by himself.

It is highly important that the adult read the book together with the child; thus, the child is helped to touch and explore, gaining knowledge of more details and forming a more accurate representation. The child is often interested in the details of the objects. A conversation about these things is carried to arouse the child's curiosity. Even if the adult is not experienced at reading

images, he is likely to know what the images stand for and it is important that he and the child have a conversation and talk about all the objects in the image. If the image contains several objects or shapes, the child needs to be told how and where they are situated on the surface of the image.

The child can be asked about the things in the story. Just like the story may contain words that are new to the child, the tactile image may contain objects that are unknown to him. After a while the child will begin to take part in the process of reading and will learn how to read the image. The reading gives the opportunity to discover new words altogether, thus the tactile image can be accompanied by the word corresponding to the object that is represented.

216 **T** & The parents and the teachers of the visually impaired child are his facilitators and interpreters, using the touch, words and verbal clues whenever possible. The child must be told clearly and directly the tasks that he has to perform step by step, as simply as possible. The explanation has to go hand in hand with the demonstration of the body posture and the position of the hands, with the sequence of the tasks. If at first the child is believed to imitate the adult or to act as he is guided, in time he will develop and become more and more independent.

In the case of a visually impaired child the use of the hands may frequently be a problem. It is said that the hands are the blind person's eyes but, according to Fraiberg, nothing is less true and it is necessary to know that the sightless children's hands also risk becoming 'blind'. The observation of the congenitally sightless children that did not benefit from an appropriate early education confirms the existence of such a risk. A large number of children in this category fail to coordinate the activity of their hands properly or to use them in order to efficiently explore the environment.

Nonetheless, at first the visually impaired children tend to explore by using their whole hand and not the fingers. Sometimes the pupil's hand is directly guided by the teacher's due to the fact that some of the visually impaired pupils have a weak coordination



of the hands regarding the ability to break, cut and even explore a shape tactually. The sightless person needs to coordinate both hands constantly and correctly in the tactile exploration or in performing a task.

The 'hand over hand' guidance is a strategy used for a long time by teachers, a strategy during which the adult places his hand over the child's in order to help him to explore the object, to operate with it or to make a certain movement.

The children that have

the opportunity to initiate their movements are motivated to do more, to learn more. If another person performs the action for them, the children lose interest in their own activities and become passive.

The sightless child is not tempted to use his fingers and hands in order to have a tactile experience that would allow him to explore the environment. He would prefer to sit in a corner, slightly moving back and forth and sometimes mumbling to himself. This hesitation to move forward and to become oriented in space can only be explained by his fear or anxiety at the thought

of getting hurt. It is more likely due to his lack of experience in perceiving the world in its spatiality. (Weihs, T. J.)

In the tactile exploration of a bi-dimensional image, the child can be given to explore similar three-dimensional objects, thus the perception exercises taking place both tactually and mentally. The exercises and activities recommended do not just try to render a natural or artificial environment, an imaginary subject and the reliving of a feeling or a sensation, but they also insist on apparently simple notions. In the game of tactile exploration the children acquire knowledge regarding a range of relations such as big-small, up-down, left-right, the importance of identification, the perception of the basics of a structure, the relations that influence the horizontality or the verticality of a piece of work or the relations among the various elements in the tactile image, etc...

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The exploration proper of the book should begin with the exploration of a page. The child has to learn about page orientation, how to feel its margins and corners by using both hands – his fingers and palms. Then the child can discover the position of the object's configuration in relation to the margins of the page, which offers information about how the figures are arranged in relation to one another. Sometimes this can be achieved by repeatedly moving the fingers from one shape to another on the one hand and by moving them from the shape to the margins of the page on the other hand. By developing fine motor skill, children can identify the relative position of the figures and can be trained to establish external reference points in relation to their body and the activities performed. (Preda, V., Cziker, R., 2004).

«Let's read together !»

An essential requirement in the development of the visually impaired child is the collaboration of the specialists and the parents, the child's normal development being inseparable from the natural family context. Through their emotional traits the family members have a unique impact on all the areas of the child's development, being his first and most important teachers. Therefore, they should ensure a positive, warm and stimulating atmosphere. The specialists should work in partnership with the family with whom they make decisions regarding the child's recuperation. Together they will decide on the exercises necessary for the child's development, the parent contributing to these recuperative activities further on. The activities that the parents do together with their sons and daughters are an opportunity for them to better understand their children, the impact of the visual impairment on the child's development, learning activity and consistency, the crucial importance of the activities that involve the children in the simple events taking place in their environment.

How are tactile books made ?

The making of a tactile book follows some very clear steps considering that these books are aimed both at the blind and the partially sighted children. The child should be motivated to use his sight and to touch, to use his hands as well. It is important to take into account the construction rules, the aesthetic value of a book for children that uses simple materials, cardboard, textures, shapes, etc.; these things should be properly glued to the pages of the book, they should not be dangerous, toxic (such as toxic glue or very small objects that prick and can be swallowed) or easily detachable if it is not the case. The frames can be highly

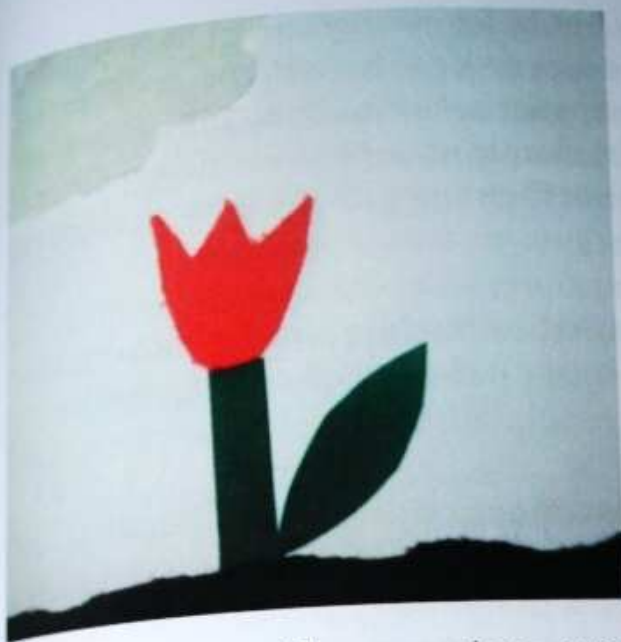
inventive including rectangles, squares, circles, triangles, cutting and perforations of the page.

The size of the pages should be suitable for the age of the child; the book should not be too big in the small hands of the child so that he could explore it efficiently. The book need not have many pages (8-10 pages) and should open fully without bending.

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The materials used should have intense, bright, fluorescent or metallic colours in order to create a strong contrast so that the partially sighted children could identify all the details. Thus, the objects can be placed against a dark background. The elements represented should not have shades like in the visual books in which the illusion of distance and volume is created, since they create confusion in the understanding of the book. If more objects appear, they should not overlap or have similar textures and shapes; the distance among textures has to be of at least 2 mm in order to avoid an inaccurate perception of the forms. In the case of younger children it is important not to show numerous shapes and textures on the page of the book; it is recommended to have only two or three different textures.

By using innovative and attractive textures, one can venture in the tactile exploration to play games of association of feelings, sensations, emotions, creating a link between the colour and the tactile perception. The thermal perception of various textures can be used since some surfaces are colder or warmer than others, may have similar shapes and textures or similar shapes and different textures. Thus, due to strong contrasts, those who do not or only partially see a colour can identify a warm or cold colour by associating the sensation with a particular texture. Sometimes the



olfactory or the auditory senses can participate in this game of colour perception. Therefore, one can use materials that rustle, smell or change their shape (the sponge) when they are touched, unconventional textures and materials, original grounds, and obtain various shapes by scratching, folding or by means of the

thermoform, etc.. The sensations experienced by the child in the 'reading' game are stimulating and formative.

The objects represented through tactile images have to be stylised, synthesized in order to capture the essence, the most important elements of an object. Shapes that are simple, common, geometric or known to children should be used; the tactile sense can best perceive shapes like angles, margins, lines or the differences in the surface and size of the figures.



The subjects of the books for younger preschool children can vary depending on the aim to be achieved: the development of the notion of size, interspatial relations, etc.. In the case of a narrative, the plot should be simple and the main element should appear repeatedly throughout the story with the same size, texture and shape.

After the child got used to reading simple books, he can move on to books in which the difficulty of reading the shapes increases gradually.

Although these books are aimed at preschool children, the text is necessary both in Braille and in black, not only for the adult that accompanies the child on the journey of tactile exploration, but also for the visually impaired child so that he could get used to the Braille signs. The text is dependent on the image. Even if a single object is presented, what that particular object represents should appear in writing; in the case of the narrative tactile books, the text is to be found on the left-side page and the image on the right-side page.

The Romanian experience in creating and using tactile books

In recent times in Romania there has been a tendency to change the mentality of the society regarding people with disabilities. Their integration in the society is increasingly sought through various projects and community actions.

However, the Romanian market remains poor regarding the special materials for the visually impaired persons. On the other hand, that lead to highlighting the teachers who often made their own didactic materials using unconventional resources, creating models, etc..

As regards tactile books, although the Romanian teachers' experience is not so vast, they created tactile images and simpler tactile books, constantly looking for varied techniques and methods to produce teaching materials. In Cluj-Napoca, at the School for Visually Impaired Children, the thermoform and various materials were used to create simple tactile images and books in order to teach basic concepts: size, spatiality, etc.; also, a great contribution was made by the production of pre-Braille books; all these materials were used in the teaching process for preschool children as well as younger pupils.

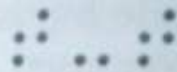
The making and use of such materials would not have been possible but for the direct collaboration of the teachers, psycho pedagogues, educators and Art teachers, in order to help with the education of the sightless child.

At present what we believe to be important is a more active participation of the parents in the team that facilitates the development of the visually impaired child.

At the "Typhlo & Tactus" Workshop held on the 3rd of April 2008 in our establishment, various means of making and using tactile books were highlighted, encouraging the teachers to create new materials.

Working with visually impaired children is always a challenge in the search for new techniques, methods and materials to permanently motivate them. We often face situations in which we do not find our resources or the right words any more, and then we surprisingly realise that it is us who learn from the children how to explain things, how to talk to them, how to guide them in their development. There is nothing more beautiful than

seeing how that little child – with clumsy, shy movements, not very curious, transforms in our 'hands', growing to be interested in what happens around him, searching with his little hands to find more and more answers... Life teaches us all...



Co-authors: Cornelia Codreanu, Roxana Czicker (PhD), Silviu Vanda,
Michaela Bujor, Daniela Mihăescu.
Translation: Raluca Thehei.

XVI

Estonia

A Tactile Book – an important part of culture

Sülvi & Kadi Sarapuu**

Before 2000 there were only a couple tactile books available in Estonia that had been given to different specialized schools such as the Tartu Emajõe School and the Tallinn Helen School via humanitarian aid programmes.

In the spring of 2000 the tactile book called "The Cat with the Zipper" ("Tõmblukuga Kass") was made in the centre for the homeless, supported by the Lahti congregation of the Evangelical Lutheran Church of Finland. Sülvi and Kadi Sarapuu were also actively involved in the activities of this work group. The book was given as a gift to the Linnupesa Kindergarten that operated in Tallinn at the time (presently known as the Tallinn Helen School) that had playgroups for visually impaired children. On the information day held in the National Library of Estonia in 2000 where the book was given to the kindergarten, the first public presentation of tactile books was organised. The presenter

* Mtū Kakora : Beautiful tactile books.

** Sülvi Sarapuu is v.impaired

was Raili Ikävalko from Celia, the Finnish Library for the Visually Impaired and the presentation was interpreted by Sülvi Sarapuu.

Since, at the time, Estonia had not yet joined the European Union, the enthusiasts decided to turn to the Finnish Library for the Visually Impaired, which acted as a mediator for those wishing to enter the tactile book competition called Tactus. We translated the text and the tactile book "The Cat with the Zipper" was entered to the Tactus competition by the Finns in 2001 where it received considerable attention, which encouraged us to continue our activities in the field of making tactile books.

In 2002 Reet Talimaa and Ave Matsin, pedagogues from the Viljandi Culture Academy, showed their interest towards the making of tactile books. They took part of a project-based training course held in the Kangasala School of Handicraft and Home Economics, Finland where new knowledge was gained with the help of Anneli Saro, an employee of Celia and a bookmaker.

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& After returning home from Finland, the book titled "Paula at the Grandma's House" ("Paula vanaema juures") was made under the guidance of Talimaa and Matsin in the course of an experimental training course and, some time later, this book was followed by Reet Talimaa's creation called "Pelle's Ball" ("Pelle pall").

Paula vanaema juures



Pelle pall



These books were given as gifts to the Tartu Emajõe School, a school for visually impaired children. In October 2003, in the course of a project of the students of the National Textile department of the Viljandi Culture Academy, another two books were made- "The Book of Bags" ("Kotiraamat") and "The Handicraft Album for Children" ("Käsitööalbum lastele"). Both of these books are now being used in the Tartu Emajõe School.



Kotiraamat

Today, the course on the making of tactile books has been included in the list of selective courses available among the facultative subjects of the Culture Academy. By the spring of 2007, the following three tactile books were made upon the order of various museums in Tartu: a tactile book introducing the funds of the Tartu Toy Museum, a tactile book on herbs for the Tartu Citizen's Home Museum and the tactile book titled "The Ring of the Sun" ("Päikeseratas") on the subject of seasons for the Estonian National Museum.

During the academic year of 2006/2007, Kaire Olt, a young teacher of art, introduced the course on making tactile books in the Estonian Academy of Arts and six tactile books were made during this course, which were later donated to the funds of the

Estonian Library for the Blind. Among these six books, the book titled "Cheese Hunt" ("Juustujaht") by Liis Raudsepp, a student at the Academy of Arts, received a special prize at the T&T competition held in Dijon, France in 2007.



Juustujaht

Making sure that all children have equal opportunities for discovering the wide world of picture books has been the aim of the workgroup called "Beautiful Tactile Book" since 2001.

The workgroup "Beautiful Tactile Book" gathered for the first time in 2001. From day one, the group has had three members: Astrid Järvisoo, Kadi Sarapuu and Sülvi Sarapuu. Their objective is to make, read and give information about tactile books.

Unique tactile picture books for children

What is a tactile book? Who are tactile books aimed at?

There is a wide selection of children's books available in bookshops and libraries and this is the way it is supposed to be. However, there are quite a lot of such children for whom these books at the shops and at the libraries are simply piles of sheets of paper because the beautiful illustrations of regular books do not reach them and they cannot read because they cannot see. If they also lack hearing, their lives could be very sad and unfair indeed.

For these children, tactile picture books are the doors to the world of picture books. With the help of these books, children can get an idea of the tracks of animals that are otherwise hard to explain. Children can discover three-dimensional shapes and their spread surface views, children can live in the world of fairy-tales by touching and moving puppets, they can fly in space and broaden their horizon on a wide range of spheres of life- if only there were more of such tactile picture books available. Various types of materials can be used for making the books: different textiles, fabrics, leather, fur, stones, feathers, cardboard, wood, moulding clays etc.. Wisely chosen colour contrasts help to activate and develop the co-ordination between the eyes and the hands and the remaining vision of the children. Various types of buttons, zippers, loops, pockets, bands and ribbons help to develop the fine motor skills of disabled children.

Now, if you also add the black and white texts and the Braille texts and the recordings with text and sound effects to it all you will get a unique tactile book.

In the making of a tactile book all methods of handcrafting can be used: sewing, application, knitting, crochet, stitching, fastening with different types of seams, cutting, gluing, moulding from wood and different moulding clays and, most importantly- all this can be done with the help of tons of creativity.

In the process of making the books one needs to keep in mind that the pictures and objects have to be firmly attached to the pages and all the things that little fingers could get a hold on need to be well hidden and firmly fastened. The materials need to be non-toxic.

In 2005 the workgroup "Beautiful Tactile Book" organised a broader-scale exhibition of the books made by the group in Tallinn, which was visited by Tiia Artla, a lecturer of the Handicraft and Home Economics department at the Tallinn University.

She was so inspired by the books seen that the handicraft students of the Tallinn University have been making tactile books as term projects for the Estonian Library for the Blind and for various specialised schools for three years now.

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& In the spring of 2006, on the initiative of Sülvi Sarapuu, six enthusiasts gathered for the first time: in addition to Sülvi also Kadi Sarapuu, Ülle Olt, Kaire Olt, Heidi Nugis and Rein Järve. They established the non-profit organisation called MTÜ Kakora. The organisation was registered in the autumn of the very same year and, by today, on the initiative of the organisation and the abovementioned workgroup, various presentations of tactile books have been organized in different libraries of Estonia in order to introduce tactile books and their making. The team has also represented Estonia as a guest at the T&T competition held in November 2007. MTÜ Kakora's website can be found at the web address www.kakora.sarasy.com.

During the years from 2001 to 2008 the workgroup "Beautiful Tactile Book" (BTB) has made 20 unique tactile books in the course of various projects and these books can now be found in the funds of both Estonian and Finnish libraries for the visually impaired and in the rehabilitation centre for the visually impaired children.

The books made by the workgroup have required much work but, despite their interactive nature and good level of workmanship, the books have not received any prizes at the Tactus competitions. The books made by the workgroup are introduced in more detail on the website www.sarasy.com.

The book titled "Autumn" ("Sūgis") received two diplomas at a competition held in Birmingham*, the UK in 2008.

After having visited the tactile book presentations, some teachers and writers have also made a few tactile books of their own.

*The list of books,
Educational and activity-stimulating books*

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1. "Tracks" ("Jāljed"), 2002, Raised shapes of animal tracks give blind children/adults an idea of the shapes and positioning of animal tracks on sand/snow/mud.



* Organised by Marion Ripley

2. "Shapes" ("Kujundid"), 2003, Enables to turn specific spread surface views of different shapes into actual three-dimensional shapes by using buttons and loops.



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3. "Our cottage" ("Meie maja"), 2005, In the course of performing a number of tasks children discover the design of a simple house (the art of construction) and get the opportunity to study different terms (such as 'in front of', 'behind', 'above', 'below', etc.).



4. "A Child's Day" ("Lapse päev"), 2005, Enables to guide a child through the main activities of a day and the related objects: waking



up, getting dressed (buttoning up, tying laces and bands, zipping up), performing the morning hygiene procedures (washing the teeth and the face, drying with a towel), eating, (food, dishes), playing (different toys/activities), getting dressed to go outside and going to bed after doing the evening washing (nightwear, bedtime story/lullaby).

5. "Autumn" ("Sūgis"), 2004, Introduces the nature in autumn: mushrooms, leaves of trees, cones, thorns, fruits of trees.



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6. "Peter the Potato" ("Kaido Kartul"), 2006, The book looks at the life cycle of the potato, one of the most common everyday foodstuff in the nature.



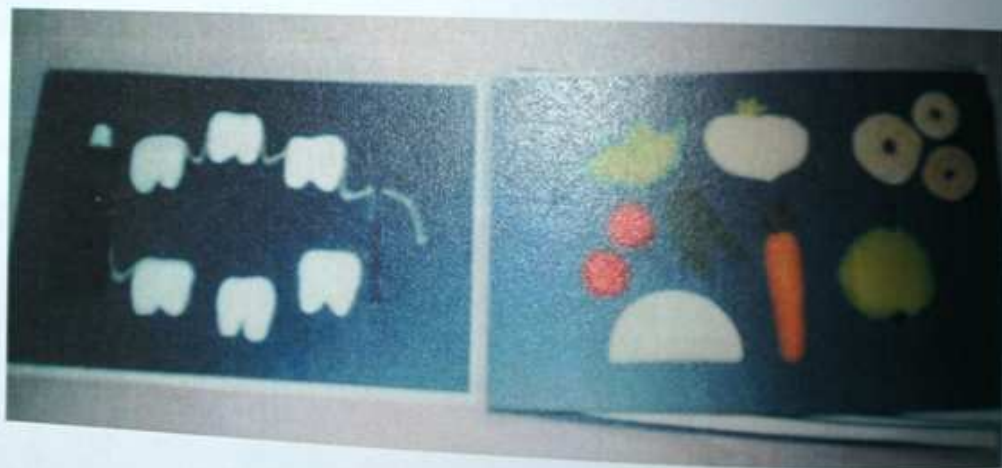
7. *"The Dog's Barking"* ("Koera hau-kumine") 2002, Children are encouraged to learn and recognize the voices of animals (each animal makes a unique sound in accordance with the storyline when the animal figure is pushed).



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8. *"Teeth Brothers"* ("Kikukased pikukased"), 2003, The book discusses the health of the teeth via a verse-form text and illustrations.



9. *"The Mole's Party"* ("Mutionu pidu"), 2005, The book introduces different animals via a verse-form text and touchable shapes of animals and children are encouraged to copy the actions done by the animals.



The Mole's Party

Folk stories

10. "Bear the Farmhand" ("Karu sulaseks"), 2006



11. *"The Race"* ("Võidujooks"), 2006



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12. *"The Fox Goes Fishing"* ("Reinuvader kalal"), 2007



13. *"The Wolf and Ice-Fishing"* ("Hunt jääaugul"), 2007, the books introduce Estonian folk tales and cover the subjects of foolishness, simple-mindedness, greed, cleverness, etc., with the help of animal characters.



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Home theatres

14. *"The Suitors at the Sauna"* ("Kosilased sauna juures"), 2005, This fairy-tale belongs also the category of folk tales but it enables the children and their parents to play the fairy-tale along. The puppets in the book can be moved from page to page and dressed accordingly.



15. *"Snow White and the Seven Dwarves"*, 2002, The child can set up each picture in the book separately, the only thing that will not move is the background, the characters move along with the child.



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16. *"Little Red Riding Hood"*, 2007, The puppets in the book can be moved and the wolf snores after eating his big lunch. Both the granny and Little Red Riding Hood as well as the sack of rocks fit neatly into the belly of the Wolf.



17. "Cinderella", 2006, Everyone can try on the little shoe.



18. "Crow and Sparrow" ("Vares ja varblane"), 2005, This fairy-tale originating from Bangladesh teaches a valuable lesson about friendship and greed.

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19. *"The Three Elves"* ("Kolm pākapičku"), 2003, This is a Christmas tale.



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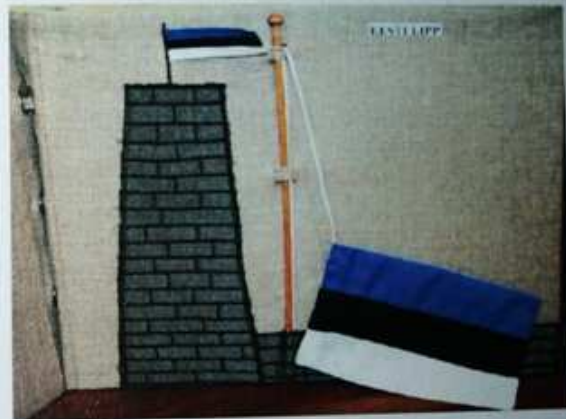
The first tactile book ever made in the Handicraft and Home Economics department of the Tallinn University was finished in 2005 as the bachelor's degree project of Monika Jaik and was called "Goat to a Sprat Flock" ("Kits kilu karja"). The student wished to introduce visually impaired children the life of our forefathers via our folk culture and on the basis of a folk song from Kuusalu. It took three months to turn the idea into an actual book: the idea for the book was very good, the end result was cleverly designed, the job was very neatly done and tasteful,



almost all the techniques covered during the course were applied in the book: sewing, crochet, knitting, looming, crafting, stitching, looming and braiding of national belts and ribbons, wet and dry felting.

By the spring of 2006 another 7 books were completed as a result of the group work done as part of project-based courses of open studies programmes. Groups consisting of 3, 4 and 5 people could either choose their own subjects or were handed out the subjects to be covered, they were given the source data and the theoretical knowledge about making tactile books on the basis of which each group had to compile the texts and each member of the group was asked to make on page of the book. The aim was to make such tactile books for blind and visually impaired children that would be both educational and developing as well as exciting and appealing.

The book of Estonia



During the academic year of 2006/2007 groups of university students made as much as 20 books on the subjects of our national culture and the trees growing in Estonia and, during the academic year of 2007/2008 another 13 books were added to this collection. As we know, things do not always go exactly the way we would want them to and, thus, not everything in the books can be regarded as being perfect from the perspective of the user but as humans we do learn from our experiences and try to do better in the future.

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The Zoo



The Farm life



The making of a tactile book is very stimulating for the mind but it is also a very time-consuming undertaking. In addition to the beautiful appearance of the book, the bookmaker also has to keep in mind how it seems and feels when it is "read with the hands", which is, in fact, not the easiest of goals to achieve.

A bookmaker often has to close his or her own eyes and touch the book but, despite the effort, he or she will not get the exact same idea about the book as a blind person would because the images generated by the imagination of those who can see and those who cannot are still so different from each other. For a person who can see it is quite difficult to put together a whole picture by simply touching various borderlines without seeing them. For makers of tactile books, the issue of which designs and materials to use for the end result to be truly recognizable is often the most challenging task.

For instance, magazines do not provide us with ready-made designs for making a piece of meat. Finding the right material is often a matter of chance and luck. Fortunately, there are quite a lot of interesting materials and objects available in various shops. Thus, the best thing to do is to walk around in shops with your eyes open and it is quite probable that you will eventually have an idea about what to do with the things you see on sale.



University students making tactile books



Conclusion

You cannot buy tactile books from bookshops because they would be very expensive. At the same time, tactile books should be seen as pieces of art, which could, similarly to paintings meant for hanging on the walls, be passed on from generation to generation.

By today, the 39 tactile books made by university students have been donated to the Estonian Library for the Blind and 2 tactile plays made have been donated to the Tallinn Helen School.

During the academic year of 2008/2009, another 11 books and 2 games will be completed.

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In 2006, this project-based study programme was included as a creative exercise to the lecture cycle titled "The Basics of National Art" read at the Tallinn University. Vocational training courses for active teachers have also been organised. Workgroups consisting of 3, 4 and 5 members were put together from the participants of the training course, some of them focusing mostly on handicraft done by women and some mostly of that done by men and some being mixed groups. The groups are responsible for providing themselves with the materials needed for the making of the tactile books by using their own finances as they are doing it for a charitable cause. The Estonian Library for the Blind provides the groups with the Braille texts needed for the books. By today, 150 people have taken part of the study programme.

The target group consisted and still consist of the students of the Craft Education department of the Tallinn University and the teachers of handicraft and home economics as well as

the teachers of craft and technological education from general education schools because the (vocational) training programme of this project is aimed at the organisation of the project-based study programme of technological education meant for the upper level students organised as part of the working version of the national curriculum to be developed for general education schools. In addition, this study method is mainly based on manual labour and the abovementioned target group has received the preparation needed for completing the task. Class teachers, art teachers and teachers of other subjects are also involved in the vocational training programme – the aim being both the raising of the level of professional competence of the target group as well as the creating of a circle of enthusiasts that would be as varied as possible.

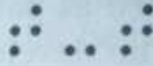
Here, we would like to encourage you to notice the children living around you who are slightly different and to try to enhance their development by making tactile books!

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By today, approximately one hundred tactile books have been made in Estonia. Most of them belong to the funds of the Estonian Library for the Blind. Less than ten of the books are located in the Tallinn Helen School and the Tartu Emajõe School. A couple of the books are used by different museums in Tartu to facilitate the displaying of their exhibits to visually impaired people.

The projects have been sponsored by: the Estonian Library for the Blind, the Council of Gambling Tax and financed through the Ministry of Social Affairs, the Ministry of Education and Research, Ministry of Social Affairs and Health Care and by the Social and Health Care Board of the cities of Tallinn and Tartu

and also by the project-based study programme of the Tallinn University and the University of Tartu.



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Text and photos:

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Reet Talimaa and Silja Lorents, Tartu

Sülvi and Kadi Sarapuu, Mtü Kakora

Part III

Typhlo & Tactus International Colleagues



Culture 2000 Program



XVII

South Africa

Tactile books in South Africa

Lynette Rudman

Before I started making and selling tactile books for blind children in South Africa, in 2004, there were no such books available in the country. Young preschool children were only exposed to tactile toys at home and at preschool. Teachers of the blind would read stories to the class and let them feel concrete objects that were related to the story. For example, if the story were about the beach, the teacher would pass large shells around for the children to explore. These preschool children were never exposed to tactile graphics books in any way. They were not exposed to meaningful books in any form in preschool. When they started the foundation phase they would have to learn to read the tiny dots of Braille for the first time. This was, and still is, very difficult for anybody learning Braille for the first time. Their fingers are not sensitive enough and some children find Braille very difficult to learn. I cannot stress enough the importance of exposing a young blind child to 2-dimensional tactile graphics pictures. It not only develops the sensitivity of their little fingertips in preparation

for Braille reading, it also gives them a lot of pleasure and it makes the stories come alive. Seeing a young blind child enjoying a tactile book is extremely rewarding. We need to strive to get all of our blind children reading tactile books with their fingers.



These children are feeling seashells and putting them against their ear in order to hear the sound of the ocean before listening to a story about the beach.

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As a preschool teacher in 2004, I enrolled a 3-year-old blind girl, Colette, in my school of sighted children. I read the children a lot of stories in class and this seemed to spark an interest in books and stories amongst all of the children, Colette included. Her blind mother used to read her Braille children's books at home too.

Colette would often sit in the reading corner paging through picture books and pretending to tell stories. She would often ask a child nearby to tell her about the picture on that page. She obviously loved the feel of books; holding them, paging through them and making up stories as she went along. I then realized that I needed to find tactile books for her to read. After doing a lot of research over the Internet and also by asking people in the field, I realized that there were certainly no such books available in South Africa. The few books that I found on the Internet from America were far too expensive to buy and to ship over to my country.

I then decided that I would make her a simple tactile storybook and so my collection of tactile books begun. The first book was called *Little Circle learns to roll*. The main character, Little Circle, was a small metal disc with two eyes glued on. He was attached to a chain, which was attached to the book, so that he would not get lost. He could be used on each page as the story was being read. The other characters were also circles but made of different textures and sizes for easy identification. They were glued into the book and were not moveable like Little Circle. For instance, Daddy Circle was the largest circle and made of blue corrugated card and Mommy Circle was made of soft pink felt and she was middle-sized. This first book was such a tremendous success with Colette and also with her sighted peers that I decided that I had to make more books like that. I went on to make two other books with Little Circle as the main character.



Little Circle : left, a small metal disc with eyes glued on and attached to a chain with soft pink middle-sized Mommy Circle and large blue corrugated Daddy Circle.

I have designed more books in that series with Little Square as the main character since those first three Little Circle books. These books contain very simple tactile graphics and are ideal for beginner tactile readers. I have marked them as suitable for

ages 3 years and over. The age guidelines are a rough estimate because this all depends on each individual blind child's level of development. The text in these books is very simple and may be read by a beginner reader.

The success of these first storybooks inspired me to design some educational books for Colette. I started off with a simple shape book and this then led to a counting book, a book of opposites and many more. The sighted children enjoyed these books as much as she did. They would often want to be blindfolded and to "see" the books like Colette did. This method of inclusion was beneficial to everybody in the class. The sighted children understood how Colette functioned in a blind world and Colette enjoyed sharing her books with her sighted friends. I could read the book to the class and Colette could feel the characters once I had read each page. At last I had found a way of including every child in story time. Colette's blind parents could also read the books to her and to her little sighted bother. Colette is now 7 years old and is enjoying reading the Braille in these books herself.

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The tactile books that I designed for Colette were such a success that her mother encouraged me to show them to schools for the blind here in South Africa. I received my first large order from a school for the blind near Cape Town in 2004. Word spread rapidly about these books and I soon received many other orders for the books from schools and parents of blind children. I then added a range of more durable fabric books for younger blind children. My collection grew so rapidly that I realized I needed a website to display them on. At first my website was available only in South Africa because I was afraid that if I opened it up to the world wide web, I would not be able to keep up with demand as I was making the books by myself. I soon taught two unemployed

women, with some sewing experience to help me sew parts of the fabric books. This was so successful that I managed to produce many more books in one week. I decided to open up my website to the whole world. I now receive orders from every corner of the globe and I have had a lot of favourable comments regarding my books. This has inspired me to carry on and to design even more books. It is very rewarding to know that I am designing and making books that children all over the world can appreciate.

Since I have started making tactile books I have helped the South African Library for the Blind to make 20 copies of two of my cloth books for lending out to blind children. These two titles have been produced in four of the 11 official languages of South Africa, namely English, Afrikaans, Xhosa and Zulu. With this knowledge of sewing these tactile books, they now plan to design and make their own books.

I believe the Pioneer Printers in Worcester near Cape Town have also started producing some printed tactile books to sell. Slowly but surely people in South Africa are realizing the importance of producing and teaching blind children to read tactile pictures.

Designing the first tactile books

When I set about designing the first tactile book, I did not have any knowledge of tactile design. I used my common sense and made the characters very easy to identify. I used the difference in size and texture for easy identification. The shapes of the characters were just simple shapes like circles, squares, triangles, diamonds and ovals with eyes. The text that I wrote was very simple so that a beginner reader could read it. I used shorter words as well as words that were phonetic and easy to sound out.

After designing the simple books, I realized Colette was ready for more challenging tactile shapes to read. I then designed a range of nature storybooks with slightly more complicated shapes. The series consists of a book on the life cycle of the butterfly, the frog and the tree. This series has been very popular with schools because it teaches these life cycles in a fun story form. The educational books that I designed also include the simple basic shapes as well as some slightly more complicated shapes like flowers, trees, cars and many more fun tactile pictures.



Little Circle with some of his simple shape friends from the book, Little Circle goes to school.

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I did a lot of research on the Internet about tactile design for young children and I attended a workshop on tactile design by Marion Ripley from Clearvision in the UK in 2007. I received notes from various people about this subject before I set about designing more complicated tactile books to sell. I attended an advanced tactile design workshop in Birmingham in December 2008. This will equip me with the knowledge to design tactile graphics for high schools for subjects like Biology, Mathematics and Science.



Tiny Tadpole hiding behind the waterweeds when the large diving beetle swims by.

Producing tactile graphics pictures

Tactile books are a fun introduction to the wonderful world of reading for the blind child. These books are essential for the development of the child as a whole. They can be used to convey ideas, concepts and vocabulary and they can be shared with other children in the class, even sighted children. This will encourage social interaction and help to develop a love of reading.

Tactile pictures are very helpful when explaining things that the blind child cannot touch such as fire, the sun, dinosaurs, mountains etc.. A tactile picture of a tree is useful because even though trees can be touched, they can never be perceived as a whole because they are too large. It is always wise to show the blind child a smaller version of a large object that he cannot feel as a whole before you let him feel the two-dimensional version of it on the paper. For example, you can let him feel a plastic rhino before showing him the rhino in the tactile book. Make sure to explain to the child that the plastic rhino is just a much smaller version of the real thing. You could then let him feel around the side of a car and tell him that the rhino is that size in reality. Better still; take him to the touch museum so that he can feel a real stuffed rhinoceros.



Take the blind child to the museum and let him feel the large stuffed animals so that he can get an idea of the size and feel of the animal.

Before beginning to design tactile pictures, we need to understand that there is a big difference between reading by sight

and reading by touch. We need to understand how sighted people and blind people read. Sighted people can quickly glance at an image and process it very quickly in their minds. They can quickly separate the main features from unimportant elements. This does not work the same way with the blind person. The fingertips are much less sensitive and are very slow to decipher tactile graphics. The blind reader has to first start feeling from the top of the page and then work his way around the page. Only then when he finds a tactile object does he feel around the shape of the object and try to decipher it and other things on the page. The overview is only as large as the fingertip itself. It can take up to several minutes before a blind person has build up a memory of the tactile picture.

1. First of all, keep the design very simple. Do not include unnecessary detail and clutter. When designing a tactile picture for a Blind person you need to decide on what you want to convey in the picture. Is the picture going to illustrate a story or will it be used to convey educational principles? The tactile picture should enhance the text very clearly. Remember that children need to build up tactile skills from the beginning so use very simple pictures to start with. You need to also take into account the age or developmental level of the person who will be reading the picture and also their level of experience in reading tactile pictures. You need to edit or proofread the tactile picture with your fingers, with your eyes closed, before you present it to the young child. Let a colleague check it for you too as you may not be aware of some mistakes in the design.

2. To avoid clutter you need to make sure that lines or other

objects are not too close together. Space the objects on the page. A simple rule is to keep different objects a finger width apart. Avoid decorations and other distracting things on the picture. Only include what is necessary.

3. Use a variety of contrasting textures and even colours for those visually impaired children who can see colour. Materials like felt, velvet, suede, corduroy, satin, rubber, fake fur and leather, scourers would provide interesting textures. Always check that the textures that you are using are contrasting. Some textures may look different but tactually they feel similar. Felt may feel like low fur pile, for example. We need to forget the visual sense and concentrate on the tactile sense when designing tactile books. Make sure the texture is appropriate for the object. For example a sheep should be made of a fluffy fabric similar to wool. Avoid using too many textures on one page, as this will confuse the child.

4. Partially sighted children love bright colours and even shiny colours like gold and silver. Shiny holographic wrapping paper that is laminated is very popular with children.



Make use of bright contrasting colours for those visually impaired children who can see colour.

5. Remember if there is a sequence of images, you need to keep the textures, symbols and layout consistent through out the book. When using textures use only one texture for a person's dress for example. It would be confusing to have the top of the dress in silk and the bottom part in velvet.

Making the whole dress in velvet would make it easier for the blind child to identify.

6. The size of the image must not be too big or too small. For example, if you were designing an insect, you would not design it life size. That would be too small. You would make it bigger so that each body part and feature can be felt clearly. On the other hand, objects that are too large are difficult to feel and therefore the blind child will have difficulty in building a tactile memory of what he is feeling.

7. Sometimes the image that is being designed may need some elements to be repositioned, resized or distorted in order that they can be felt clearly. Tactile pictures do not have to be visually pleasing to a sighted person; they need to be practical for a blind person to feel and to learn from.

8. Try and avoid perspective because this is a very difficult concept for a blind person. For example, making nearby trees larger and trees further away smaller. People who have been blind from birth do not understand this concept. Bear in mind that tactile pictures are in two-dimensional form.

9. When designing an animal like a cat or dog include all of the body parts. It is wise to draw all four legs, its tail sticking out and its head facing you so that you can see both eyes and ears. If the picture were in profile, the blind child would think that a cat has only two legs, one eye and one ear.



This cat design includes all four legs, both eyes and ears when designing animals. Remember to use fake fur for furry animals.

10. However, if a tactile picture is in profile, you must explain to the child that he is only seeing the side view and that is why the animal appears to have only one eye and ear and two legs. You could explain this more clearly by using a plastic animal.
11. Avoid overlaying objects. Do not hide some parts of the picture behind other parts. For example, someone walking behind a car where only his upper body is sticking out. This will confuse a blind child. When drawing humans or animals you should always show the whole body.
12. When drawing a human you must always show both arms and both legs, even if the picture is in profile. The arms should stand out from the body and the legs should be sufficiently apart so that the child can identify that there are two legs.
13. Do not use shadows in tactile pictures because the blind child does not understand them. Shadows are used for sighted people to illustrate volume.
14. The sizes of objects like people should be consistent throughout the book. The main character, for example, should be the same size and not bigger on one page and smaller on another page.
15. Avoid using lines that are too thin or too thick because they will be difficult to feel. A line should be sufficiently raised to make it clearer to track.

Text and Braille

1. It is important to use large print in black against a white background, as well as Braille in all tactile books. Toddlers, even though they cannot read Braille, need to know that large

print and Braille help to tell the story. The large print can be read by low vision children or by adults reading the book to the blind child. A blind adult can even read the Braille to a sighted child.

2. Keep the text short and simple for smaller children. Books for very young children only need one or two words on each page. Short sentences are ideal for toddlers' books.

3. Ideally the bold print and Braille should be on the left hand page and the tactile picture on the right side. The Braille may be printed under each line of printed text or it may be separate and pasted in below the print. There is an adhesive transparent plastic available for organizations for the blind that can be used in a Perkins Braille machine and then pasted into board or fabric books.

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4. For large print that is easy to read you can use the

Teachers Pet font on bold, size 48.

The cat is fat.

Arial font is also suitable on bold size 28.

The cat is fat.

5. The Braille should be simple uncontracted Grade 1 Braille for young children and it may be placed directly under the large bold print. Both the print and the Braille may be printed onto paper and pasted into the book or the text may be printed directly onto the page.

6. For fabric books you can either write the text onto the fabric with a permanent marker or you can embroider it neatly on by using chain stitch.

A fabric shape book with the title embroidered on with chain stitch. The blind child can feel the shapes of the letters and understand that sighted people can read it.



Materials

1. Normal printing paper is not thick enough to hold tactile pictures so it is wiser to use thicker 160 g/m² or 240 g/m² board. It is a good idea to use an even thicker cardboard (350 g/m²) for beginner books for very young children, as it will be more robust. Fabric books are also ideal for tiny children or children with additional disabilities as they are very robust and difficult to damage.

2. Try to use strong glue that does not leave a smell when dried. Do not use too much glue as it may make the object that you have glued feel lumpy.

3. It is wise to make templates of all of your designs in heavy cardboard like that from cereal boxes. You can put the template

on the back of the material, trace with a pencil and then carefully cut it out.

4. Books for blind children should be ring bound so that the book can lie open on the table. The child can then use both hands to feel the Braille and the tactile picture.



Books for the blind should be ring bound with either plastic or metal binding combs. This ensures that the book can open flat so that the reader can use both hands when reading.

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5. Text or other paper-based objects may be pasted into the book by using double-sided sticky tape.

6. Glitter glue can be used to make eyes on objects or to make raised lines on the board. There are some smoother fabric paints on the market that come in a squeeze tube that also dry raised. Make sure that it is properly dried before binding the book because the pages may stick together.

7. Because the materials for making tactile books are so costly, you could ask friends or sewers to donate scraps of the materials listed below to you. You could also place a notice in the local newspaper asking for donations of scrap materials, buttons etc for tactile books. People are normally very willing to donate materials if they know blind children will use them.

Here is a list of materials that you can use in tactile board books;
Felt, velvet, fake leather, fake fur, suede, corduroy, polar fleece,

upholstery material, satin, silk, tulle, lace, smooth laminated paper, sandpaper (use this very sparingly as most blind people hate the feel of very rough sandpaper), rubber non-slip matting, corrugated card, textured paper, sheets of cork, PVC, wall paper samples, balsa wood, or anything else that is flat and can be glued down safely.

Suitable materials for fabric books:

Some of the above materials are ideal for sewing into fabric books.

You can add more three-dimensional objects to fabric books like plastic spoons, forks, plastic insects, lids, ice-cream sticks, small dolls clothes, large buttons or beads securely sewn, Christmas decorations, feathers, braid, artificial leaves or flowers, small sponges from pill bottles, cord, ribbon, wool. Some objects may need holes drilled in them so that you can sew them into the fabric book. Text may be written into fabric books by using a permanent marker or laundry pen.

For the pages of the fabric books you can use stiff cotton fabric cut into rectangles of about 40cm x 20cm in size and folded in half. Once the tactile pictures and text have been sewn onto the pages, you can bind the book by sewing machine or by punching holes in the spine and threading a lace through the holes and tying it firmly in a double knot.

8. Remember that a blind person relies on their other four senses so include items that make sounds like squeakers, bells and scrapers. For smell you can use lavender in a pouch or perfume sprayed onto a flower. If the story is about fruit, let the child taste some real fruit before or after you read the story.

Safety

1. Make sure that the child cannot pull off anything that is glued into the book. Small things like beads and buttons need to be sewn very securely into fabric books.

2. Children must be taught to read the tactile pictures with their fingertips and not to pull off the glued objects with their fingernails. Small children or children with developmental delays should be supervised when handling tactile books. Most tactile books are not suitable for children younger than 3 years of age.

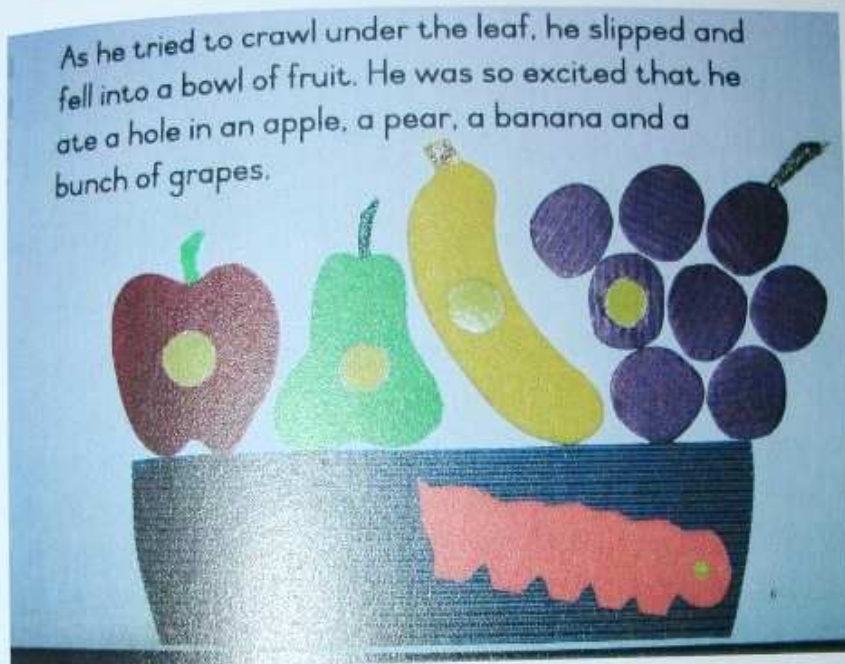


Children must be taught from very young to read a tactile picture with their finger pads. Both hands must be used.

3. It is wise to include a warning in the book regarding safety, like:

“WARNING - choking hazard - this book should be used under adult supervision because of the small parts which may be swallowed. Not suitable for children under 3 years.”

4. Avoid using sharp objects or toxic objects in your books.
5. Avoid using objects that could splinter or break over time.



Nature story-book

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Croatia

Tactile picture books in Croatia

Javorka Milković

The process of printing and distribution of tactile picture book in Croatia is at its very beginning. The situation with tactile picture book in general can be resumed by following sentence: There are some of the noble attempts that are not very well connected between themselves. It would be unfair to claim that the needs of visually impaired children to have a tactile picture book are not being recognized by special teachers and libraries, but permanent and systematic press does not exist.

Institutions and the individuals who do recognize the problems of absence of tactile picture books are following:

- The association of blind persons of Croatia
- Croatian library for blind people
- The printing house for blind and low vision (which is the part of Centre for education of the blind and low vision «Vinko Bek» in Zagreb)
- Centre for education of blind and low vision «Vinko Bek» in Zagreb

- The libraries of the city of Zagreb
- Faculty for education and rehabilitation – University of Zagreb
- «Little house», daily centre for rehabilitation of the visually impaired persons
- The library and reading room «Fran Galović» of the town Koprivnica
- The association of special teachers who work with visually impaired children
- Elementary school «Pećine» in Rijeka
- The others (special teachers, parents, teachers, etc..)

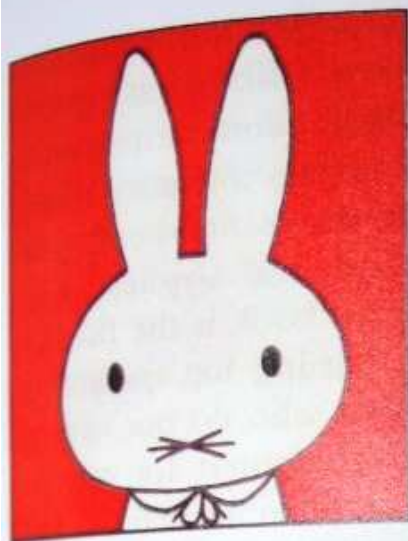
Institutions and activities related to tactile picture book

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The association of the blind of Croatia

The publishing activity of the Association (at least concerning tactile picture book) has started in 2007. Three titles have been printed and distributed: «*Miffy*» and «*Miffy cries*» by Dick Bruna, and «*The alphabet*» created and illustrated by the Association itself. The distribution has been a part of a project «Touch the story». The aim of the project was to donate the three titles to blind and low vision children aged from 0- 6. During the project, twenty children from different parts of Croatia were given a package of the three titles. Until now, reactions of the children involved have shown that the picture books about *Miffy* (little rabbit) and alphabet were success. The pictures are made without to many details which could disturb child's attention (like all the other picture books by Dick Bruna). The colours are clear, but not aggressive, and all the images have black edge. For the children who do not have any sight, the black edge can be recognized by touching a line made by a sort of the rubber.



JOŠ KAD BI I BEBU IMALI,
JAKO BI SE RADOVALI.
TADA BI IH BILO TROJE,
OSTVARILI BI ŽELJE SVOJE.

JOŠ KAD BI I BEBU IMALI,
JAKO BI SE RADOVALI.
TADA BI IH BILO TROJE,
OSTVARILI BI ŽELJE SVOJE.

«Miffy» (Dick Bruna);
Association of blind persons of
Croatia, 2007.



IDE MIFFY, JADNA, SAMA,
SVA ŽALOSNA, U SUZAMA.
GOLEMA JU TUGA SNAŠLA,
MEĐU SVOGA NIJE NAŠLA.

IDE MIFFY, JADNA, SAMA,
SVA ŽALOSNA, U SUZAMA.
GOLEMA JU TUGA SNAŠLA,
MEĐU SVOGA NIJE NAŠLA.

«Miffy cries» (Dick Bruna)
Association of blind persons of
Croatia, 2007.

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The three titles can be bought at the Association.

After the success of the tactile picture books for preschool children, the Office of Ombudsman has started another action which had the final aim of providing a tactile picture book to visually impaired children aged 7-10. The Office of Ombudsman has printed a stamp. All of the costs for the publication were paid with the money collected by selling the stamp. The stamp was additional, which means that no one who would buy other stamps was obliged to buy an additional one. The action was organised in order to celebrate 18th anniversary of The Declaration of The

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Rights of The Children. The result of the action has been a tactile picture book «*Super je bit različit*» [Being different, it's great!] by author of verses Đurđa Miklaužić. Illustrations were drawn by Zrinka Ostović. The picture book promotes tolerance towards anyone who is «different». According to the picture book, we are all different: thin, chubby, tall, small, blind, deaf, Gypsies... A very interesting fact connected to this picture book is the following: although the picture book has been existing for approximately one decade, the version for the children who do not have any visual problems could not possibly be adapted for touching because the illustrations contain too much details and too many shades of colours. The lady who has made those illustrations has agreed to make them all over again for the tactile version. The consequence: the illustrations for the first and for the second version are completely different. Described example proves that the authors of illustrations are willing to adapt their work to those who have special needs, but they have to be previously informed about the perception of these children.

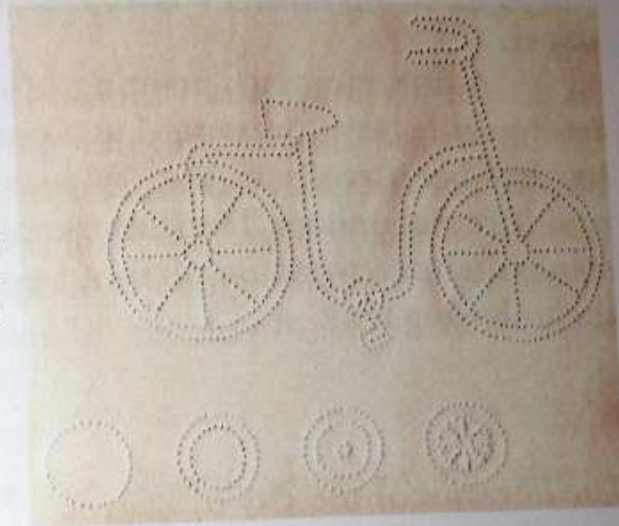
The book has been made in the same way as the three titles for pre-school children, and can also be bought from the Association, but it was given to visually impaired children who were aged 7-11 while the action was taking place. That tactile picture book was a great success too.

Croatian library for the blind

The library exists for many years, but it is very poor with the titles for the children, at least the ones that concern tactile picture books. According to informations given by the library itself, there are two titles manufactured during 1980's. The titles are: «*Snoopy*» and «*The Fish*», both by Dick Bruna. Textbooks for the

first class (native language) are kept in the library as the witnesses of the success in the past, because these books are not used in the schools any more. Their titles are: «*Dobro jutro 1*» [Good morning 1] and «*Dobro jutro 2*» [Good morning 2] both by Edo Vajnaht. The picture shows one of the images from the book.

Dobro jutro 1, Edo Vajnaht,
Croatian library for the blind,
p. 47, Zagreb, 1982.



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The printing house for the blind and low visioned
(which is the part of Centre for education of the blind and low visioned «Vinko Bek» in Zagreb).

The printing house has had some activities concerning tactile picture books (in the first place for the blind, but not low visioned children) during 1980`s. In direct collaboration with the kindergarden and elementary school of the same center, the printing house was making the titles which followed the curriculum, and were meant to be used by the pupils of the centre. The titles were either by Dick Bruna, either the ones who explain the changings which happen in the nature through different seasons, or the others which tell the stories about children`s experiences.

The titles by Dick Bruna: «*Snoopy*», «*The Fire*», «*The Snow-White*». Other titles, made for pupils of the Centre are the following:

«Seasons» and «Let's count to 10», both made by special teacher Barica Pugar in 1987. The pictures are realised as high relief and made on plastic leaves by using high temperatures. Although they do not satisfy the ecological requests of today, their advantage is their permanence. They can not be destroyed by many readings, which does not stand for Braille texts and pictures printed on paper.

At the moment, printing of new titles is just a wish, which has recently been presented as a part of one project. The project has not been realised, but it's presentation has provoked some positive cosequences. The libraries of the city of Zagreb have shown some interest for tactile picture book, which will be described in the following text.

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The libraries of the city of Zagreb

The libraries and the printing house for the blind together took part in a project « The door of a library wide open». The employees of the printing house have given two lectures about the main principes which have to be respected during fabrication a tactile picture book. The book, named «*Crvić Mrvić i Kokica Kvocalica*» [The Tiny Worm and The Clucking Hen] is hand made. The most of the pictures are made of natural materials. Only the hen's beak and legs are made of artificial material. The other materials are seeds of different sorts, tissues, feathers, paper etc. The book tells a story about a little worm who lives on a tree. Every day, he is being visited by a hen who tries to persuade him to come down from his tree because she wants to eat him. Finally, the worm finds a tiny hole, and goes to an another story which is yet to be written. The text is written in Braille ant the black print. It took a few months to finish the book. Pupils aged 11-14

participated in fabrication of the book. Today the book exists on the children's department of the library, but it can not be borrowed. The children can read the book during their staying in the library.

Faculty for education and rehabilitation – University of Zagreb

The Faculty is the only university institution for education of special teachers. During their education, students attend the subject named «Adaptation of educative materials for visually impaired children». One of the students' tasks is to make a tactile picture book. The final product is being estimated by visually impaired pupils. So far the Faculty has no official publications of the tactile picture books.

«Little house», daily center for rehabilitation of the visually impaired persons

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The Centre has recognized and supported attempts of «The library and reading room «Fran Galović» in Koprivnica about whom talks the following text. The employees of the Centre have given lectures about main principals in fabrication of tactile picture book to the teachers in kindergarden and elementary schools, and all the others interested in tactile picture book.

Library and reading room «Fran Galović» of the town Koprivnica

The childrens' department has adapted and bought some of the picture books for their little clients who have sight problems, but has not created it's own publications which could be borrowed. There can be found some foreign titles, mostly from England, which are not really intended to be used strictly by visually

impaired children, but by children in general. However, using by visually impaired children does make sense. Although The Library does not have any own publication, it has to be stressed out that the positive consequences of the adaptation have been the education given by «The Little House» and the other lectures with the aim of motivating the parents of the visually impaired children to become the clients of the library. The picture books made during the education tell stories about children's direct experience (for example, the leaves represent walking through woods etc.)

Centre for education of the blind and low visioned «Vinko Bek» in Zagreb

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The Centre is the only institution specialised for education of visually impaired children who are not integrated in elementary school nearest to their homes. The Center does support the inclusion too. At this moment, The Centre has no own publications, but does have a part to take part in the projects which support the process of publication of the tactile picture book.

Association of special teachers who work with visually impaired children

It is a young association. The members are special teachers who work with visually impaired children. The members of The Association are presenting themselves through some projects, but the tactile picture book is at the moment just a wish.

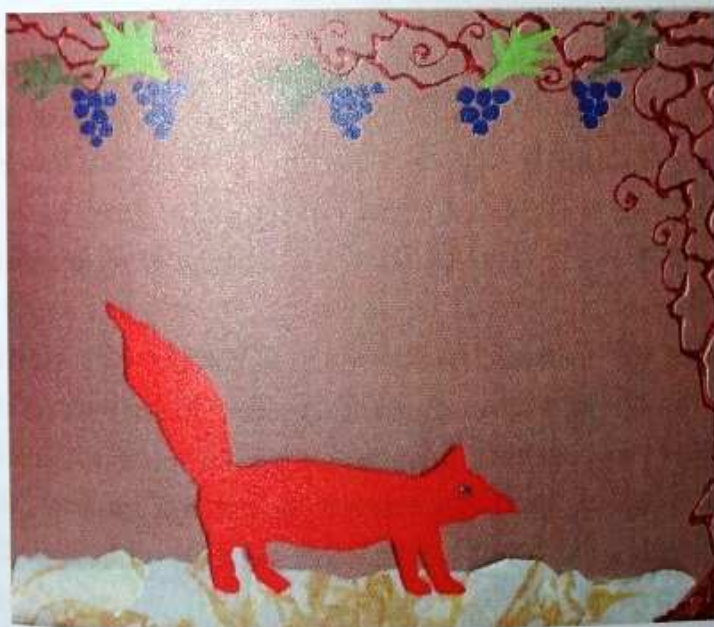
Elementary school «Pećine» in Rijeka

It is a mainstream school which have a special department for the children who have sight problems. The pupils-members of

the departement are integrated in local mainstream schools but they are supported by the departement. General activity of the departement is providing a help to their pupils and their teachers. The pupils attend the excercices of Braille and those which tend to improve their residual vision. They come to the departement once or twice a week. The work is organised as individual, or they work in couples.

16th December 2008., the School has opened a library for the children who have sight problems. At the moment, the library has some of the foreign publications, mostly from The United States and The South Africa, but also has some of hand made picture books which are not Croatian official publications. The photography shows a tactile picture made for the fable «*The Fox and The Grapes*» by La Fontaine. The fox is made of fabric, the vine is drawn in 3D pen, and the grapes are made of cardboard. The text is written in Braille.

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«*The Fox and The Grapes*» by Jean de La Fontaine, adaptation by Javorka Milković. This adaptation was done because that fable is obligate literature in elementay school.

Tactile picture book on the market

Books made of fabric may be a great help for the very first encounter of visually impaired children with a book. Those picture books can be bought in toy stores. They contain pictures which show different forms, colours (for children who have residual sight), spatial relations, etc. Thanks to these books, parents, teachers and the other persons who work with visually impaired children can get useful ideas for making tactile picture books on their own. That is the advantage of described picture books. Another advantage is the fact that the books can be washed and used again, without fear of ruining them.

Disadvantages are: they are not really picture books, but the toys similar to picture books; they do not give variable tactile informations because all the images are made of the same sort of fabric; they are made of artificial materials.

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Recently, on the market have appeared some picture books edited by different editors, who do have a name «tactile» picture book. Although the pictures in these books do have some elements which can be observed by fingers, they can not be used by children with sight problems for several reasons. First of all, the pictures are not tactile in general, but have only a few parts which can be seen by touching them, for example a nose is tactile, but the rest of the face is not. For the children who have some residual sight, the colours are not clear enough, and the pictures have too many details. Tactile elements are realised as low relief and can not be recognized by a little child with poor tactile experiences.

There are also some picture books which have tactile elements made by different fabrics, but can not be used by visually impaired children for the same reasons. Although the books



When I'm happy by Trace Moroney

are not very well adapted for visually impaired children, the editor has to be praised for recognizing the problem of lack of picture books on the market.

The books which can help

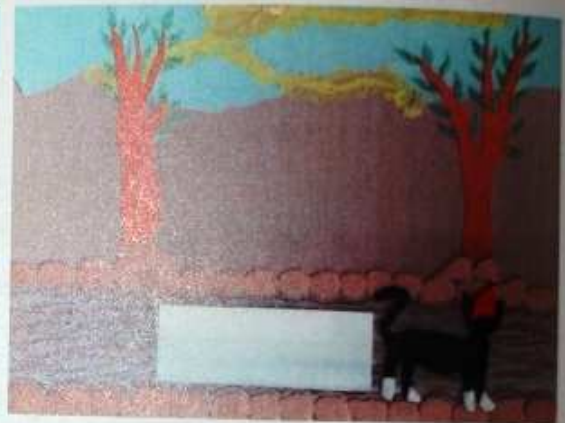
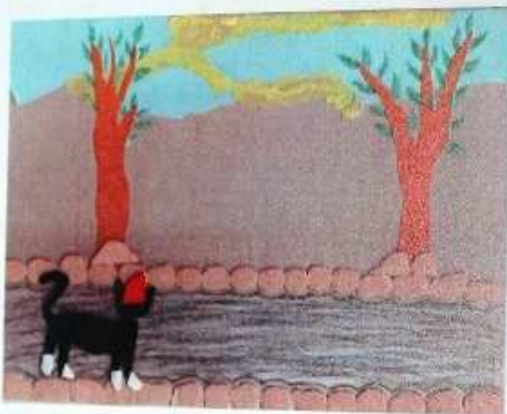
In Croatia, it is possible to study Waldorf education by Rudolf Steiner. One part of the curriculum refers to a subject which is called «Mobile picture book». Students make their own picture books. In general, they are made of cardboard, but other natural materials are allowed. Those picture books are a great help when an idea of motion picture on the film has to be explained. Figures are pasted to a cardboard and can be observed by fingers. Keeping a view on mobile elements is a very good exercise of visual fixation for those children who have residual sight. Natural materials enrich tactile

experience. These are the advantages of mobile picture books.

Disadvantage is certainly the fact that they are not very resistant, and they can not be found on the market.

Except for the students, professors who give lectures during the study of Waldorf education, also give lectures and workshops to kindergarden teachers and teachers in elementary schools during the process of professional improving, which is an obligation of any teacher in Croatia.

These books are not Croatian official publications.



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& *Ide mačak* [A cat walk], poetry from *Word, rhythm, movements* by Ivana Hreljević et Ilona Posokhova, Ostvarenje, Zagreb, 2002.). Adaptation by Javorka Milković.

Conclusion

Although there are no many titles that concerne official publications of tactile picture books in Croatia, has to be admitted that the consience about the problem does exist on several levels. In the past, the offer had been richer than it is today, but thanks to consience present and existsting good will, we should hope that the future is going to bring much better situation.



XIX

Canada - Quebec

Illustrated Tactile Books in Quebec (French language)

Louise Comtois, Jean Jacques

Books for blind children, birth to five years old

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The history of the tactile illustrated books for young blind children in Quebec is probably similar to the one in the rest of the world: tons of efforts by enthusiastic and devoted parents or educators who took a lot of time using strings and glue to adapt or create one or two books to answer the needs of one blind child. We will never find any documented traces about the titles of the books and the adaptations made at the time; nor will we find any of these books in a library. Fortunately the information was transmitted orally from one generation to the other. Most blind children touched their first tactile book in elementary school around the age of four or seven years old depending on the customs at the time. Most of them knew that books existed to tell stories but only for sighted people, not for them.

Since then things have changed ... but so little! The availability of tactile books and books made for young blind

children (0 to 5 years old) is still rare ... but it exists. At first the teachers or educators of Institute Nazareth et Louis Braille¹ made tactile books that were used in the classroom, lent or given to their students. The adaptations showed a lot of work and good will but the books were very fragile. Nevertheless they were practical to teach parents how to adapt already existing books or how to create some from scratch.

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The proximity of the USA and the availability of catalogues from internet allowed us to find out about the tactile books made by the American Printing House for the Blind and particularly the collection of *On the Way to Literacy*. That collection offers interesting books to touch created for blind children, where the little fingers can look for textures, significant small objects hidden in little pockets or in boxes. Some of the more recent books address tactile emergent literacy: tracking of the index, recognition of different textures and simple symbols, the presence of braille in a sensible manner and finally imaginative stories still significant for a blind child. We also found the Panda collection from Perkins aiming at early literacy for young blind children with tactile books accompanied with a parent's guidebook and activities. Sadly for the young francophones in Quebec, everything is in English!!!

We also have since a few years, the possibility to buy tactile books from France, Les Doigts Qui Rêvent. Since the presentation made in Montreal by their director, Philippe Claudet, at the international conference Vision 2008, many parents and organisations showed their interest in buying those books. However, that purchase seems impossible for many parents or because of the price or because of the formalities to order from

1. Used to be the school for the blind and is now a readaptation center for visual impairment.

France. Also, parents hesitate and do not order them because the books cannot be "seen" or touched to appreciate it's content for their child. It will probably be very interesting to see the reaction about the books that will be published for youngsters in the BiTiB* collection in which Quebec is a participant. Those books made especially to promote emergent literacy with young blind children aged from birth to 5 years old, could increase the access to tactile books for that group of youngsters.



Prototypes from Quebec presented to the BiTiB group by Louise Comtois and Joanne Thibodeau.

Researchers from the Université du Québec en Abitibi-Témiscamingue (UQAT) have started since 2004, in cooperation with the Centre de Réadaptation La Maison, the adaptation of books for blind children. This team is aiming for:

"... accessible material for blind children that could also be used by those with low vision, our adapted books should be in three modes: tactile, braille and print. Therefore they could also be appropriate for blind parents with sighted children and also for grand parents with vision problems.

* BiTiB: Blind Infant's Tactile Illustrated Books, international research group (Cz Rep, Fr, It, Netherlands, Switzerland, Quebec) about tactile books in the frame of early intervention. Created and organised by Les Doigts Qui Rêvent.

GOALS

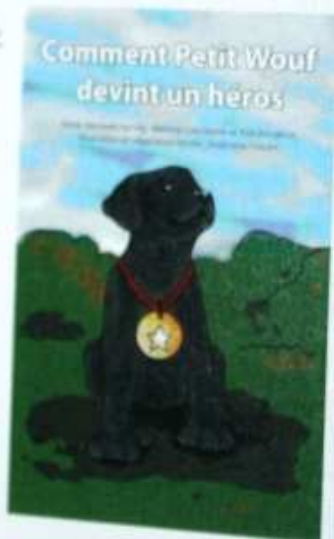
We wish to reach the following goals with emphasis to the two functions particular to literacy, inform and entertain, by the:

- 1) Promotion in early childhood, of emergent literacy for the blind and low vision children in Abitibi-Témiscamingue;
- 2) Creation of emergent literacy material for preschool blind and low vision children to help build a better relationship between the parent and the child and also promote their transition to daycare, preschool or school;
- 3) Offer quality and various materials to blind and visually impaired children to encourage their imagination and obtain knowledge on the environment.

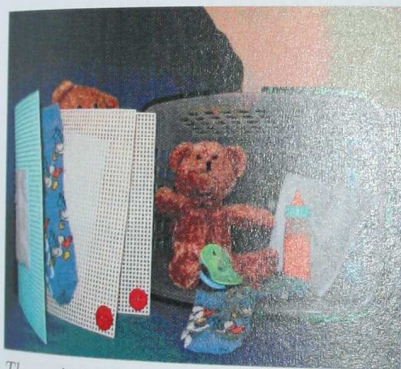
From Martine Cournoyer, UQAT, Martine.Cournoyer@uqat.ca

The team from Abitibi created five one edition books, two fairy tales, an ABC book, a bedtime story and a book about shapes.

Books from Abitibi



On the other hand a joint team from Institut Nazareth et Louis Braille and Jacques-Ouellette school, are presently completing three intervention kits for parents and educators of blind children, from birth to five years old. This work follows the conclusions stated in the study "*Le développement de la conscience de l'écrit chez l'enfant aveugle âgé de 0 à 5 ans : recension des écrits*". These kits include an intervention guide divided in three sections (according to the developmental level), objects, toys and games aiming fine motor development and at last books adapted or made for each level: *Je touche*, *Je reconnais*, *je classe*, *je joue*, *Je Braille un point sait tout*. The intervention guide should soon be available and the "*Recension des écrits*" is available on the INLB site.



The «going to bed» book



Daily life objects

My first book



Body parts



The books included in those kits aim emergent literacy to allow young blind children to live tactile experiences similar to ones lived by sighted children with literacy. According to Giasson and Theriault, these experiences permit the acquisition of specific knowledge for sighted children and they can be easily adjusted for blind children. It could read like this:

- Establish a relationship between tactile or print signs and language.
- Learn the functions and conventions about tactile and visual writing or reading: when, why and how, do we read or write, the direction of reading etc..
- Learn by tactual experience the concepts related to: page, line, letter, word and sentence.

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The evolution of tactile (raised line) drawings in schoolbooks

It is in the education system that we had and still have an important increase in the production of raised line drawings. Forty years ago, no figures were systematically reproduced in school books used by braille students. Now, at the beginning of 2009, almost all figures in all published schoolbooks are reproduced with raised lines: geometrical figures, diagrams, schematics, plans and even the most complex geographic maps. This is why we regrouped all the different ways to make adaptations and reproductions under the name "Dessins en relief" DER. These drawings come from ordinary schoolbooks used by sighted students.

Today also, only the figures useful for learning are reproduced and this, after they have been adapted to tactile learning. All the figures that are not directly related to learning, that are not bringing useful tactile information or would be better adapted by a descriptive text, are eliminated. This is done also

for the color charts, the various drawings used only for visual interest.

It was in 1979 that we saw the first sign offering blind children raised line drawings in their schoolbooks. At that time, Jacques-Ouellette school, formerly known as Nazareth et Louis-Braille school, established a technician position dedicated to the different adaptations and the most important job was to produce tactile drawings for the students of the school. This technician², with a braille transcription technician formed a team at the service of the specific needs of the blind and visually impaired students of the school.

Different tactile adaptations, like geographical maps, had already been made by the teachers. But these productions, mainly models in three dimensions, were not reproductions of figures coming from schoolbooks. These models were made out of paper with different thicknesses, strings glued to establish the contour, small pieces of wood, material with different textures, etc.. These useful one and only models, shared and touched by all the students in a cacophonic tactile display, had a limited life time.

The implementation of the production service in 1979 allowed for a more diversified production. The ultimate goal was to offer to each blind student a copy of all the figures, for all the subjects taught in all school levels. We found out very soon that this work was too much for only one technician. That is why, right from the beginning, the production of models was abandoned for the production of templates used with thermoform. Almost

² Clément Virolle is a technician specialised for the blind since 1979. His experience brought him to develop and apply particular techniques for the production of raised line drawings.

all of the templates were reproductions of drawings in published schoolbooks used by sighted students but also used in schools by blind students. This allowed a better bond between the specialised and the ordinary school where many students were mainstreamed. From then on, as soon as a template was finished, the production of one or many samples of a raised line drawing depended only on the cost of the material and the time used by the technician.

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This was a giant step, but still did not reach the intended goal. It certainly was not sufficient to give each blind student a tactile graphic volume but the drawings had to be meaningful when touched and useful in the learning process. This was the reason why the technician and the pedagogues have put together their knowledge to produce better tactile drawings. Consequently, the final result was not a simple reproduction of a print drawing into a raised line drawing, but an adaptation of the printed drawing according to the pedagogical goal and the needs of the user. As time went by, different templates were made, in an artisan way, using diversified work techniques and materials including aluminium sheets. For more than ten years this was the procedure. Although the production of these drawings was for the exclusive use for the students of Jacques-Ouellette school, some schools bought, occasionally, at a high price, some essential figures or maps. For example, in 1992, one simple duplication in thermoform format of one drawing was costing six dollars (canadian) and more than twenty-five if a new template was necessary.

During that time, mainstreaming was growing and the specialised school services for blind students were split between two organisations: Jacques-Ouellette school and the Commission scolaire des Premières-Seigneuries. At the end of the eighties, due to the pressure coming from mainstreaming of blind students in ordinary school, the ministry of education negotiated a contract

with "les Éditions Braille du Québec"³, for the transcription in braille of the approved schoolbooks and their sale to the schools who required it, at the price of two dollars and fifty cents for each braille page. Therefore, there was an obligation to do the transcription in braille of the schoolbooks approved by the ministry of education on demand. It was then common to pay as much as two thousand dollars for a braille book worth only twenty dollars in print. The transcription respected, word for word, the printed material. But, in most cases, except for a few mathematical figures, the drawings were not reproduced. In the space where sighted students would see a drawing, the blind student read "Illustrations not included". The production of drawings, were not supervised by a pedagogue: most often, it was a simple exact raised line drawing of the printed matter. In the beginning, the production of these drawings was done on thermoform, then gradually on swell touch paper. In 1995, raised line drawings on thermoform were very rare and were, according to some publishers, prehistoric.

In the mid nineties, to diminish the cost, the ministry of education, awarded braille transcription to the "Commission scolaire des-Premières-Seigneuries" whom operated, as Jacques-Ouellette school did, a braille transcription service. Some private transcribers and "les Éditions Braille du Québec" were asked to make the raised line drawings taken from schoolbooks approved by the ministry of education. But since 2006, it is the "Service de Production Adaptée (SPA)" at Jacques-Ouellette school who is responsible for the production of raised line drawings included in schoolbooks approved by the MÉLS⁴. Therefore, the schools do not need to buy expensive schoolbooks anymore, but they can borrow them for a one year period, at a reasonable cost based on

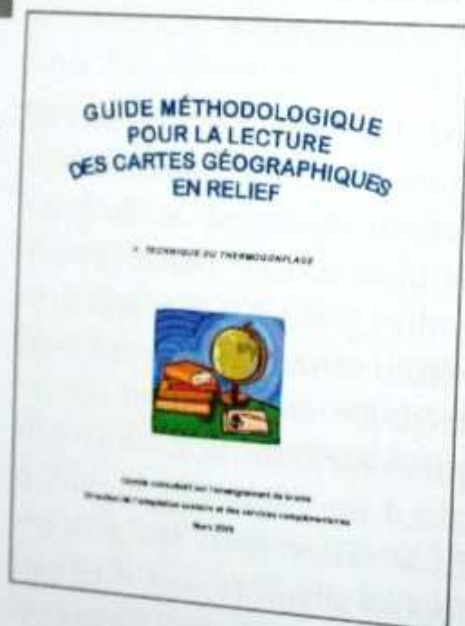
³ Éditions Braille du Québec is a service of the Institute Nazareth-et-Louis-Braille (Health and social services).

the number of braille pages. Gradually, an interesting collection of braille books was created offering all the schools in the province of Québec most of the books used by sighted students.

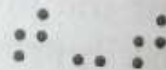
More so, all the drawings essential to learning are not only produced in raised lines but they also are produced according to the adaptations proposed by a pedagogue specialised in braille teaching. The simple embossing of a printed drawing (without adaptations) is often without sense for the touch and hinders the learning process. That is why, to enhance the tactile recognition of the drawings, work groups including pedagogues and technicians, have set rules and regulations to respect when creating and producing raised line drawings. Those rules and regulations shaped a method for reading raised line drawings which is thought in the MÉLS braille program.

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The production of school books for elementary and high school is now the result of a joint work of «Service de production braille de la Commission scolaire des Premières-Seigneuries» and «Service de la Production Adaptée» of Jacques-Ouellette school in the Commission scolaire Marie-Victorin.



4. Ministère de l'éducation, des loisirs et du sport (Minister of Education, Freetime and Sport).

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United States of America

Designing tactile illustrations for children's books

Suzette Wright

Whether you are a teacher, transcriber, or caregiver of a child with a visual impairment, this guide is intended to help you learn more about:

- the role of illustrations—both visual and tactile—in books for a young child
- challenges and limitations of tactile illustrations
- factors that contribute to well-designed tactile illustrations
- considerations that must be addressed in order to design meaningful tactile illustrations
- information supporting an overall sequence of difficulty for various types of tactile illustrations
- types of tactile illustrations and the tools and materials needed to create them

It is hoped discussion of these will assist you, whether you are designing tactile illustrations for an existing children's book, a book you have created, or are evaluating tactile illustrations in tactile books produced by others.

Role of Illustrations in Children's Books

A quick glance at children's books on library and bookstore shelves reveals a wide range of storybooks and informational books filled with colorful, interesting pictures. People who study how to engage young children in books and in reading believe visual illustrations in children's books play several important roles.



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- As an adult reads a book aloud, visual illustrations give the child a fuller understanding of the book's events and meaning. They provide instant information and often add detail or humor that is not included in the book's text.
- Visual illustrations attract and hold a young child's attention long before he is able to read—or perhaps even understand—all of the words of the text. Bright colors, appealing characters and expressions, familiar and unusual settings add interest as an adult reads aloud.
- Visual illustrations act as conversation-starters for the child and adult: What does the picture show? What is the character [doing, feeling, wearing]? Is this thing round like the other things in the picture? These conversations are an important way to engage a young child in books, helping him build oral language skills and learn the meaning of unfamiliar words (Whitehurst, Falco, et. al, 1998; National Early Literacy Panel, 2006).

- Talking about a book—its text and pictures—also models for the child how to think about what is being read in order to make sense of it (comprehension strategies). Later, when he learns to read independently, he may use similar strategies to increase his own reading comprehension (Gold & Gibson, 2001).

- Books with visual illustrations encourage development of book-handling skills: learning to hold the book right side up, turning pages to view the pictures. Even though a young child cannot read the words of the story, pictures can encourage early, independent enjoyment of the book.

- By drawing the child into handling and exploring books, pictures may also increase his exposure to nearby written words. As a young child looks for pictures, he may also notice the print text, critical to learning about books and reading.



- Once the words of a book are familiar, a child may use what he sees in a book's pictures as a guide to help him pretend read. Pretend reading is when a child says aloud words of the story, using a reading tone of voice as he turns pages. Although the child's words may not match the words in the book, it is clear he thinks of himself as a reader, an important early step on the way to literacy.

- And at a later stage, when a child is truly beginning to read, pictures continue to support his learning by providing clues that allow him to fill in gaps between what he is able to read and words he does not yet know.

For a young child who is not yet a reader, visual illustrations are an important bridge, helping a young child take a more active role in book reading, as a listener and later, as a beginning reader.

When a Child Has a Visual Impairment

It is clear that visual illustrations in children's books engage and assist a child with typical vision. But what if a child cannot see a book's pictures? How can adults engage a young child with a significant visual impairment as books are read-aloud? What can add meaning to the words of the book, especially if the child's language skills are still limited?

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- For a child who will read braille, children's books in braille offer important braille exposure and a degree of tactile interest. Long before he can read, a child may enjoy the feel of braille as adults read aloud. He can begin to learn that the braille "tells the story" and may imitate the hand movements for reading braille.
- Books that use rhyme, "catchy" language, or repeated words may be interesting to listen to, even if a child cannot view their pictures.
- And if a book does not depend too heavily upon pictures, adults can briefly describe some of the most important illustrations, using language at the child's level and relating their description to things the child has experienced.

However, exploring braille may not hold the attention of a young child for long periods, and lengthy descriptions of pictures can take away from rather than add to a child's interest. Furthermore, unlike exploring a picture, listening to a description is a passive activity. A key goal of reading aloud is to engage the

child as an active participant. Given the young age of the audience, and the limitations just discussed, many teachers and parents of preschoolers with visual impairments have chosen to use story box objects and tactile illustrations as a way to add interest and meaning to some books they read aloud (Miller, 1985; Stratton & Wright, 1991; Newbold, 2000; Lewis & Tolla, 2003).

Story Box Objects

Story box objects are real objects, related to the book, given to the child to handle and explore as the book is read aloud. The items are usually collected together in a box or bag. Story boxes (or bags) offer a good first step for sharing books with a very young child who cannot view pictures. Although it takes time to find books featuring common objects that can be easily gathered up, most children enjoy using story boxes and often like to help choose and collect the items to include.



A long-time favorite, "If You Give Mouse a Cookie," by Laura Joffe Numeroff, features a demanding mouse with a growing list of needs for milk, a straw, a napkin, crayons, tape, and more—items that are easily found around the house for inclusion in a story box.

However, story box objects are not part of the book. They are examined alongside the book, and therefore, may not engage the child in exploring and handling the book to the same degree as visual pictures (Lewis & Tolla, 2003). In fact, story box items may draw a child's attention away from the book itself, limiting his exploration of the book and the written words it contains.

Tactile Illustrations

In addition to story box objects, tactile illustrations—pages with illustrations designed to give tactile (touch) information related to the book's story or topic—also have the potential to add meaning and interest to books for a preschooler who cannot view the book's pictures. Tactile books (books with tactile illustrations) vary in the types of tactile illustration they use and are available from different sources.

- Many tactile books are custom-made for a child by a teacher, caregiver, braille transcriber, or volunteer.

- Some publishers of print books produce children's books that include tactile features. These are designed for a visual learner who can also view the surrounding print picture; the meaning the tactile features have for a child with a visual impairment may be limited.

- Some braille publishers add braille labels to tactile books produced for visual learners. This does not change the fact that the visual illustrations (with tactile features) were designed for a child with typical vision. The books do have, however, the advantage of offering important braille exposure and something to touch, even if the tactile illustration falls short of having true meaning for a young child with significant vision loss.

- A few braille producers publish tactile books specifically designed for children with visual impairments. In most cases, the tactile illustrations are also visible. Because the text is both print and braille, these books are appropriate for a range of audiences: children with significant visual impairments, typically sighted children, children with low vision, and adult readers who are braille or print readers.

Assortment of tactile books from the American Printing House for the Blind featuring a variety of types of tactile illustrations. Each book is designed for and evaluated with children with visual impairments, yet also provides visual images for children with limited or typical vision. Text is both large print and braille.



Role of Tactile Illustrations in Children's Books

To be effective, a tactile illustration should provide the child with a tactual experience that, along with the book's words, triggers a connection with the child's own experience of the object in everyday life (Wright & Stratton, 2007).

Like visual illustrations, tactile illustrations can serve several functions as books are read aloud.

- They have been observed to add interest and meaning to story reading for many children (Miller, 1985; Stratton & Wright, 1991; Norman, 2003).
- They offer a child opportunities to actively explore and think about what he



discovers in the illustration and relate it to the words of the text.

- Because tactile illustrations are part of a book, they are more likely to involve the child in handling the book and as he does so, in encountering its written text.

- Like visual pictures, tactile illustrations can also act as conversation-starters as adult and child touch and comment on what the tactile illustration contains and relate this to the story.

- Some children, once they are familiar with a book and its tactile illustrations, use tactile illustrations to pretend read—similar to a child using visual illustrations to pretend read.

In addition, books with tactile illustrations give a child with a visual impairment opportunities to learn how to examine and interpret tactile displays. This is important knowledge since a variety of tactile displays (tactile maps, diagrams, charts, and graphs) accompany school textbooks.

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Children with typical vision seem to interpret visual pictures and many other types of graphic displays, such as diagrams or maps, almost automatically. Since infancy, their world has supplied a steady stream of images on signs and labels, in books, and on television. They have had many chances to observe as adults use a variety of visual displays.

For a child with a visual impairment, however, learning to interpret tactile illustrations and displays is not automatic; it requires practice, support, and instruction. Many abilities—hand skills, tactual exploration skills, and cognitive skills—develop over time and combine to help a child explore and interpret tactile displays. There are also conventions or rules of practice that require explanation and associated concepts to be learned. Many adults with visual impairments report dissatisfaction with their own preparation for interpreting tactile displays.

For a number of children, exploring and enjoying books with well-designed tactile illustrations may be a valuable, early step in their preparation for using tactile maps, diagrams, and other tactile graphic displays. It is possible experience with well-designed tactile illustrations provides a foundation both by building skills and by helping the learner form a positive attitude about tactile displays. Every book does not need to be accompanied by a story box or tactile illustrations, and not every child enjoys them. But many children with visual impairments demonstrate interest and enthusiasm for tactile illustrations (Miller, 1985; Stratton & Wright, 1991; Wright, 1991; Swenson, 1999; Norman, 2003).

Interest in tactile books

Tactile storybooks developed at the American Printing House for the Blind (APH) are evaluated with young children with visual impairments to assess children's interest in them. More than 18 storybooks have been developed for the On the Way to Literacy series, featuring a range of types of tactile illustrations. From 16 to 37 children, ranging in age from 2 ½ years up to kindergarten level or age 7, participate in the evaluation of each book. Questionnaires returned by their teachers indicate most children—both potential braille and large print readers—show a high level of interest in the books. Many have commented that a student with little previous interest in books (without tactile illustrations) showed increased interest in reading from the tactile books. In addition, teachers report that some students use the book's tactile pictures to help them pretend read (Wright, 1991). (Please see Appendix B for a listing of these and other tactile books produced by APH.)

Types of Tactile Illustrations

There are many different ways to represent objects and concepts in

a tactile medium. We will discuss a possible order of difficulty for these later in the guide, as well as the tools and materials needed to create them. For now it is enough to become acquainted with basic types of tactile illustrations frequently used in tactile books designed for a young child.

Tactile illustrations may be composed of:

- **Objects or parts of objects*** glued, tied, Velcroed® or otherwise attached to the page or enclosed in a bag, envelope, or pouch fixed to the page.

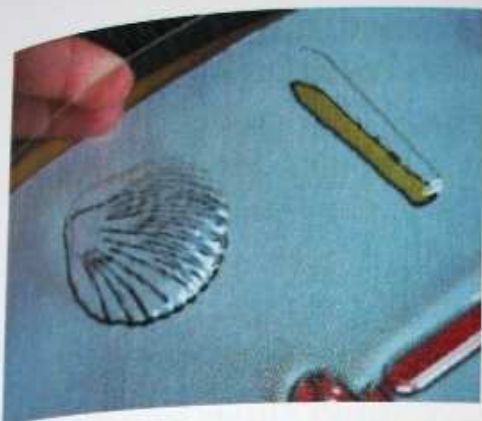


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T (*Note that this does not refer to miniature models—such as a small toy car—used to represent a real car. A very young child may not understand the relationship between a small-scale model of an object and its real-life counterpart. For the purposes of this guide, tactile illustrations that use miniature models are not included in this category.)

A tube of toothpaste provided as an illustration in a book about bath time; it is enclosed in a plastic zip-lock bag stapled to the poster board page.

- **Forms of objects** molded in a thin plastic sheet (clear or opaque) by heating the plastic in a special machine. This process, called thermoforming, leaves an almost three dimensional, highly realistic image of the object. Forms can also be molded from modeling compounds that dry to create a permanent form.



A thermoformed image of a shell in clear plastic; beneath the thermoform is a print drawing of the shell provided for visual learners.

• **Flat shapes** cut from textured fabric, paper, foam paper, and a wide variety of other textured materials, and then applied to the page. These usually depict the outer shape of an object, and the texture chosen may resemble the texture of the real object. Shapes can also be layered or “collaged” to vary thickness.

Fake fur fabric, cut in the shape of a child's teddy bear, glued to a paper page



A jack-o-lantern shape cut from thick foam paper and glued to a highly contrasting, black paper page.

• Raised lines and shapes embossed on a paper page, thermoformed on a plastic page, or created using special paper that swells when heated (swell paper). Raised lines can also be created by gluing string or yarn in place, drawing with thick fabric paints, poking holes in thick paper—and more. Textures associated with the real object will not be present. Because raised lines provide only an outline of the object, the outline is often “filled” with a pattern (called an areal pattern).



A raised outline of a hand, filled with a dotted areal pattern, embossed in paper.



An unfilled raised outline of a spoon, thermoformed on a white plastic page.



Raised outlines of geometric shapes created by drawing with a felt tip pen on sponge paper (Quick Draw Paper available from the American Printing House for the Blind).

Challenges and Limitations of Tactile Illustrations

The purpose of a tactile illustration is to communicate an idea or information— not to reproduce a visual picture in a tactile form.

There are key reasons to include books with tactile illustrations among the many types of books you make, borrow, or buy to share with a young child with a visual impairment. However, it must be emphasized: a tactile illustration is not the same as a visual picture and does not replace it.

A tactile illustration can never be as complete as a visual picture or understood as instantly and completely.

Even adults with visual impairments often find tactile illustrations challenging to interpret. There are more than a few explanations for why this is so, and it is important to be familiar with them before attempting to create or evaluate tactile illustrations—especially if your intended audience is a young child:

- **Tactile illustrations cannot be seen at a glance as visual pictures are.** The “viewing area” is limited to what is beneath a fingertip (Loomis, Klatzky, & Lederman, 1991). Larger areas can be felt with the whole hand, but detail will be missed. And a young child’s hands and fingers are smaller than an adult’s. In most cases, the child must examine each part of a tactile illustration separately. Then he must think about all of the parts and how they fit together. Only then will he be able to understand the tactile illustration as a whole.

- **The child’s experience of how an object actually feels can seldom be duplicated, making it difficult for him to make a connection between the tactile illustration and the object it is intended to show.** An object’s three-dimensional shape feels very different from a flat representation of it. For example, an outline of a cat’s shape shown in a side view does not feel at

all like the squirming cat the child has held, perhaps with his hands around the cat's middle.

•**Context is critical, in part because the same shape can be interpreted in many different ways.** Is a raised outline of a circle meant to show a ball, cookie, saucer, orange, a wheel, the merry-go-round at the park, or the moon? Tactile illustrations must be given a context—either provided in the book's written text, through verbal explanations, or both.

•**Like shape, texture can provide the child with clues but does not usually give enough information to identify a thing.** A cat is furry, with a scratchy tongue and claws. Some of these textures can be imitated—a patch of fake fur, scratchy sandpaper—but these could be confused with many other things that have a similar texture.

•**Differences in size between an object and its tactile illustration can be especially confusing.** As an example, a child may tactually recognize a table by its height and how long it takes to feel along its edge as he turns each corner; a page-sized, flat representation of the table seems very unlike the real thing. (In a similar way, miniature models often confuse a young child.)

•**Spatial relationships are difficult to show and to interpret in a tactile illustration.** Showing where objects are in relation to one another on an illustrated page is quite different from how the child has experienced positions like above, under, behind in his tactile explorations of objects in the everyday, three-dimensional world.

•**Both visual and tactile displays use certain conventions; being familiar with these is critical to interpreting tactile illustrations.** Examples include the use of different perspectives (side view, overhead, cross-section), use of arrows to indicate movement, indicating an object is behind another object by not fully

showing the object in the rear (not fully showing the wheels on the "back side" of a wagon). A young tactual learner will not be acquainted with these. In addition, there are many underlying concepts a child with a visual impairment may be lacking (Aldrich & Sheppard, 2000).

Principles of Good Tactile Design

In addition to the challenges and limitations just mentioned, a child's ability to interpret a tactile illustration can also be seriously impaired if the designer has not followed key principles of good tactile design. If you are making your own tactile illustrations, it is critical to become familiar with and follow principles of good tactile design. If you are selecting a tactile book—one that is ready-made, knowledge of these principles can guide you in avoiding tactile books whose tactile illustrations are poorly designed.

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Basic guidelines of good tactile design

To make tactile displays easier to interpret:

- Use textures, shapes, lines, and symbols or items that feel distinctly different from one another.
- **Simplify**—many lines or elements in an illustration make it confusing to examine by touch. Leave out unnecessary details and lines. A tactile illustration should show only a few of an object's most important, identifying tactile details, such as the stem on an apple to distinguish it from an orange.
- **Avoid clutter**—place items no closer than $\frac{1}{4}$ inch apart; lines closer than $\frac{1}{8}$ inch apart are not felt as being separate.
- **Avoid many intersecting lines**. Lines that do meet and cross over one another should be tactually distinct from one another (e.g., dotted versus solid).

- Shapes should be at least $\frac{1}{2}$ inch on a side, no smaller, if they are to be recognized.
- "Fill" large outlined shapes or areas with a "fill pattern" (areal pattern) or texture to help the child tell what is inside and what is outside the shape.
- If your tactile illustration has many objects or elements, break it into two or more separate illustrations. For a young child, a tactile illustration should show only one to a few objects per illustration.
- If it is important that a number of objects be shown together, or if an object has a number of parts, build toward the final, complete illustration by creating several illustrations, adding one or two new elements to each subsequent illustration.¹

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Additional reading and sources regarding the principles of good tactile design include:

- The Good Tactile Graphic: *A two-tape video presentation and booklet*. Louisville, KY: American Printing House for the Blind.
- Barth, J. L. (1981). *Tactile graphics guidebook*. Louisville, KY: American Printing House for the Blind.
- Edman, P. K. (1992). *Tactile graphics*. New York, NY: American Foundation for the Blind.
- Otto, F. (1997). *Guidelines for design of tactile graphics*. Louisville, KY: American Printing House for the Blind.
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- Research and Development Institute (2006). *Tactile displays and graphics: Guidelines for designing tactile displays*. Sycamore, IL: author. Available online at: <http://s22318.tsbvi.edu/mathproject/ch6-sec1.asp>
- Sheppard, L. & Aldrich, F. (2000). *Tactile graphics: A beginner's guide to graphics for visually impaired children*. Primary Science Review, 65, 29 - 30.

1. © American Printing House for the Blind, 1997

Designing a Meaningful Tactile Illustration

Yet even when a tactile illustration uses principles of good tactile design and has a context, it still may not trigger, for the child, an association with the real object/s or concepts he knows. If a child is unable to associate a tactile illustration with his own experience of the object and relate this to the words of the story, the illustration will be more decorative than meaningful. It may be tactually interesting, but it will not support the child's understanding of the text, engage him in meaningful conversation about the story, or build skills for learning to interpret tactile displays.

Designing and creating a truly meaningful tactile illustration for a book requires careful consideration of many elements: the child, the story or text, type of tactile illustration, principles of good tactile design, as well as the tools and materials needed to produce the illustration.

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The following summarizes questions and factors that must be considered as part of the process of designing a meaningful tactile illustration for a young child.

1. Begin with the Child

Begin with the child in mind—considering his previous experiences, background knowledge, and abilities.

Has the child had firsthand experience with the object/s you plan to include in the tactile illustration?

Provide hands-on experience first. A young child cannot be expected to understand a tactile illustration of an object he has never before felt or examined.

- Think about the child's tactual experience of the object you plan to represent. What was most significant to the child when he felt the real object—its texture, shape, size, a key feature or detail, its function?

Design your tactile illustration to include these, even if this results in an illustration that is not visually like the object. It is a very common mistake to create a tactile illustration based on the visual features of an object—such as a raised outline of a teddy bear. This visual “point of view” is less likely to trigger a connection with a young child's tactual experience of his own teddy bear, which he may identify by its fuzzy texture, floppy arms and legs, or button nose.

- What are the child's tactual discrimination abilities? Can he tactually discriminate objects? Shapes? Thick as well as thin raised lines? Fine as well as gross differences? Both small and large shapes?

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Design a tactile illustration that corresponds with the child's abilities. If textures, raised shapes, or raised lines are used, differences should be clear and obvious unless the child is skilled at detecting small differences. Will the child be able to discriminate differences in the specific textures, shapes, objects, or line types you plan to provide? Checking this beforehand can save valuable time.



- How well developed is the child's ability to tactually explore? Does he explore in a systematic manner or haphazardly? Does he know how to "scan" a tactile illustration to preview its overall size and major parts? Can he separate his fingers to explore fine detail? Can he follow a raised line with his finger/s? Does he know how to trace around the outline of a shape without overlapping his starting and ending points?

Create tactile illustrations that are in keeping with the child's ability to explore and be prepared to help him explore carefully and completely.

- How well does the child understand part-whole relationships? Can he hold in mind various parts of a tactile illustration he has explored until he has fully examined each part? Can he then make associations among these parts in order to understand the illustration as a whole?

Create tactile illustrations that are in keeping with the child's cognitive ability to fit together the information he gathers into a meaningful whole. Illustrations that show only one object with little detail are usually easier to "piece together" than illustrations with many elements or ones that show a large object with a complicated shape.

- What previous experience does the child have with tactile illustrations? What types has he encountered? Has he ever created a tactile illustration of his own? Has he explored tactile illustrations that show spatial relationships among two or more things? Is he familiar with conventions and different types of perspective that may be used?

Design your illustration to build upon his previous experiences with other tactile illustrations; talk about how the current illustration is like or unlike others he has explored. Be prepared to explain conventions/rules of practice used in the illustration.



One of the surest ways to create a tactile illustration that has meaning for a child is to involve the child in choosing how to illustrate a particular thing or concept.

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2. Consider the Story/Text

Whether you intend to add tactile illustrations to a published children's book or illustrate a book that you have written or the child has dictated, carefully consider aspects of the book's text.

- Will the book's text provide enough information —a context—to help the child identify and understand the tactile illustration?

*Select stories whose text gives enough information to support the meaning of the tactile illustration or be prepared to add this information as you read the book aloud. Even if a tactile illustration shows a familiar object with its most significant tactile features, a child still needs a **context** to make a meaningful interpretation. Although there are picture books for typically sighted children that have little or no text, this is not a successful format for tactile books. In tactile books, the meaning of a tactile illustration depends upon the words of the story (Stratton & Wright, 1991).*

It has been said that while

“a picture may be worth a thousand words”—

a tactile illustration without words isn't worth anything!

- Identify the central objects and concepts in the story or text. What type of tactile illustration—if any—will best depict these (objects, textures, cutout shapes and textures, raised and filled outlines, unfilled outlines)? Is this type of illustration also appropriate for the child with whom you will be sharing the tactile book?

Select books that allow you to illustrate significant things or events using tactile illustrations suited to the child's abilities and experience. However, even if you choose books with care, you may find that you cannot illustrate all of a book's most important objects/concepts. This leaves several options: creating a tactile illustration of another, less significant object; including fewer tactile illustrations; rewriting the story to include something that you can represent with a tactile illustration.

- Are there a number of important things in the book that are so fanciful or visual that it will be hard to link them to something the child has experienced firsthand?

It is difficult to create a meaningful tactile illustration of imaginary or nonexistent things like castles and dragons. Largely visual things, like a rainbow, also present a significant challenge. Attempts to illustrate these with a tactile illustration are unlikely to hold much meaning for a young child. Better to choose another book or use descriptions to give an older child some sense of these. In some cases, you may be able to illustrate something else from the story that the child has experienced—a bean for “Jack-and-the Beanstalk,” rather than the castle or the giant.

3. Design the Tactile Illustration

In considering the child's abilities and the objects you plan to represent, you will have given thought to the overall type of tactile illustration you hope to use: objects, thermoformed objects, textures, cutout shapes and textures, raised and filled outlines and lines. You may even have chosen specific textures and materials that you plan to use.

As you complete your design, there are many other details that must be weighed and considered, then rechecked against what is appropriate for the child and what best illustrates the story. The following are some basic questions you will need to answer. As you do, other more specific questions will arise.

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- How much space is available for tactile illustrations?
- How will the tactile illustrations be bound into the book and where will they appear in relation to the text?
- Can objects be shown at their actual size (recommended), or must you reduce their size to fit the page? If so, by how much? And will the child for whom the illustration is intended be able to understand the size transformation?
- Can you consistently use the same representation for a given object (size, shape, texture, type of illustration) throughout the book's tactile illustrations (recommended)?
- If an illustration has many elements or is crowded, can you break the illustration into two or more illustrations to show all that you have in mind?
- What perspective will you use: an overhead/aerial view, side view, magnified view, cross section view? Will this be consistent (recommended) throughout the book?
- If more than one thing is represented in the tactile illustration, is their relationship to one another (above, below, behind,

near, far) important? If yes, how will you show important spatial relationships?

- What materials will you need for the illustration (paper, plastic, fabric, glue, yarn, fabric paint, etc.)? Where can these be obtained?

- What tools are required (scissors, tracing wheel, embossing equipment, thermoforming equipment)? Are these available?

With each step involved in creating the illustration, it is important to reassess: Does my tactile illustration follow the guidelines that govern good tactile design?

4. Present the Tactile Illustration

Even if an object is familiar to a child, it will be helpful to have him touch and examine the object just before encountering its tactile representation.

- If possible, compare the object and the tactile illustration side by side. As you do, talk about the object's identifying characteristics and uses. Point out similarities between the object and its tactile illustration (Stratton & Wright, 1991).

- If an object is too fragile, too large, or faraway to examine firsthand you may be able to prepare an older child by allowing him to explore and compare the object to something that he can touch and handle. For example, you could discuss how an inaccessible object like the moon is like and unlike a ball. Allow the child to explore the ball, and then compare the ball to a tactile illustration of the moon, shown as a raised circle.

A young child, though, is likely to have great difficulty linking comparisons of the moon, to a round ball, to a flat circle representing the moon in a tactile illustration. There are limits to how meaningful these links can be until the child's language, concepts, and cognitive skills develop further.

First, and always, provide hands-on experiences with the real thing before presenting a tactile illustration of it.

5. Evaluate the Tactile Illustration

Before you include the illustration in the book and use it with the child, it is an excellent idea to try out the illustration yourself—with your eyes closed! Better still, “test drive” your illustration with someone who has never before seen or touched the illustration. Provide your test subject with a context by reading the book’s text, watch as he tactually explores the illustration (with eyes closed, if he is sighted), and ask him to “talk through” his examination and interpretation of the illustration. What you learn can be valuable—and surprising! If an adult or older child has difficulty examining and understanding your illustration, it is all but certain that a young child will also have trouble. If this happens, redesign your illustration to correct the problems you discovered.

Once you do complete and use the tactile illustration with the young child, be a careful observer.

- How does the child explore it—quickly, haphazardly, slowly, incompletely, with ease, or is he tense?
- Does he have trouble locating some of the elements or objects shown?
- Does he recheck certain features over and over again?
- Does he seem to be “hung up” on parts that may be tactually distracting in some way, for example, an areal pattern that is too pronounced?
- Does he comment?
- Can he answer questions about the tactile illustration after he has finished examining it?

An older child should be able to reflect on the illustration and his examination of it. This is valuable information for you, the designer!



The observations and comments you collect may help you to design a better tactile illustration the next time, introduce the illustration in a more meaningful way, or may indicate areas where the child needs to develop more skill.

Sequence of Difficulty for Types of Tactile Illustrations

As mentioned earlier, base your selection of the type of tactile illustration you will use on what is most appropriate for the child, taking into account his skills and previous experience. We have pointed out characteristics that make any tactile illustration more difficult to explore and understand—having many elements, showing complex spatial relationships, sizes that differ from the size of the actual object. These add difficulty, regardless of the type of illustration used.

However, the question remains: Is there an overall sequence of difficulty when it comes to introducing various types of tactile illustration? Are tactile illustrations that use real objects easier to explore and interpret than thermoforms of objects, and are thermoforms easier to understand than illustrations that use raised lines? We do not have a great deal of research to "spell out"

a sequence of difficulty among types of illustration, but we know some of the factors involved. Some are best explained in terms of the tactile illustration, others, in terms of the child.

Child's Development of Necessary Skills

314 **T** As far as a young child is concerned, research shows a child's tactual discrimination skills and fine motor skills develop gradually, following an overall sequence during the early years of life. A very young child's ability to examine things with his hands is at first limited by a whole-hand style of exploration (Griffin & Gerber, 1981). At this stage, he can grasp objects and notice large areas of texture, but may not be able to separate his fingers to examine a flat shape or use his fingers to follow a raised line or outline. Tiny shapes and details may not be noticed or adequately explored by a child at this stage of development. Therefore, at first, illustrations that use objects and have larger areas of texture or larger shapes & usually function best.

Once a child is able to examine objects more fully using his fingers and more sensitive fingertips, he can detect more about their shape and texture. As the child develops greater sensitivity, fine motor control, and the ability to think about the tactual input his senses bring, he will be better able to explore the details of tactile illustrations that use flat shapes, raised lines, and outlines.

Sequence of tactual discrimination skills

Kershman (1976) found evidence supporting the gradual emergence of a sequence of tactual discrimination skills in a study of 60 children whose level of vision was categorized as light

perception or less. Children ranged from 5-12 years of age. Each child was required to tactually examine four items and indicate which one was "not the same". Children were first able to pick out which item was "not the same" when examining **3-dimensional** objects. As age increased, greater numbers of children correctly picked out the item that was "not the same" as they examined **flat** shapes. This was followed by proficiency in detecting differences in **raised shapes and lines**, and last of all, variations in **braille** shapes.

Richness of Clues Contained in the Illustration

From the standpoint of the illustration itself, many clues to an object's identity are lost in creating a tactile illustration of it; however, some types of tactile illustration result in more lost clues than others. For this reason, some types of illustration are likely to be more difficult to interpret, especially for a child who is inexperienced with tactile illustrations. Stratton (1990) offers the following example of how various types of illustration—objects, raised shapes, raised outlines—offer progressively fewer tactile clues to help a child connect the illustration with the object it represents.

"Lost in translation"

Most young children are very familiar with socks and the business of putting them on and taking them off. A young child's tactual experience of sock probably includes the impression that it is soft, that he can place his hand or foot inside the sock, and that he can scrunch it up or stretch it.

- The same sock, with one side glued flat to the page to serve as a tactile illustration, has lost one or two clues to its identity: it

cannot be scrunched or stretched. The child can still put his hand inside it but it will be hard to fit on his foot!

- Gluing down a cutout in the shape of a sock, even if it is cut from the same sock material, further reduces the tactual information available to the child. The child can detect the texture and shape, but can no longer fit his hand inside or scrunch and stretch the sock.

- Thermoforming the sock in a sheet of plastic results in the loss of another very significant clue to its identity: the feel of plastic has replaced the original texture of the sock. In the case of a sock, its texture may well have been the best single piece of tactual information.

- Representing the sock as a raised outline formed by embossing the outline in paper or gluing string to outline the sock's shape (as seen in a side view) has very few clues to trigger a connection to the child's experience of a real sock. It isn't the same texture. If the outline shape is unfilled, the child may even have difficulty determining what is "inside" the outline and what it is "outside" and so arrive at a very different impression of the shape being presented.

- Moreover, reducing the size of the sock in any of these types of tactile illustrations removes yet another critical clue.

A child needs a great deal of experience and a context in order to make sense of a tactile illustration when so many familiar clues are missing! (Stratton, 1990)

It is always possible that providing a key detail can make even a more difficult type of tactile illustration easier to interpret, and the reverse is also true. An illustration that uses objects is not necessarily easier to interpret, if, for example, it is cluttered. Nonetheless, information we have about children's development

and the richness of clues provided by different types of tactile illustration does suggest an overall sequence of difficulty.

Object Illustrations—First

Tactile illustrations that feature objects—real object illustrations—are likely to provide the best introduction to tactile illustrations, both because a young child has the fine motor skills, tactual discrimination skills, and cognitive abilities needed to explore them and because they contain more significant clues to the object's identity.



A two-year-old explores a real object illustration in a tactile book, unzipping a small purse attached to the book's page.



A four-year old uses his fingers to examine a very simple raised line illustration as his caregiver reads aloud.

Raised Line Illustrations—Later

Given what we know about children's development of tactual discrimination and exploratory skills, as well as the number of tactile clues missing from raised line illustrations, it is reasonable to expect raised lines/raised shape illustrations to be more difficult to interpret than other types of illustrations. Raised line drawings, in most cases, should be reserved for use with a preschooler who has had successful experiences with other types of tactile illustrations.

Intermediate Steps . . .

Between real object illustrations and raised line illustrations, however, are other types of tactile illustrations that seem to be of intermediate difficulty. They may lead a child in making the transition from real object illustrations to raised line illustrations. Or they may simply offer an alternate means of providing more, and richer tactile clues.

Thermoformed objects

Barth (1984) first suggested that tactile illustrations featuring thermoformed objects might serve as an intermediate step between identifying objects and interpreting illustrations with raised shapes and outlines. Poppe (2004) also utilizes this progression in a set of training materials designed to help students transition from exploring 3-dimensional objects to interpreting 2-dimensional raised line illustrations. Thermoforming may be a good choice for representing objects whose shape is an important identifying clue. However, if thermoforming eliminates texture as a clue, it loses some of its effectiveness. A thermoform of a comb may be highly recognizable; it is very like a real comb. A thermoform of a fuzzy stuffed animal, however, has lost its most important clue—its texture.

Parts of objects

Using part of an object in a tactile illustration can provide a good or a poor means of representing an object, depending on the specifics. Evaluate each case carefully based on the child's familiarity with the whole object and its parts, his ability to understand part/whole relationships, and how distinctive or unique the part is. A tab from a soda pop can is a key part of the real object, but may not signal soda pop can to a young child who has never opened

his own pop cans! Placed alone on the page, it may not be understood, even if the story supplies a context.

Texture-added illustrations

Adding texture to raised line illustrations—either through cutting shapes from textured materials or adding textures as “fill” patterns—has the potential to boost the richness of clues in an illustration. Research shows even typically sighted preschoolers pay special attention to texture (Abravanel, 1970). When an object’s texture is distinctive, it can be a powerful clue to its identity. Sometimes, it may even be able to “stand alone” as an effective illustration.

Distinctive details

Similarly, distinctive details of an object, if there is a way to represent them, can greatly increase the ease with which an illustration is interpreted. Regardless of which type of illustration you are using, be on the lookout for these “telling” details or clues and how you

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can show them tactually. Just one can "jumpstart" recognition and make a "more difficult" type of illustration, such as raised line drawing –easier to interpret.

Future research may offer guidelines about the best times and ways to introduce various types of illustrations, including, which are most appropriate for a given need, and how they may be combined.

Last Words

It is helpful to frame our thinking about tactile illustrations and young children by recalling that both development and experience play important roles in learning to explore and interpret tactile illustrations and displays. Not only must an illustration be well designed, the right type of tactile illustration must be presented in the right way at the right time for a particular child.

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& Responsibility rests with the adult to:

- determine the child's abilities, previous experience, and knowledge
- decide what the tactile illustration will attempt to illustrate
- select the most appropriate type of tactile illustration
- provide a context for the tactile illustration
- use principles of good tactile design
- present the illustration, associating it with hands-on experience with real objects
- support the child's exploration of the tactile illustration
- observe and reflect on the child's use of the illustration

The central question should be: how meaningful will this illustration be for the child in the context in which it is supposed to function?

tactile illustrations, while serving a role in sharing some books with a young child with a visual impairment, are not necessary for every—or perhaps—most books. They provide one way to add meaning and enjoyment to read aloud stories. And tactile books offer a child opportunities to begin building a foundation for interpretation of tactile displays contained in geography, science and math textbooks. In many cases, however, you will discover that a tactile illustration cannot convey the information you wish to convey. This is not a failure on anyone's part. There are many ways to enrich book reading that do not involve pictures. Closeness, quiet time together, and the sounds of language read aloud—these are a powerful part of sharing books with every child. And as one individual with a visual impairment remarked,

"I don't have to enjoy things in the same way as a sighted person. I'm happy with the things I enjoy! Once my friends were describing the view from the hill we had just climbed, going to great lengths to put into words the colors of the sunset. I was happy feeling the breeze on my face, the chill air as night fell, and the sounds of approaching night. So I suggested to them they go ahead and enjoy their "view" while I enjoyed mine . . ."

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Summary: Design Considerations for Different Types of Tactile Illustrations

The next section summarizes information for creating specific types of tactile illustrations—those created using real objects, those that use thermoformed images, and those that consist of raised shapes, lines, and outlines. Tactile displays that primarily use abstract symbols, such as those used in maps and identified in a map key, will not be discussed. Information about designing abstract, symbolic tactile graphics can be found in a number of sources, including those listed in Basic guidelines of good tactile design.

Creating Tactile Illustrations Using Real Objects

At first, a young child is usually most successful discriminating three-dimensional forms (Kershman, 1976). At the earliest levels of tactual discrimination, he is more likely to notice gross differences in texture and size (Griffin and Gerber, 1981). Before the age of 2 years, or in a child who has not done much exploring due to early tactile defensiveness, you may notice a tendency to explore with the whole hand, instead of using his fingers separately. Even preschoolers have been observed to prefer exploring objects in this way. Tactile illustrations that feature real objects are appropriate choices at this initial level.

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- Select objects that are familiar to the child. Use the real thing; using miniature replicas of objects is not recommended at this stage.
- Choose objects with distinctive textures; textures greatly assist recognition.
- It may be easier if objects selected have simple forms, unique shapes, or distinctive features—such as bristles on a brush.
- If your child is beginning to use fingers separately and together to investigate details, objects that are more detailed and have more complex contours can be used.
- At first, primarily use objects that are the size of or smaller than the child's hands. It can be more difficult to identify large objects that must be examined by moving the hands from one part of the object to another.
- When the real object is too large to fit on the page, it may be successful, if the book's words provide enough supporting information, to attach a texture like that of the object. (e.g., a story character has a soft, fuzzy blanket. Provide a large swatch of blanket material, attached at one edge rather than glued

down, so it can be "crumpled" and feels more like a blanket might actually feel.)

- Objects that feature actions the child can perform—a purse that opens up, a comb Velcroed® to the page that he can detach and use—may assist recognition.

- Objects can be attached to the page (glue, Velcro®, or tied through holes cut in a page made from stiff poster board), enclosed in an envelope, or placed in a zip-lock bag fixed to the page. Objects are more difficult to recognize if they cannot be detached from the page, however this may be a step toward recognizing thermoformed (molded) plastic images.

- Limit each tactile illustration to one or two objects per page, unless you are showing multiples of the same object. Even in such a case, use only a few items. For tactile readers of every age, clutter is the "number one enemy" of interpreting tactile displays. Less is more for the tactile reader! If you must show more than a few items, consider showing them in separate displays.

- Space objects so there is room between them; things positioned too closely together may seem to merge, to the sense of touch, into one object. But do not scatter objects so widely that the child is likely to miss one positioned off to itself.

- Always try out the tactile illustration yourself, with eyes closed—or try it out on a willing volunteer as you read the story.

- Ask the child to suggest objects to create tactile illustrations to go with the story!

Creating Tactile Illustrations Using Thermoformed Images of Objects

If certain guidelines are followed, tactile illustrations made by thermoforming real objects may help bridge the gap between

recognizing real objects and interpreting tactile illustrations that use raised lines to represent objects (Barth, 1984; Stratton & Wright, 1991, Poppe, 2004). A thermoform image of an object is made by heating a thin sheet of plastic, vacuum forming it over the object or a molded form of the object using a device called a thermoform machine. The resulting molded plastic image closely follows the contours of the original object and shows details, such as surface markings and indentations. Before thermoforming an object, however, it is very important to consider its identifying features from the child's point of view. What clues will be lost? A thermoformed image shows shape very well, but is hard and has the surface texture of the plastic medium. If a fuzzy texture or pliability is an object's most significant tactile feature then thermoforming the object is not likely to produce an effective tactile illustration for a young child. Beyond this, many of the same guidelines for creating an effective tactile illustration using real objects can be applied to tactile illustrations showing thermoformed objects. In fact, many of the same objects suited to real object illustrations are also suitable for thermoforming.

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- Use objects that are familiar to the child.
- Use actual size objects rather than miniatures. Size is still an important clue to preserve.

(If the real object will be damaged by thermoforming, in some cases you can shape a replica from self-hardening clay. Take care that the replica resembles the object in size, shape, and significant details.)

- At first, choose objects that fit beneath the child's hands and have simple forms or a distinctive, unique form. If your child uses fingers to investigate details, objects that are more detailed and have more complex contours can be used.
- Keep to just a few objects per page, spacing objects so there is room between them without scattering them too widely.

- Again, remember to try out the tactile illustration yourself, with eyes closed—or with a willing volunteer as you read the story.
- Ask the child to suggest objects to thermoform for tactile illustrations that will illustrate the book.

Creating Tactile Illustrations with Raised Lines and Shapes

A preschooler may continue using tactile illustrations created with real objects and thermoformed images of real objects. He may also be ready to explore and interpret tactile illustrations that feature raised lines and flat, cutout shapes glued to the page. (Recall Kershman's levels of tactual development described under Sequence of Difficulty for Types of Tactile Illustration.) This type of tactile illustration will require him to use his fingers separately, tracing along lines with fingertips. He will also be required to notice finer tactual differences. Ideally, lots of experience with real objects, textures, and other types of tactile illustrations has prepared him for this step. Raised lines are often used to show the outline of an object, such as the outer shape of an apple. Unfilled outlines present a problem, however, for most young tactile learners. It can be difficult to tell what the outline encloses, especially if several objects are presented. For this reason, outlined shapes are usually filled with an areal pattern. An areal pattern is a repeating pattern of raised dots or other small raised marks; this tactual pattern "fills in" the area inside the outlined shape. Think of it as "coloring-in" an outline to help define the shape being presented. A cutout shape solves this problem of filling an outline; in addition, if it is cut from material that is similar to the texture of the real object, this preserves an important clue. Raised lines, areal patterns, and cutout shapes are sometimes used together in a tactile illustration—as long as the resulting illustration is not cluttered and each type is used in a consistent manner. Raised

lines, outlines, and cutout shapes can be created using a variety of methods and materials.

- When deciding upon objects to represent, continue to choose objects that are familiar to the child or that he can examine before reading the story. If something is too fragile for the child to feel first-hand—a butterfly, for example—you may be able to show the child a three-dimensional, actual size model, explaining how the model differs from the real thing. Your preschooler may be able to use your verbal explanation, combined with the model, to gain an understanding of the object before moving to a two-dimensional tactile illustration of the object. Experience with the actual object is always preferable, though, when this is practical and safe.

- Continue to show objects at their actual, real-life size. Until a child understands the idea of scaled sizes, avoid making tactile illustrations of things that are very big, such as a house. Your scaled down representation will not resemble the parts of the house he has felt—and it's doubtful he has explored the roof! A preschooler quite likely has an unclear idea of how all the parts of the house go together. In the case of larger objects, you may try using a miniature model with verbal explanations to demonstrate relationship of the parts, but the child's understanding will probably have inaccuracies.

- When you select objects to be shown, always consider the tactile clues that will be lost, particularly when creating tactile illustrations using raised outlines or cutout shapes. If texture is an important clue, use shapes cut from a similarly textured material to preserve this clue.

- Choose objects that have a characteristic outline that is not complex. For example, the outline of an apple may be easier to recognize than the outline of a shoe—in part because shoes

vary so much in shape and because the shoe's outline will differ greatly, depending upon which perspective (side view or top view) you choose to create the "outline."

- In deciding which perspective to use in creating an outline, consider the child's tactual experience of the object in real life. Is this an object, like a plate, which is usually presented and felt from above? Is a critical, identifying detail only obvious in a side view—such as a cup's handle? Many considerations must be balanced in selecting the best perspective.

- Think about what is important to show—then eliminate all unnecessary detail. In particular, it isn't necessary and can be misleading to show details that are primarily visual—such as colored stripes on a ball. Do show one or two defining details, such as the apple's stem or the eraser at the top of the pencil.

- In most cases, present only a few objects per page to avoid cluttering the page. Space objects so there is room between them, without scattering them too widely. Leave about a "child's finger width" between objects and at least 1/4 inch between all raised lines. Research has shown that lines closer than 1/8 inch are usually not felt as separate lines. Young children may need even more space.

- If you use an areal pattern, the raised lines that form outlines in the illustration should be higher (more raised) than the pattern itself. This way, they are less likely to distract from the child's examination of the overall shape.

- After a child understands that objects can be represented with raised lines on a tactile display—the next step is to represent spatial relationships between objects. Again, demonstrate the spatial relationship with actual objects before showing the raised line drawing.

- If a tactile illustration has multiple parts, consider breaking the illustration into several different illustrations. A growing

- plant could be shown first as a single stalk, then shown as a stalk plus branches, and finally as a stalk plus branches plus leaves.
- *Enlist the child's help in selecting the side of an object to be outlined or represented with cutout shapes; discuss how you might position elements in the tactile illustration to show spatial relationships.*
 - *Remember to try out the tactile illustration yourself, with eyes closed—or with a willing volunteer as you read the book.*

Tools and Materials for Creating Tactile Illustrations for Children's Books

Remember—safety first!

- Keep in mind that small parts may present a choking hazard. It is important to make sure that each tactile piece is securely attached to the page. Furthermore, a child should always be supervised when using a tactile book that contains small ingestible pieces.
- All glues, adhesive materials, markers, and paints should be nontoxic. Refer to the product label for details.
- Be aware of sharp edges or corners on objects. Efforts should be made to round these to prevent cuts and scratches.
- Some objects or parts of the illustration may be breakable. If this is the case, remember to check for possible sharp, jagged edges or corners, or small pieces that could present a choking hazard or be harmful if ingested.
- If a child is allergic to certain materials or foods (e.g. latex allergy), be certain to not use those materials in the book.

Basics

- Brailleable labels or sheets for adding braille (available from APH)
- High quality, long-lasting adhesive (glue, double-sided tape,

hot glue, adhesive backed "dots")

- Sturdy paper, poster board—white, black, or colored (If the child has usable vision, select materials with bright colors and contrasting, solid backgrounds.)

- Three-ring binder or other means of binding text and tactile illustrations

Materials/Tools for Creating Tactile Illustrations Using Real Objects

Attach objects to page using:

- High quality adhesive suitable for the item you are attaching
- Elastic, sturdy yarn or string for tying items to the page
- Tyvek™ (plastic fiber "paper") envelopes or pouches to glue or staple to the page to hold items
- Zip lock sandwich bags to glue or staple to the page to hold items

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Materials/Tools for Creating Tactile Illustrations Using Thermoformed Images of Objects

Thermoform equipment and supplies (available from American Thermoform Corporation)

Materials/Tools for Creating Raised Shapes for Illustrations

Cut shapes from:

- Cardboard/ corrugated cardboard (pre-cut shapes available)
- Carpet • Cork • Fabric (various textures and colors)
- Felt • Foam paper (sheets and pre-cut shapes available)
- Magnetic sheet material (pre-cut shapes available)
- Needlepoint canvas • Paper (thick, textured papers and card stock) (available from APH) • Plastic • Sandpaper • Styrofoam
- Velour paper • Wood (pre-cut shapes available)

Draw shapes with:

- Fabric paint/puff paint or glue
- Felt tip pen on Quick Draw paper (sponge paper; available from APH)

Mold, form, or assemble shapes using:

- Modeling compound (Crayola Model Magic)
- Pom pom balls—soft, colorful balls in various sizes can be glued to the page
- Popsicle sticks
- Puzzle pieces

Materials/Tools for Creating Raised Line Illustrations

Draw lines with:

- Blunt pen or stylus—lay paper over carpet, a folded towel, computer mouse pad, or corrugated cardboard; poking holes with the pen or stylus produces a raised dotted line on the reverse side of the paper
- Crayon and screenboard—window screening stapled over a wooden board, drawing on paper placed over the screenboard leaves a rippled, waxy line that can be felt
- Draftsman Tactile Drawing Board—drawing board used in conjunction with a plastic film and stylus instantly produces raised line drawings (available from APH)
- Fabric paint or thick glue
- Quick-Draw Paper—flat, dry sponge “paper” swells as you draw on it with a water soluble marker; markers of different widths produce lines of different widths (available from APH)
- Raised-line drawing kit—features a thin plastic sheet attached to a clipboard with a rubber backing; writing on the plastic sheet with a blunt tool.
- Spur wheel—lay paper over carpet; roll spur wheel to produce

a raised dotted line on the reverse side of the paper (available at craft stores)

- Swail Dot Inverter—special stylus allows dots to be embossed upwards by puncturing the paper on the downstroke (available from APH)

- Swell-Form Machine, Swell Touch paper (available from American Thermoform Corporation)

- Tactile Marking Mat—textured mat functions like a screenboard when paper, laid over the mat, is written upon with a waxy crayon (available from APH)

Shape and adhere to page to form lines:

- Fabric tape, bric-a-brac, Velcro® tape—apply to page to form raised lines and outlines

- Graphic Art Tape—thin, adhesive-backed tape can be used to make straight lines and manipulated to form curved lines and outlines; available in several widths (available from APH)

- Pipe cleaners

- Wikki-Stix—bend and cut into any desired shape; due to their tacky texture, they will stick to almost any surface—and are also easy to remove

- Wooden or plastic “stir sticks”

- Yarn/string—glue in place to form a raised outline or line

Multi-sensory Additions

- Audio sound file (use sound chips from commercially published children’s’ books or record your own sound effects on a small digital recording device like those available from APH, catalog number 6-77505-00)

- Jingle bells

- Scented markers

- Scratch and sniff stickers

- Small scented soap
- Perfume (spray onto an absorbent cloth or paper)
- Vibrating equipment (e.g. cell phone)
- Zip lock bag of crunchy candy or food to smell, taste, and hear



You will find all the APH Products for Creating Tactile Illustrations and Displays and all books for children at
<http://www.aph.org/catalogs/index.html>

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Thanks to the *American Printing House for the Blind* and Suzette Wright. Let us hope that this article, will be a new bridge between the USA and Europe. (Ph. Claudet)

Guide to Designing Tactile Illustrations for Children's books
& Suzette Wright, APH 2008

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Translation Philippe Claudet & Louise Comtois

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A Braille Picture Books library

Japan

Mitsuko Iwata

What is Fureai Bunko

Fureai Bunko is a volunteers organization which carries activities to make by hand « Braille picture books » and offer lending service through the existing nationwide postal system to visually handicapped people who want to have the same pleasure to read picture books as the sighted people do.



We are the only organization in Japan doing this kind of activity.

What is our Braille Picture Books like

1-At first we select and buy picture books being put on sale at bookstores.

2-Using these books, we stick transparent adhesive plastic peel-off seal piece cut to the shape of pictures to the original book, so that visually-handicapped people may read it. The way of cutting and sticking peel-off seal pieces to the original book is so important that we have made a standard manual to follow as much as possible. Quality of this peel-off seal is also important. This method of making books has been created in 1981 after so many trials and errors by Ms. Mitsuko IWATA who is the founder of Fureai Bunko, a blind mother of two children.



How to Make Braille Picture Books

In order to make Braille picture books as much in unified forms as possible, we made a standard manual, in which the details of work are listed. Following is the title of each subject;

1. Translating texts
 2. Cutting plastic text pieces
(Cutting, four corners, cutting tool)
 3. Sticking on plastic text pieces (Before starting, where to stick, long Braille texts, joining two plastic pieces together)
 4. Writing explanations for pictures (Picture books for babies, story-based picture books, roles of explanations, sample of making explanations, translator's insertion dots)
 5. Where to stick plastic explanation pieces
 6. Showing shapes of pictures (Use of tapes as auxiliary material, sticking on plastic picture pieces, pictures that spread over two pages, pictures with overlapping parts, showing a direction of picture face, picture names, copying the picture, pictures not suitable for plastic pieces, how to stick on plastic picture pieces with text)
 7. How to write afterwards
 8. How to Braille colophon
 9. How to Braille front cover, jacket and title page
 10. Numbering of pages
 11. Books for older children
 12. Correcting errors (Braille errors, removing plastic seal, correcting by double sealing, wrinkles occurring while sticking on plastic pieces)
 13. Selecting picture books to Braille (Good books, books suitable for brailleing)
 14. Quality of braille and plastic peel-off seal
- We have prepared this standard manual both in book and DVD, each in Japanese and English.



Purpose of our Activities

We can say that in every home with a child or children, there are always picture books. For instance, when we go to a library in the neighborhood, there we will see mothers and children taking out picture books from



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bookshelves and enjoy reading them together. Picture books are indispensable as they help to foster thinking power, imagination and sentiment of the children, and at the same time the reading of books play a very important role to deepen contact between the parent and the children.

However, to the visually handicapped people, most picture books being on sale now at bookstores are of no help, because they are not made as they can read. In fact, there is very few number of books available in Japan for the unseeing parents to read for their children they bring up. Under such circumstances we have started this activity to make Braille picture books by hand in our own way and lend them out using the existing mail system to any readers throughout the country. This activity is being done only on a small scale, therefore is not enough. What we really look for is the possibility that all unseeing people who need picture books can get them easily as they want. In Japan over 1,000 titles of picture books are being published each year and we sincerely hope that even few more numbers out of this be published in Braille also.

Our Main Activities

1-Making of Braille picture books.

Volunteers who want to join into our activities to make picture books will finish a short training at our library. As the most of these volunteers live away from Osaka, they do this work at their own home. So, we send them books together with the peel-off seal, and when they complete the work, they send us back the books. Mailing charge for the books is free because it is authorized by the government as « free-charged printed matters for the blind ».

2-Lending to readers.

When we receive a request to lend out from readers, we will have them inform us about whether the application is for parents or for their infants, gender, age, type or story of books they prefer if any. We choose books in accordance with this information, if they do not specify the books they want. We have our own parcel package of books made of the cloth and with strings to tie. It has a sealed pocket with transparent plastic window to put a reader's address on one side and our library's address on the other. This is very convenient because they can only reverse this address note when they return.



3-Private service.

There are readers who want to possess Braille picture books they specially like. This is the service we will do for them but with the cost of the original books and peel-off seal at their account.

4-Making, lending of recorded tape of book on the subject of child care.

Most of our readers are parents who are growing up the children and some of them have a sort of problem and worried about their child care. In order to help them in such cases, we make regularly 180 minute long recorded tapes about articles selected from childcare monthly magazine.

5-Publication of news-letter.

For the purpose of deepening links with readers and supporters, we publish both in prints and Braille 4-page news-letter three times an year. Through this publication we introduce to the readers our newly-made books, or recommendable, Ms. IWATA's interview column with picture book authors, message from readers or working volunteers, information about Braille picture books or tactile books in general. This news-letter is distributed to readers, supporters, working volunteers of our library, and all blind schools and Braille libraries existing throughout the country

6-Management of « Association to Think over Publishing more Tactile Picture Books ».

This association is more like a research group, organized in 2002 under the leadership of Ms. IWATA for the purpose of studying ways and means to increase the publication of tactile picture books. Participants are mainly from publication companies of picture books, printing companies, researchers, and those who are connected with books for children including librarians. The office is located at our library and we take care of clerical matters mainly in relation to the meeting.

7-Entering of braille staff members

Since there is only a small number of tactile picture books being published today, we have to depend on manual production. This, however, requires a number of skillful braille staff members. Ms. Iwata is taking part in such education programs to be sponsored by groups and organizations.

Present Status of our Activities

1-Opening hours

Our library is open from 13:30 to 16:30 on Wednesdays through Saturdays, except national holidays. As the library is operated by volunteers, the working hours become shorter.

2-Number of books to make and to lend out.

We produce Braille picture books in 300 to 350 titles per year and we now have the total over 8,000 titles. The books vary from simple books for babies to lower grade pupils of the primary school including creation, old tale, legend, story, biography, non-fiction, story for knowledge or play, and religion.

3-Readers.

Our readers live at many parts of the country. The present number of our registered readers are 200, including 170 families with people having visual difficulty and 30 institutions like schools and libraries. We lend out the book at about 1,200 times in the total number of 7,000 books per year.

4-Working staff members.

Our working staff members are all volunteers. The types of work can be divided into following four :

-About 40 persons come to the library to work on Wednesdays through Saturday, each choosing the dates to work regularly.

- Those who take part in Braille translation and book-making are 80 persons. They make a book in two to three month time on the average.
- Few people are engaged in making 40 to 50 parcel bags an year.
- 2 to 3 persons work on tape recording of child-care magazine.

Organizational Structure

Our organization is managed by following three groups:

1-Working volunteers:

We have about 170 working volunteers for making Braille picture books, lending, parcel bag making, and cassette tape making.

2-Financial supporters:

We have now about 100 individual and 10 organizational supporters. As this is not enough, we are trying our best to raise more supporters.

3-Management Committee:

The committee, composed of 10 persons mostly from outside, takes part in the making of the budge, activity programs, and other important matters relating to the management of the library.

Financing

We need a total budget of about 7 million yen (about US \$ 70,000) per year to cover the expenses including house rental, heating, activity expenses, personal expense and other expenditure. Besides a subsidy from municipal authorities, we will raise the fund by ourselves through collecting membership fee from the library supporters, donations from individuals, organizations or social welfare groups. We receive about 100 picture books donated by

few publishing companies but it is hard to secure the budget in full amount.

Importance of Tactile Picture Books for Visually Handicapped and its Present Situation in Japan

It was in the later part of 1970's that the people in general have begun to talk about the problem of picture books for the children with visual handicap. Families with unseeing children and those people who are related in their daily life to unseeing children took an initiative of this tendency by organizing volunteers' groups to make tactile picture books. They sent books they made to blind schools or to children living in the neighborhood.

A tactile picture book at that time was a bundle of hard cardboard sheets, all in one same size and bound at a side like a book. Each page has pieces of wood, plastic, cloth or any materials available nearby, all cut in the similar shapes and colors as the original thing. Sentences are also written near the picture. There are also picture books made out of the cloth, instead of the cardboard, with pictures detachable with snaps or magic tapes. On the other hand, a publishing company Kaiseisha has published in raised prints during 1979 to 1981 three volumes of translation editions under the original authorship by Virginia Allen Jensen's of Denmark; They are « *Roly Goes Exploring* », « *What's That* » and « *Catching* ». However, as these translated editions costed rather expensive, no other books like this have ever succeeded afterwards. Under such circumstances we have published in 1996 with the cooperation of a publishing company Kogumasha a picture book titled « *Choki Choki Chokkin* » (a story of a crab on the beach) in raised prints and in full



colors. Two other books have been published later in succession. It is said that the publication of these books have given an impetus to draw public attention toward the people with visual handicap. Since then, about 40 titles of picture books have been published and out of which 25 titles are in circulation today. Despite whichever they are made by machine or by hand, the part that the tactile picture books play to the people who have visual handicap is so great and important that we must keep doing our best to appeal to publishing companies for more publication of these tactile books.

To Develop Activities of our « Association to Think over Publishing more Tactile Picture Books »

1-Organizing a research group.

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T People understand well that the tactile picture books are important and also indispensable to the people with visual difficulty but in reality the publication of such books have not proceeded accordingly.

With the cooperation of a publishing company Kogumasha, we took an initiative to call for a meeting of all printing and publishing companies who have ever once published tactile books and talk there frankly about what we can do to cooperate in promoting the publication of tactile books in the future. We gathered together in April 2002 and after much hesitation we came to a conclusion that we would organize a research group named « Association to Think over Publishing more Tactile Picture Books » with its office at our library.

2- Purpose and movements of this group.

At the first meeting all attending companies have disclosed frankly about the failures they had in the course of production, cost and sales, and at the following meetings we all attendants

talked in much more details exchanging opinions even about cost breakdown. All companies seemed to consider that they would like to publish tactile picture books as long as they do not lose much money, therefore, we were very sincere in speaking and in hearing. The first thing we have done at this meeting was to make a map to cover all existing tactile picture books. This was to have everybody know about what we have now. On the basis of inquiries to about 90 companies, we obtained information that 48 titles of books are available on sale. In 2006 we made a complete map including cover- page photo, book size, number of pages, name of author and publishing company and prize and distributed this map to individuals and organizations including all blind schools and Braille libraries and others for public relations purpose.



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3-Participants.

Participants of this group were 12 persons including 5 from publishing companies, 1 from printing company at the time of organizing the group. However, as the existence of our group is known to public, participants increase and now we have about 25 participants including 8 from publishing companies, 3 from printing companies, large bookstores and researchers related to the education of disabled pupils. The meeting is held twice an year.

4-Results.

The map of tactile picture books, revised to cover 56 titles, are widely used among books stores, libraries, schools, authors of

picture books and people who are engaged in various movements concerning children's books.

In 2006, Shogakukan published two tactile picture books: « *Thomas the Tank Engine* » and « *Doraemon* »,

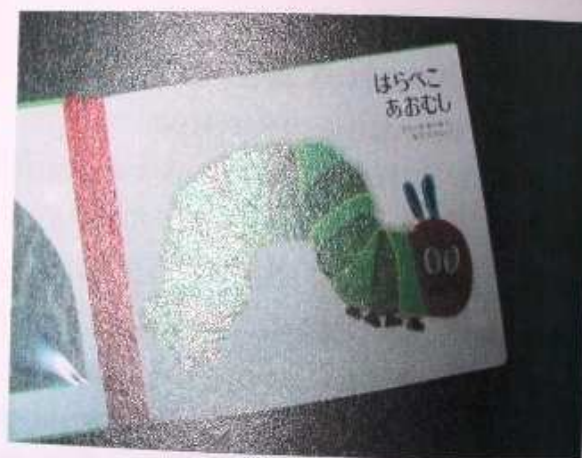


In 2007, Kaiseisha reproduced two books: « *Roly Goes Exploring* » and « *What's That* », both by Virginia Allen Jensen.

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In 2008, « *The Very Hungry Caterpillar* » by Erick Carle, produced in India, was put to sales.



Kogumasha is going to publish in summer 2009 « *White Bear and Hot Cake* » by Ken Wakayama. Junkudo, which is one of Japan's major bookstores will sponsor in Tokyo and Sapporo in Hokkaido a one-month-long tactile book fair, in this summer showing all above-mentioned 56 books. We also plan to perform the same tactile book fair at Kyobunkan Bookstore in Tokyo in commemoration of 25 years of our library.

Brief History of Fureai Bunko.

- April 1984: Opened a small library of Braille picture books at Iwata's private home.

- July 1987: IWATA's petition to the Government asking for the Braille picture books be admitted as « postal charge free printed matters » has been approved.

- July 1989: Started private service.

- July 1991: Moved the office to a building in the center of Osaka and changed the name to Fureai Bunko.

- January 1992 to December 2000: Played the center role of making a 60-minute broadcasting program each month concerning picture books including interview with picture book authors. This program was sponsored by Japan Broadcasting Service for the Visually Handicapped (JBS) and broadcasted nationwide through JBS network.

- February 1993: Started the service of making cassette tape and lending out to parents with problems concerning child care.

- April 1994 to February 1995: Sponsored by herself to open lecture class to make Braille picture books.



Mrs Iwata, 1984



- October 1996: Iwata published a Braille picture book « Choki Chokkin » in print through cooperation with Kogumasha Printing Company.



- April 1998: Received Promotion Award from International Board on Books for Young People (IBBY).

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- September 2001: Started a supporters organization system.
- October 2001: Started publication of news-letter (3 publication yearly).
- February 2002: Made a video tape manual of « How to make a Braille picture book ».
- April 2002: Organized « Association to Think over Publishing more Tactile Picture Books » (to be held twice yearly).
- September 2002: Invited to IBBY 50th Year Inauguration Anniversary Convention held in Basel; Switzerland made a report on activities since receiving IBBY Promotion Award.
- September 2004: Published Fureai Bunko 20 Years Inauguration booklet.



Some of the books Mrs Iwata published

Ms. Iwata Received 7 other social welfare contribution awards from Municipality, NPO organizations, Private Companies.

Ms. Iwata Published 7 books so far.



XXII

Australia

Feelix Library: A tactile literacy program

Louise Curtain

Feelix Early Childhood braille Book Library began in 2003. Before this small books for the very young were produced by Early Childhood teachers but they were very time consuming to make and there was a great shortage of them available. A group of volunteers and Early Childhood workers produced a small number of Tactile nursery rhyme books with braille in the 1990's but time and money became limited and the process was ceased. So children from birth to 7 years who were blind or had low vision were not experiencing books like their peers with vision.

Picturing the storybook characters we know and love isn't so simple for young children who are blind or have low vision. Without access to the illustrations to immerse them in the stories alternate methods are needed to involve the child who is blind or has low vision to become engrossed in the story. A tactile book which is fun to feel and tell a story with, and hands on materials are provided in each kit. These allow the child to engage in a sensorial way with the story, promote their learning according to their



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Our Vision Australia project is named Felix with a logo saying "I can Feel the words." Our symbol is that of an Echidna an Australian native animal that doesn't see very well but operates very effectively in an olfactory manner. Each child receives a small plastic echidna as their borrowing card, the little spines on the animal feel rather like Braille dots.

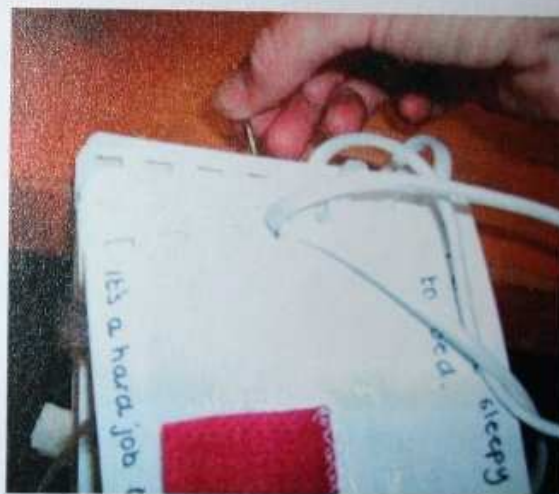
Braille is the essential literacy tool for children who are blind or have low vision, in the same way that print is the literacy tool for children who can see. However children who have vision begin to enjoy books at a much younger age than their vision impaired peers. Carefully constructed tactile books can help children who are blind or have low vision to explore the world around them and to learn about the world around them.

Carefully constructed tactile books have changed this for children who are blind or have low vision. They can now flip through a tactile book have a feel on the page and tell a story to themselves. They can interact with the book, feel for specific elements move the tactile cues and look for things on the page. We use picture

story books with Braille and base our tactile books on these stories. It is important that tactile books are about the size of a child's hand so investigation is more manageable. It is vital that the materials used are safe and stitched or adhered firmly. Also they need to be soft skin friendly so that they can be taken to bed and read without scratching or cutting the child.



Heavy duty plastic sheets 16cm x 10cm with rounded corners are used, and the books are bound with soft polyester cord with a small loop at the top for easy carrying. The small plastic pages are clean white to provide good contrast and strong enough to withstand olfactory exploration.



Braille is not included in these books only simple collages of what happens in the story are included, the Braille is in the picture story book. We do put print in the tactile books to guide parents in their interpretation of the tactile symbols. This is a family resource that goes to children's homes so parents and siblings need support in how tactile books work.

When designing these books efforts are made to maintain the same collage representation for regularly occurring items, each time they appear. There is a current list of items that are always represented in the same way: bed; dog; cat; duck; cow; sheep; chicken; fence; rock; water; sea; tree; forest; path; uphill; down hill; person; stairs; fish; frogs; nests; house; cake; hippo; rain; pie; snake; elephant; crocodile

Natural materials are used most of the time when safe, occasionally resin and plastic and aluminium sheets are used. Thermoform and Piaf produced materials are used in books for the 5-6 year olds as these materials are widely used for tactile graphics in Australian schools. For symbols produced graphically on the Perkins Braille stick Braille label is used and adhered to the plastic sheets.

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There is an Advisory group of people with 20 years and more experience working with children who are blind and have low vision. Their advice was to keep the tactile graphics simple and not to clutter. Also they advised to lay things out in linear fashion for the very young, who are just learning to search the page. Further it was advised to consider what a blind or low vision child would mainly associate with things. For a dog, a collar with a tag would best represent a dog, for a pig just the curly tail, and for

the elephant, the trunk was it's most memorable characteristic. The tactile graphic attempts to isolate the major feature that sets things aside from others- for crocodiles it's the mouth, for ducks feathers and rubbery feet. In this way symbols are derived and regularly repeated.

Where possible noisemakers, squeakers, air puffers, bells, animal noisemakers and press button tunes for Christmas and birthday stories are used as part of the tactile book. These are usually encased in a small calico bag to protect them. Everyday recognizable items like keys and switches are also very successful. Having an auditory element to the tactile book makes it more engaging especially for the very young child. Overall however fabric, leather, vinyl, icypole sticks, strong feathers, plywood, bottletops, small aluminium trays (like a petit-fours case), dish scourers and nonslip rubber mats are our staple items.

Records of all our designs are kept as these books do get lost or damaged and need to be replaced. Also it is necessary to archive designs for the future of the Felix Library. Presently 350 tactile books have made - double copies of each.

The tactile books are supported with experiential items, eg a metal colander for "*Strega Nonna's Pasta Pot*" a pair of little sneakers for "*Grandpa's Shoes*", an open wooden boat for "*Who Sank the Boat*" and so on. Parents report that children hold these items when they first listen to the story and then move to the tactile book to tell the story to themselves.

In this way the road to literacy is being achieved, children are interacting with the story they hear and translating it into their own experience through the tactile book.

ABOUT THE FEELIX LIBRARY

Feelix began in 2003, we have over 200 members and 180 children have graduated from the library. Vision Australia's Feelix Library consists of 700 specially designed kits containing Braille, print and audio storybooks along with tactile objects and tactile books that help bring the magical world of the stories to life.

It is a unique resource targeted specifically at giving very young children (birth to seven years) who are blind or have low vision the opportunity to experience story-telling with material suitable to their development and needs.

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The books are provided in Braille and tactile formats and are also accessible to print readers. Improving literacy in children who are blind or have low vision is the aim of Feelix book kits. Young children need to be stimulated to respond, explore and understand the world they live in. Understanding 'stories' can create opportunities to imagine the world beyond their immediate experience. Literacy facilitates learning - adequate language, social, independent life skills and work skills are enormously heightened if children are literate. Rhyme and rhythm are important language elements in the stories chosen. Such language develops communication and is proven to develop early braille reading skills (Phoneme, grapheme, onset-rime and word analysis in braille with young children (Crawford, Elliott and Hoekman, 2008).

Children who are blind or have low vision can miss vital experiences due to the lack of visual stimuli and the opportunity to learn by observation and mimicry. These children need alternative paths to stimulate the process of becoming literate. The alternative has to be tactual and the Vision Australia Feelix Library is the very first step for very young child on the path to literacy.

Feelix Kits

Despite the young age of Library members, Feelix kits aim to provide independent access, including:

- A case designed for young children to open and explore themselves
- Audio and tactile materials that provide children with the opportunity to independently familiarize themselves with the story
- A small tactile handbook that is safe, sturdy and designed to encourage children to search for tactile clues to tell their own story

Feelix kits allow children to share their experience with their parents, siblings and peers. Feelix books break down the 'fear' of Braille as a written medium. Families begin to realize that Braille is not only accessible for their child but for them

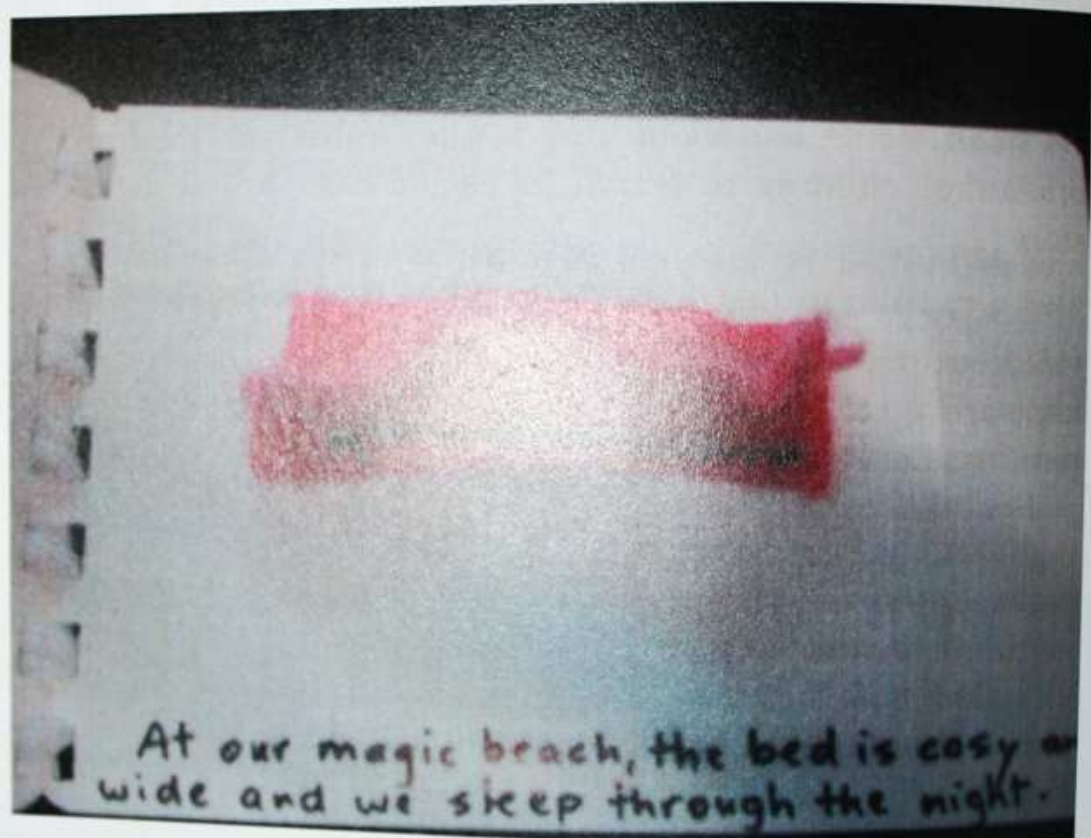
too if they wish to learn. They also begin to feel very comfortable reading aloud a vitally important experience for the child and parent. (*This Little Finger*, Mary Lee. Reading Aloud. Mem Fox, 2005).

Children feel they have ownership of their kits; it is special for them and promotes their abilities. Members usually borrow a kit monthly. Kits are sent free post.

The Tactile books and 3D materials are universal in their



application to the story's meaning. The themes of the stories are designed to meet the developmental stages of a child's life. For the very young we limit the number of pages in the tactile books and keep the symbols very simple. The inclusion of the symbol for bed is usually introduced in these books as it is a very simple one of Braille lines and a tiny wool blanket.



Families need only to indicate what their child's needs are in order to receive developmentally appropriate material. Kits are labelled 1 to 4 echidna, one echidna kits being very young stories and 4 echidna books stories for the child who is 4 to 7 years.

What is the aim of Felix?

Felix is an innovation in pre-literacy.

Felix:

Is an open invitation for families and friends who have vision to interact with Braille

Matches highly specific tactile materials to a picture book to heighten the reading experience for children

Provides kits in the home for three week periods, to allow for repetitive reading experiences

Provides materials in all modalities that are meaningful to children who are blind or have low vision, in one interactive kit

Involves families for whom English is a second language in the production of kits

Works in close collaboration with Early Intervention Specialists to provide suitable stories for very young children with low vision

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Educational opportunities that arise as a result include:

- Introducing children to the idea of a books, stories and words
- Teaches children that words are written in a sequence that you follow with your fingers
- Provides experiences outside the limits of everyday life.
- Encourages investigation, questioning and imagination
- Extends language skills and ability to communicate using 'story'
- Encourages families to experience the book in the same way as their low vision child, and learn to use other stimuli to heighten the meaning of the stories

These educational opportunities are the building blocks for a baby to begin the process of learning about reading. It provides very young children with little or no vision progress towards literacy at the same rate as children who have vision.

AIMS

- through membership of the Vision Australia Felix Library very young children who are blind or have low vision;
- will have their experiences, understanding and imagination extended as widely as possible
- are given the opportunity and tools to learn to read
- learn and use tactile experiences, tools and skills – a prelude to lifelong learning.

"The child who has little or no vision can obviously draw some information through the distant sense of hearing, but will rely heavily on information received through his or her close senses. Rogow (1988) argued that exploration through touch is essential in order for children who have visual impairment to "achieve intimate and direct contact with the physical world. (p71). Information through touch needs to be "Systematically acquired and developmentally paced in order for environmental stimuli to be meaningful' Griffen and Gerber(1982). In other words careful structuring will be required before touch becomes an effective way for children to learn about their environment." (McLinden & McCall).

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KEY AUDIENCES

Key audiences include:

- Children who are blind or have low vision, aged from birth to seven years
- Families and extended families of Felix members
- Early childhood specialists and educators

Memberships are generated via:

- Families learning about Vision Australia's Felix Library through their case managers or Early Childhood Educator
- Advertising campaigns and media coverage of community events, which has led to increased interests and memberships,

including local kindergartens attended by children who are blind or have low vision.

- The Vision Australia website
- Presentations at conferences to inform external specialists and workers in the sector and enhance knowledge about Felix across Australia
- Word of mouth

Australia Post offers a free post system for any 'materials for the blind'. This enables Vision Australia to post Felix kits easily and have them returned by any library member in Australia free of charge.

KEY MESSAGES

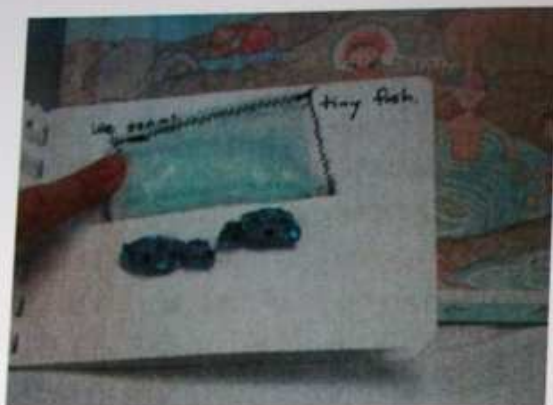
The key messages of Felix include:

- Giving opportunities for young children who are blind or have low vision to experience the fun of books with their families
- Using tactile stimulation as a key to learning
- Extending families understanding of what a story offers their child and how early literacy steps are attained
- Offering stories with rhyme and onomatopoeia to extend the language skills of children and encourage listening
- Providing a shared experience of reading for parent and child
- Providing hands-on (3D) experiential items to help children enter the imaginative world of the story.

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TACTILES





KEY GOALS

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Goal One - to engage children who are blind or have low vision in stories, through shared tactile experiences

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Objectives:

To provide a wide range of stories via the Feelix kits, which include:

- the concurrent print and brailled picture book
- a recording of the story
- a tactile handbook and
- hands-on 3D materials that demonstrate the narrative

Action:

- Select books from commercial publishers and create hands on 3D materials including tactile books, Braille and audio copies of picture books
- Organise and research voluntary readers.
- Resourcing materials that extend the imaginative world of the story.

Timeframe:

Ongoing.

Each title is produced by 2 co-workers in a large workshop in two copies over approx 4 days. Both workers have long experience with blind children, one as a teacher and the other as an Early Intervention worker.

Measures of success:

- 350 titles and 700 books produced in both contracted and uncontracted Braille since 2003
- 270 members across the country
- 170 members who have graduated and moved on to the Vision Australia Library.

Example:

"Belinda" - an example of a typical Feelix kit includes:

- A picture book with annotated Braille
- A CD recording read by volunteer reader
- A tactile handbook with tactile representations (collages) of Tom, Bessie, Belinda the cow, the rope Tom tries to catch Belinda the cow with, the carrot he tries to feed her, and the bucket Bessie gets the milk in.
- Hands-on materials include a small metal bucket, a cow noisemaker and a plastic model of a milking cow with udder.

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TACTILE

Testimonials from Parents:

'Andrea loved the storybook «Hushabye». What does that mean ?It's a book title. It has been her favourite kit so far. She often walked around with the book under her arm and wanted it read over and over. She enjoyed listening to the tape and showed interest in the Braille. The frog noise maker

was a real hit and she used it right on cue when the book was read. Thankyou, Mary.'

'To all at Feelix Library, thanks for «*Owl Babies*», Percy and Bill have been dragged all over the town and Bill even had a whisker of a bath one night. Sorry we have had the book and case so long. Lola has become quite attached and every time we have packed everything up to head down to the Post Office, which is usually a treat, tears and tantrums have followed... So I have posted this secretly today and continue my search for «*Owl Babies*», I think I'll try *Border's Bookshop* next. We love receiving our new case every couple of weeks. Thanks for the wonderful surprises and we look forward to our next case full of interesting books and things. Regards, Jonine'

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Goal Two - Expand and extend Feelix Library membership across Australia

& While the Vision Australia Feelix Library is already available to members nationally, it is our intention to greatly increase and extend the awareness of this initiative across all states.

Objectives:

- Recruit new members in existing states ie Victoria, NSW
- Recruit new members in Tasmania, Queensland and Northern Territory
- To produce new titles for the Vision Australia Feelix Library
- To produce Feelix kits for culturally and linguistically diverse families

Actions:

- Keep website accessible and up to date
- Network with early childhood services and educators to

- promote Felix to families and kindergartens and paediatric ophthalmologists
- Purchase new titles and increase Felix production and expand distribution capacity
- Source books from other book agents that are culture specific
- Record Felix books in DAISY (Digital Accessible Information Systems) format and provide Felix members with DAISY players

Timeframe
ongoing

Measures of success:

- 200 new members across Tasmania, QLD and NT
- 300 new titles and 600 copies
- 50 titles in languages other than English, including Somali, Urdu, Vietnamese, Turkish, Arabic and Chinese
- Felix books are being recorded in DAISY format
- 'I-Am-Sam' awareness campaign, targeted towards glossy magazines, featured in 26 publications over a 6 week period in metropolitan and regional media with an estimated readership of 1.5 million east-coast Australians.

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Goal Three - Evaluate Felix Library outcomes

Objectives:

- To evaluate and improve the service, thereby ensuring the service continues to be a valuable resource
- To research the link between Felix and early literacy for young children who are blind or have low vision

Actions:

- Survey Felix members, families and early childhood educator/case managers
- Monitor borrowing habits to assess regularity of use and child's

specific needs

- Study and assess how children use Felix books through feedback from parents and educators.
- Encouraging open lines of communication by phone, email or notes in the returned kits, so families feel open to offering suggestions and systematically record and collate data
- To continue to use video of families using the resource to assess how children interact with tactile materials.

Timeframe:

Ongoing.

Measures of success:

- Establish and improve levels of member and family satisfaction
- Increasing interest and attendance at Felix events
- Keep clear records about rate of borrowing and keep records of the numbers of children who withdraw their membership and their reasons for this.

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Goal Four – Increase promotion and education about accessible information

Objectives:

- Promote the Vision Australia Feelix Library to a wider audience
- Educate clients, stakeholders and the general public about the need for such a resource and the outcomes it offers young children who are blind or have low vision
- Secure ongoing funding to enable the program to expand

Actions:

- Host two family promotional events in Melbourne, Sydney and Brisbane plus one in Tasmania and Darwin each year
- Host one rural event in each state per year
- Produce a quarterly newsletter for families and other stakeholders
- Participate in four State and National Conference presentations in Australia in 2008
- Generate media coverage for all actions listed above

Timeframe:

Ongoing.

Measures of success:

To increase:

- attendance at Vision Australia Feelix Library events
- number of donations to support the program
- number of media hits about the Feelix concept
- understanding of the potential abilities and needs of people who are blind or have low vision to fully participate in all the activities of life they choose
- success of the I-Am-Sam awareness campaign (referenced in Goal 2)

OUTCOMES:

As an educational resource, Feelix kits have had an impact on how material is presented to children who are blind or have low vision in participating kindergartens.

Feelix kits are available to kindergartens and participating staff now use the Feelix models to adapt their own materials for children in their classrooms, include Braille and tactile formats.

Visiting Teachers of the Vision Impaired are also adapting the ideas of Feelix kits for use in the classrooms of children who have just commenced school. Teachers and aides in mainstream schools are learning new ways to present literature to children who are blind or have low vision. A part of the Feelix Library is now available as a resource for Itinerant teachers and classroom teachers to use as an individual teaching tool for a child who is blind or has low vision in an integrated setting.

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DAISY (Digital Accessible Information Systems) formats:

With the introduction of DAISY in the Vision Australia Feelix Library, children and families will gradually learn skills that will allow them further access to materials when they begin school. This will have a significant impact on the variety of print materials they will have available to them as teenagers and adults.

Making it Real:

A large Feelix sculpture has been designed for children to investigate whenever they visit the Library or attend an event. The large echidna is a replica of the small token they receive as their borrowing card.

Our freepost system for Braille materials makes sending kits to families throughout Australia very easy. Our postal workers have become used to the large orange padded bags that often make strange noises as they are delivered. Many workers have

asked about the contents of the bags and are very impressed when they hear what they are delivering!



Part IV

Tactus and *Typhlo & Tactus* Award



Culture 2000 Program



What is TACTUS ?

A European award concerning **T**actile **i**llustrated **B**ooks (TiB) for Blind children. It is a non profit project.

When is TACTUS born ?

Born in 1999, during a European meeting (Russia, Sweden, Italy, Belgium, England, France) about tactile illustrated books (TiB) organised by Philippe Claudet and Patricia Richard (Les Doigts Qui Rêvent), with the help of the French Culture Ministry. During that meeting, all the people were sure that without a European co-operation, TiB would be nearly impossible to produce in enough quantity and quality. Les Doigts Qui Rêvent proposed to start a European Award to stimulate TiB production in Europe. A first E.C grant was given for one year in 2000 and a 3 years one in 2001 which ended in December 2004 and an other one until 2007 for TYPHLO & TACTUS.

What is Les Doigts Qui Rêvent ?

It is a French charity (created in 1994 by Philippe Claudet and 4 Blind children's parents, specially Patricia Richard) producing TiB for Blind children. Its workshop employs 10 people with social disabilities. Its research centre about tactile illustration has started 6 years ago: the Amandine Centre.

Which countries are already members in TACTUS ?

Belgium, Finland, France, Germany, Italy, Netherlands, Poland, United Kingdom. All are financially engaged in front of the E.C.

Which countries are working partners ?

Czech Rep, Estonia, Ireland, Lithuania, N. Zealand, Romania, Slovenia, Spain.

Which countries are International Colleagues ?

Australia, Canada (Quebec), Croatia, Japan, South Africa, USA.

What is the aim of TYPHLO & TACTUS ? (2000-20008)

- To give the chance to the Blind children to get into their culture by illustrated books, like for the other sighted children, to integrate them better, to make them citizen.
- To co-operate with European countries, to feel less isolated, to gather the few means we have each in our own country, and share them.
- To help other European countries to develop the TiB production (workshop).
- To increase the quality of those special books by confrontation, by research we share and we do.
- To give the opportunity to the Blind children to get access to the European common cultural heritage.
- To offer TiB to the Blind children at the same price than a sighted book by producing and distributing every year the award books, at 15,25 euros all over Europe.

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Who is supporting TYPHLO & TACTUS ?

It is supported by the French Culture Ministry (Books and Reading Dpt.), by the European Commission in the framework "Culture 2000", since 2000, and by the Burgundy Council.

What are the advantages for coming into TYPHLO & TACTUS ?

- 1) To meet twice a year, people involved in TiB, to confront point of view, to exchange experience, to see other kind of TiB, to share ways of small mass producing and techniques.
- 2) To see what happen in that field in other countries. In each meeting we have a guest.
- 3) To get conferences about TiB ; one in each technical meeting.
- 4) To be in a European project might help you and your organisation to continue your work for Blind children in your country.

Roots of TACTUS competition

1999: Les Doigts Qui Rêvent organized the first International meeting concerning tactile illustrated books (Sweden, Italy, Belgium, Russia, France, U.K.).

Conclusion: an enormous lack of tactile illustrated books...
to learn to read yes, but to read what ?

2000: Les Doigts Qui Rêvent proposed to create a European competition.

Main Objectives of the European TACTUS competition :

- To share the few means of each countries, in order to offer much more tactile illustrated books to Blind children.
- To cooperate in the field of research to create more efficient tactile illustrations.
- To share production of tactile illustrated books for a lower price and a better quality.

Main and direct beneficiaries :

The Visually Impaired Children
(Blind & partially sighted),
their families,
and all professionals working with.

Organisation in 2007

Organiser : Les Doigts Qui Rêvent France

Co-organisers (Tactus Members):

- Oeuvre Nationale des Aveugles Belgium
- Celia-Kirjasto Library for the v.i Finland
- Grenzenlos gemeinnützige GmbH Germany
- Federazione Nazionale Pro Ciechi Italy
- Visio Royal The Netherlands
- Hungry Fingers Poland
- ClearVision Project United Kingdom

Financial supports:

- The European Commission
- French Cultural Ministry (France)
- Regional Council (Burgundy, France)
- Council of Côte d'Or Department (France)
- Town of Dijon (France)
- Les Doigts Qui Rêvent

One technical meeting per year :

- only for the members (1 per country)
- turning in each country

One plenary meeting per year :

- members
- jury (one v. imp + one sighted / country)
- in Dijon

Production by

- Les Doigts Qui Rêvent in Dijon (France) by people with social disabilities.

Distribution by

- each country member.

TACTUS n°1
May 2000 - May 2001

Members:

- Belgium:

Œuvre Nationale des Aveugles (Brussels)

Monique Clette

- France:

Les Doigts Qui Rêvent (Dijon)

Philippe Claudet, Patricia Richard

- Italy:

Stamperia Braille (Firenze)

Cecilia Trinci

- U.Kingdom:

ClearVision Project, RNIB (London)

Marion Ripley

Partner:

- Italy

Hallman Foundation

Josée Lanners

TACTUS n°1
May 2000 - May 2001

Award 2000



First prize:

Crokato, l'animal qui change de peau
Claudette Kraemer (France)



Special prize

Ruvidino a scuola
Istituto dei Ciechi Milano (Italy)

609 tactile illustrated books produced
in English, French, Italian
and distributed in all Europe
at 15,25 euros = Integration



Poster 2000 (42 x 60 cm)
by Françoise Debellemannièr (Ldqr)

© 2009 Les Doigts Qui Révent - www.Ldqr.org

TACTUS n°2 **June 2001 - May 2004**

Members:

- Belgium:
Œuvre Nationale des Aveugles (Brussels)
Monique Clette

- France:
Les Doigts Qui Rêvent (Dijon)
Philippe Claudet, Patricia Richard

- Italy:
Stamperia Braille (Firenze)
Cecilia Trinci

378

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- U.Kingdom:
ClearVision Project, RNIB (London)
Marion Ripley

- Finland:
Celia Library for the V.I (Helsinki)
Païvi Voutilainen
joined us in December 2000

Partner

- Italy
Hollman Foundation
Josée Lanners

TACTUS n°2 June 2001 - May 2004

Award 2001



First prize:

Qui sent le fromage ? (with 5 smell)
Céline Piette
(Belgium)



Special prize

Mireille l'abeille
Dominique Salesse
(France)

379

570 tactile illustrated books produced
in English, Finnish, French, Italian
and distributed in all Europe
at 15,25 euros = Integration

380

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33 entries after national selections

Poster 2001 (42 x 60 cm)
by Françoise Debellemannièr (Ldqr)

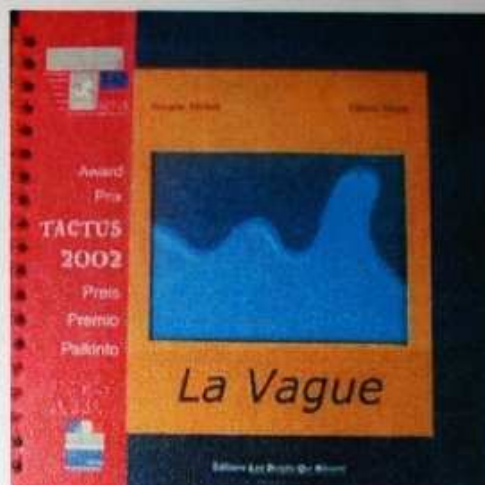
TACTUS n°2 **June 2001 - May 2004**

Award 2002



First prize (0-7)

Charlotte la marmotte
Aurélie Lavie (France)



First prize (7-12)

La vague
C. Piette, R. Hérent (Belg)

381

Special Prize



Dessine-moi un bonhomme
M. Carrier-Panelatti (Fr)



Fiona
Vuokko Nyberg (Fin)



Il cane Fred
Calabria-Danovaro (it)

630 tactile illustrated books produced
in English, Finnish, French, Italian
and distributed in all Europe at 15,25 euros = Integration

382

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55 entries after national selections

Poster 2002 (42 x 60 cm)
by Françoise Debellemannièr (Ldqr)

TACTUS n°2 June 2001 - May 2004

Members :

- Belgium:

Œuvre Nationale des Aveugles (Brussels)

Monique Clette

- France:

Les Doigts Qui Rêvent (Dijon)

Philippe Claudet, Patricia Richard

- Italy:

Stamperia Braille (Firenze)

Cecilia Trinci

- U.Kingdom:

ClearVision Project, RNIB (London)

Marion Ripley

- Finland:

Celia Library for the V.I (Helsinki)

Paivi Voutilainen

joined us in December 2000

- Germany:

Grenzenlos (Erfurt)

Anja Strobach

Partner

- Italy

Hollman Foundation

Josée Lanners

TACTUS n°2
June 2001 - May 2004

Award 2003

First prize



Trouvé
A. Laberche (Fr)



La robe de Clara
M. Ballavoisine (Fr)



Le grenier
M. Ballavoisine (Fr)

384

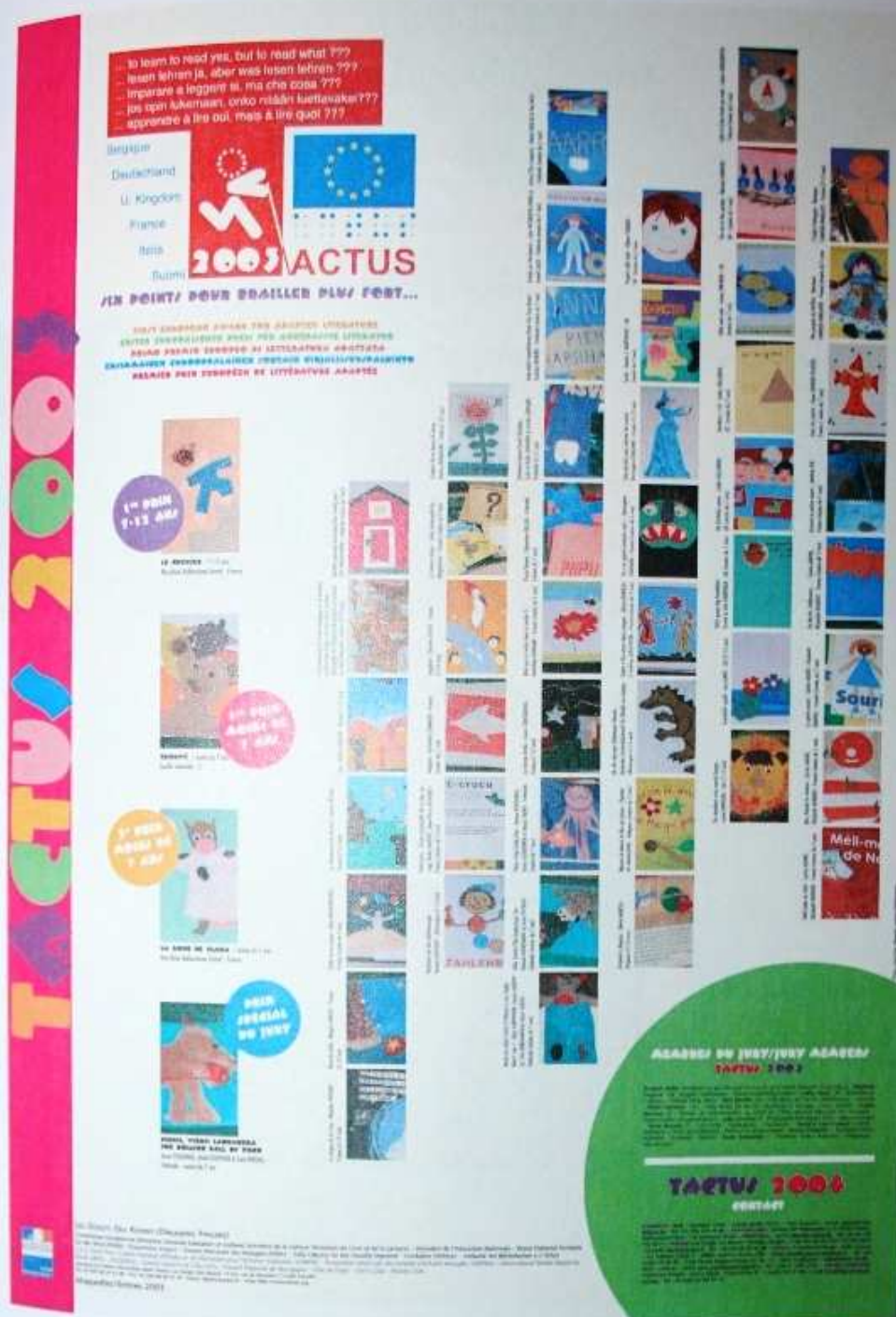
TYPHLO
&

Special prize



Kierii, Vierii Lankakerä
A. Pitkänen, H. Päivinen, S. Rokka (Fin)

1 340 tactile illustrated books produced
in English, Finnish, French, Italian, **German**
and distributed in all Europe at 15,25 euros = **Integration**



47 entries after national selections

Poster 2003 (42 x 60 cm)
by Françoise Debellemanière(Ldqr)

TACTUS n°2
June 2001 - May 2004

Award 2004

First prize



J'ai un peu peur
L. Constantin (Fr)



Coccinella
T. Mantachetti (it)



Piccina come una formichina
B. Ferrazano (it)

386

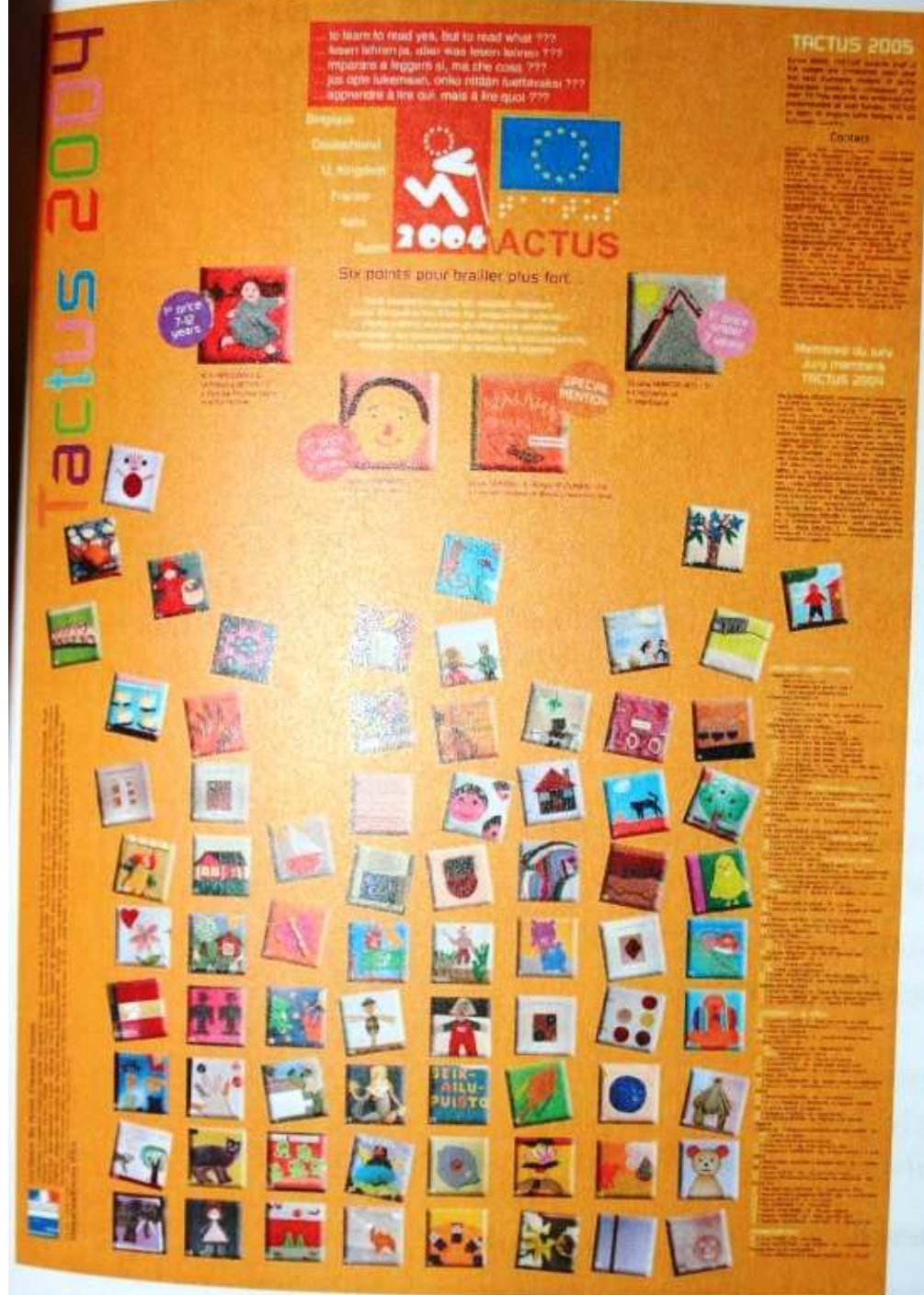
&

Special prize



Vauvan Kesàpäivä
B. Sundell & M. Valtonen (Fin)

1 155 tactile illustrated books produced
in English, Finnish, French, Italian, German
and distributed in all Europe at 15,25 euros = Integration



73 entries after national selections

Poster 2004 (42 x 60 cm)
by Céline Girot (Ldqr)

2005 : TACTUS became TYPHLO & TACTUS

Members:

- Belgium: Monique Clette
Œuvre Nationale des Aveugles (Brussels),
- France: Ph. Claudet, Patricia Richard
Les Doigts Qui Rêvent (Dijon),
- Italy: Pietro Vecchiarelli
Federazione Pro Ciechi (Roma),
- U.Kingdom: Marion Ripley
ClearVision Project, RNIB (London),
- Finland: Päivi Voutilainen, Irmeli Holstein
Celia Library for the V.I (Helsinki),
- Germany: Anja Strobach
Grenzenlos (Erfurt),
- Netherlands: Anneke Blok
Visio (Amsterdam),
- Poland: Boguslaw Marek
Hungry Fingers (Lublin),

Partner

- Italy: Josée Lanners
Hollman Foundation, (Cannero Riviera, VB)

Guests:

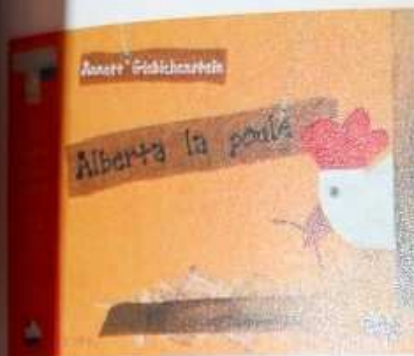
- Czech Rep. (Středisko rané péče SPRP), Jana Vachulová
- Lithuania (Lietuvos aklinųjų biblioteka), Audronė Gendvilienė
- Estonia (Mü Kakora), Sülvi & Kadi Sarapuu

Workshops in: Estonia, Lithuania, Romania

TACTUS n°3
June 2005 - May 2007

Award 2005

First prize



Das Hun Alberta
A. Giebichenstein (Ger)



Troppo ordine
M. L. Evangelista (it)

Special prize



Kettu ja mehiläinen
Marjatta Tuura (Fin)

1 094 tactile illustrated books produced
in English, Finnish, French, Italian, German, **Dutch, Polish**
and distributed in all Europe at 15,25 euros = Integration



88 entries after national selections

Poster 2005 (42 x 60 cm)
by Céline Girot (Ldqr)

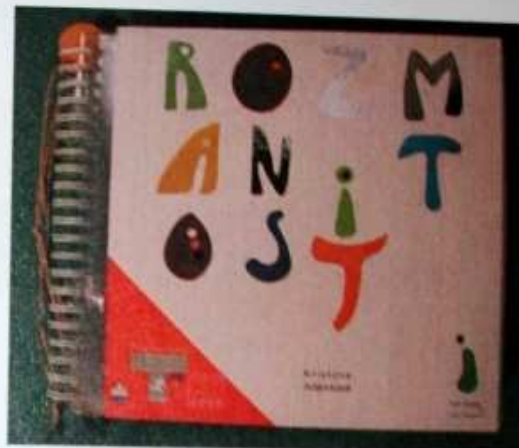
TACTUS n°3
June 2005 - May 2007

Award 2006

First prize



Hiiri, kissalle räätälinä
A. Rintala (Finland)



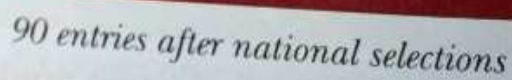
Rozmanitosti
K. Adamkova (Czech Rep.)

Special prize



Take 5 fish
A. Carrott, J. Ashford, J. Cobett, B. Fox, B. Lardner, D. Scott (U.K)

1 125 tactile illustrated books produced
in English, Finnish, French, Italian, German, Dutch, Polish, **Czechish**
and distributed in all Europe at 15,25 euros = Integration



Poster 2006 (42 x 60 cm)
by Céline Girot (Ldqr)

TACTUS n°3
June 2005 - May 2007
Award 2007

First prize



Cuore di pietra
M.L. Evangelista (Italy)



Jack and the beanstalk
S. Philipps (U.K)

Special prize



Juustujaht
Liis Raudsepp (Estonia)

1 144 tactile illustrated books produced
in English, Finnish, French, Italian, German, Dutch, Polish,
and distributed in all Europe at 15,25 euros = Integration



68 entries after national selections

Poster 2007 (42 x 60 cm)
by Anaïs Brard (Ldqr)

+ Chocolate smell !

Technical advance in the last Typhlo & Tactus TiB : *Example : Heart of stone*

-Thick cover page (2mm)

▶sturdy

-Bounding without wire-o :

▶sturdy

▶safety

▶pages horizontally open

-Large print & Braille

-Braille dots set up directly :

▶on the text pages

▶on the coverpage

▶no soaked off Braille label

Aesthetic

Ergonomics

Sturdiness

Safeness



Typhlo & Tactus summarized results : 2000 - 2007

- **7** years project
- **521** entries
- **16** awards
- **7 689** tactile books produced (in 7 languages)
- **27 800** posters distributed in Europe
- **3** international workshops
- **16** international meeting in 6 countries

24 countries involved

T&T Members

France (2000): Les Doigts Qui Rêvent

Belgium (2000) : Oeuvre Nationale des Aveugles de Belgique

U.Kingdom (2000): ClearVision, Royal Nat. Institut f. the Blind

Italy (2000): Stamperia Braille, Federazione Pro Ciechi, Hollman Foundation, Istituto dei Ciechi da Milano

Finland (2001): Celia Library for the v. impaired

Germany (2004): Grenzenlos

Netherlands (2005) : Visio Royal

Poland (2005): Hungry fingers

T&T working countries

Spain (2000): Org. Nacional de Ciegos Españoles

New Zealand (2001): Royal N.Z Foundation of the Blind

Ireland (2004): National Council for the Blind of Ireland

Czech Rep. (2005): Stredisko rané péče Praha

Lithuania (2006): Lithuanian Library for the Blind

Estonia (2007): Mtü Kakora

Slovenia 2007 : Institute for Blind and Partially Sighted Children,

Romania : School for Visually Impaired Children Cluj-Napoca

T&T International colleagues

Quebec: Nazareth & L. Braille Institute; Ecole Jacques-Ouellette

USA: American Printing House for the Blind

Croatia: Osnovna skola Pecine, Rijeka

Korea: URAT

South Africa: I read with my hands

Japan: Fureai Bunko

Australia: Vision Australia

T&T Workshops in

- Estonia (2007)
- Slovenia (2007)
- Romania (2008)

T&T members conferences in

- Marburg (Germany) IFLA meeting
- Grahams town (South Africa) IFLA meeting
- Mechelen (Belgium) IFLA meeting

T&T TiB shown in book fairs of

- Montreuil (Fr)
- Paris (Fr)
- Brussels (Bel)
- Namur (Bel)
- Helsinki (Fin)
- Brno (Cz.Rep)
- Prague (Cz.Rep)
- Frankfurt (Ger)
- Bologna (it)
- Rome (it)
- Modena (it)
- Montreal (Ca)

T&T TiB exhibitions

- Ibby international (world)
- Nejmeren Museum (NL)
- IFLA meeting (S.Af)
- National French Library
- Cassina di Raffaello (Rome)
- Boppard (Germany)
- Mechelen (Belgium)

Competition organized because of T&T in :

Germany : Erfurt 2005
Cz. Rep : Prague 2007, 2008, 2009
Lithuania : Vilnius 2006; 2007; 2008; 2009
U. Kingdom : London 2008

Cooperative production in the T&T network

France & Belgium
France & Italy

TiB production after T&T

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Italy : a workshop for TiB started in 2006
Netherlands : a workshop for TiB production is starting in 2009

Afterword

Philippe Claudet

I'm sure you shared the same thoughts that I had after reading this *Typhlo & Tactus Guide to the tactile illustrated books* : thoughts such as the fundamental importance of TiB (Tactile Illustrated Books) for visually impaired children, the diversity of the ways in which they were designed, the ingenuity of the solutions for making books that these children can read with their fingers.

What all the articles from field practitioners have in common is this innovative aspect as well as immense motivation. Here they have shared everything they know with you, generously and unreservedly laid open their practice, with the aim of breaking down the isolation of designers and producers of TiBs throughout the world and particularly those in developing countries, with the staunch belief that children suffering from blindness and impaired visions are entitled to books, so they can find out about culture and discover the immense pleasure of reading, so they can integrate better.

This Guide is a perfect example of "l'Esprit Tactus" [The Tactus ethos].

The enormous success of the current TiB exhibition organised by Pietro Vecchiarelli (Federazione Pro Ciechi, It.) and held at the prestigious Casina di Raffaello in Rome, clearly shows the current interest in tactile illustrated books. They are no longer regarded as "books for the disabled", confined to a specialised market, but more so as artists' books; since this exhibition follows one dedicated to the great Bruno Munari, creator of the first tactile books (*Pre Libri*, Danese 1980), and precedes one that is starting mid-May and celebrates another great children's author, Leo Lionni (*Little-Blue, Little-Yellow* 1959). This is not just for blind children, seeing children will also be entertained given the success of the children's workshops, animated by Claudette Kraemer (Chairwoman of the T & T board) and Pietro Vecchiarelli!

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But nothing is definite, there is so much that remains to be discovered. The different articles show the care that the TiBs must be given from their design to their distribution, as they are so complex. Various countries have asked arts and crafts students if they would participate in this venture; guided by professional specialists in visual impairment, these designers provide original and aesthetic plastic solutions, transforming models into tactile children's illustrated books, thereby achieving the standard of children's literature. Some countries provide volunteers. Others have set-up a specialist workshop. All of them find solutions somehow.

The success of the TiBs awarded (by a visually impaired judge and a seeing judge, per country) by Typhlo & Tactus and produced by Les Doigts Qui Rêvent [Dreaming Fingers, Fr] is as much due to the quality of the content that is adapted to tactile

form (text and images) as it is to their production quality. Indeed, the impact of the Typhlo & Tactus project was only possible because the T & T TiBs were produced, distributed all over Europe and beyond, and continue to be exhibited by the Ibby International travelling exhibition. This gave and still gives the possibility to everyone, in different countries, to see and touch the quality TiBs, those that were selected by a European jury of specialists and produced in large numbers (around 600 copies/models [awarded] in 7 languages). The national Tactus competitions are organised in different countries, thereby promoting synergy and TiB development.

The Typhlo & Tactus project never intended to eliminate national differences. For example, thanks to T&T, France has produced two English titles, two Italian titles and two Finnish titles (textile illustrated books) out of T&T awards. Quite the contrary; the aim of the project is to share experiences and to build on each other's progress, but also to share techniques, research and production methods. To offer other countries' TiBs to children in each of our own countries, would really expand their cultural horizons, and would truly be sharing a European cultural heritage.

Typhlo & Tactus is really a European project in the sense that it is participating in this historic venture to construct a new Europe. Throughout the last 8 years, we have learnt to communicate through English and French, we have stated our differences and discovered our common ground, we have visited each other's places and vice versa and slowly but surely, links were woven, a trust was established : then T&T opened up towards the new eastern entrant countries, inviting them to participate in our meetings and organising workshops.

Then Typhlo & Tactus became an international project, since, (the price of success !), we were contacted by many countries such as the USA, Croatia, Argentina, Korea, etc..

Bibliographies show that every country, whether big or small, rich or less rich, has works of reference on the subject. The richness of the European project is really evident, in its diversity, the ability of each person involved, shared amongst everyone. I dream of a T&T library where all the research works would be translated into each of our languages...

But it's because the European Commission defined programme frameworks, such as Culture 2000, that we were able to fully realise this type of project. The clever thing about the Culture 2000 team was that it understood the main issue and our project and trusted us implicitly. Without the help of the European Commission, the production and distribution of the T&T TiBs at the price €15.25 would have been impossible. Even if left at cost price, the TiBs would be sold at a discriminatory price.

Our results have far exceeded our expectations. This is partly because the T&T group turned out to be an exceptional group and partly because we incorporated a real need for field practitioners and families. T&T has shown that when it comes to Europe, many obstacles concerning the creation and manufacturing of the TiBs, can be lifted or greatly reduced. The manufacturing of T&T's TiBs has considerably improved between 2000 and 2008 to accomplish illustrated books that are not spiral-bound but are hardbound with the title and author's name in Braille, and of the same quality as commercial illustrated books.

Today Typhlo & Tactus is going to change in order to open up to other countries, without losing its motivation, and without

forgetting that it is working for children suffering from blindness and visual impairment, with or without other disabilities.

Typhlo & Tactus has become the hub of TiB in the world. To fully fulfil its role as a centre for meetings and dissemination of information, this Guide will incorporate new contributions through future editions. In many countries the isolated professionals are most certainly doing great things but we just don't know about it. Published in the T&T Guide, everyone will know about them.

I would like to give my warm thanks to all the writers who agreed to participate voluntarily in the Guide project.

Help us to spread the T&T Guide to all those whom it concerns. We thank you in advance.



PS: Ireland, Spain and Korea could not participate in this Guide for temporary reasons which will soon be remedied.

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