objects of reference

promoting early symbolic communication

Adam Ockelford
bibliography by Keith Park

Royal National Institute for the Blind RNIB

objects of reference

promoting early symbolic communication

third edition

Adam Ockelford
bibliography by Keith Park

Acknowledgements

Each edition of *objects of reference* represents an amalgamation of the ideas and experiences of many people. This third edition, in particular, owes much to the contributions of Rebecca Seely, Abigail Werth and Petrea Woolard, Speech and Language Therapists in the Lewisham Adults with Learning Disabilities Team, and Keith Park, Advisory Teacher for Sense in Greenwich and Lewisham.

Thanks also to Cathy Davies and Mary McDonald at RNIB for their editorial assistance.

Published by RNIB, 105 Judd Street, London WC1H 9NE.

© Adam Ockelford, RNIB 2002

Registered charity number 226227

ISBN 1 85878 529 4

Layout and design by Claire Lovell, RNIB Publications and Book Sales Service. Printed and bound by Briden Print Ltd.
All photographs © Garry Fry except Figures 3, 4, 7, 9, 11 © Martin Sookias.

Further copies of this book (quote ED290) can be purchased from RNIB Book Sales Service, c/o RNIB Customer Services Centre, PO Box 173, Peterborough PE2 6WS Tel: 0845 702 3153
Fax: 01733 37 15 55 Email: cservices@rnib.org.uk

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying or recording, or in any information storage or retrieval system, without permission in writing from the publishers.

contents

Foreword 6

part one: objects of reference - an introduction

The development of early communication 10
What are objects of reference? 13
What can objects of reference represent? 15
Choosing objects of reference 19
Who is most likely to benefit from using objects of reference? 20
Starting out 21
Introducing further objects 23
Reducing and simplifying each object 24
Sequencing and the representation of time 28
Extending and refining the meaning of objects 31
Using objects as expressive language 34
Other potential benefits of using objects 35
Conclusion - the importance of careful planning and evaluation 37

part two: four case studies

David: using objects to assist memory and concentration 40
Taufiq: using objects as labels to promote independence and social interaction 41
Paolo: using objects to structure time and reduce the incidence of challenging behaviour 42
Claire: using objects as a medium of expressive communication with a TouchTalker 43

part three: further reading

Further reading: a bibliography compiled by Keith Park 48

Foreword

It is now a decade since the first version of *objects of reference* was produced - a rather slimmer booklet than the present edition! The aim then was to show how a communication technique originally developed for deafblind people could profitably be adapted for use by certain children who were visually impaired and had severe learning difficulties.

Quite unexpectedly, this idea excited a high level of interest, not only by those working in the field of visual impairment, but by a wide range of other professionals too - including, notably, speech and language therapists - and around 4,000 copies of the first two editions were distributed. This may have been one factor in the use of objects of reference spreading rapidly in the UK during the late '90s, finding a place in the communication programmes of many children and adults with severe and even profound learning difficulties (with or without sensory impairments). Their potential value for some people on the autistic spectrum or with other communication disorders also began to be recognised.

Used sensitively within appropriate developmental contexts, objects proved to be a great asset, on the one hand assisting some people to understand, anticipate or remember things better, while quite literally unlocking the communication potential of others. However, while much good practice evolved, other efforts were less successful, particularly where objects were imposed as an inflexible system in "top-down" fashion, with no real appreciation of their quintessential person-centredness, or of how they fitted into a bigger scheme of things.

A key aim, therefore, of this third edition of *objects of reference* is to clarify some issues that have arisen since the use of objects has become more widespread. In Part 1, fundamental questions are addressed, such as how objects fit into the broader development of communication, who is likely to benefit from their use, how

and when they are best introduced, and how to promote progression. A particular area of concern is to what extent a "whole-school/college/centre" approach to objects of reference is possible or desirable, and this is discussed at some length. Part 2 comprises four case studies, which show how objects of reference have been used successfully in a number of contexts and with a variety of ends in mind; since communication is central to many aspects of development, the benefits of using objects can be wide-ranging. Finally, Part 3 provides a comprehensive bibliography.

Objects of reference will be of interest to those working with children and adults who have special communication needs, including teachers, lecturers, teaching assistants, speech and language therapists, music therapists, social workers and educational psychologists. Parents, other family members, friends and carers may also find ideas in the book that are of relevance.

In conclusion, it is important to recognise that *objects of reference* does not advocate a "system" which, if adhered to, will help some people to communicate more effectively. It is merely a collection of ideas, designed to stimulate what must be, in every case, an individual approach: successful early communication is all about empathy and imagination. So, what follows is just the third version of a developing resource. To ensure the fourth is more relevant to your needs and those of others, please do get in touch with RNIB Publications and Book Sales, tel: 0115 852 6735, with any comments or suggestions you may have, of ideas that worked well and things that didn't turn out quite as you had expected! There is something to be learnt from all of them.

part one

1 objects of reference - an introduction

Objects of reference are ultimately about facilitating a relationship between two people. They are about empowerment, and are fundamental to equality of opportunity. Those seeking to introduce them need a secure grasp of how early communication works, and in this section a developmental model is set out that provides the necessary context, within which eight issues are addressed:

- What are objects of reference?
- What can they represent?
- How are they chosen?
- Is it possible for different people to use the same objects of reference?
- Who is likely to benefit from their use?
- How should they be introduced?
- How should you foster progression?
- What other potential benefits do objects have?

The development of early communication

Communication is central to human development. Potentially it is a two-way thing: one person expresses a need or a feeling, or imparts some information to another, who receives (and, to a greater or lesser extent, understands) the message sent. These two roles may be reversed, and interaction occur along the following lines:

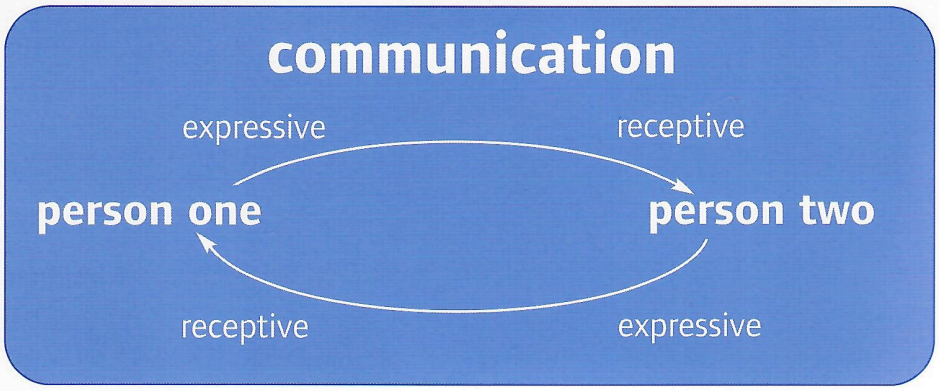


Figure 1. Communication is potentially a two-way thing

Communication can occur in any of the sensory domains, commonly involving vocalising, speaking, singing, listening, looking, moving and experiencing through touch.

Expressive communication has several phases of development. In the earliest phase, people may unthinkingly respond to their immediate circumstances (for example, physical discomfort) through vocalising or moving in a certain way. If this expression of need is recognised by those around, then communication occurs which is said to be "non-intentional". Gradually, the awareness may dawn that vocalising and particular gestures have an effect on others. At this point, the communication becomes "intentional". Here, a person may draw other people's attention to things by pointing, and relish the shared external interest this arouses.

Next may come a growing appreciation of "symbolic" communication: knowing that one thing can stand for another. Flapping the hand may consistently be used to mean "yes", for example, or a special sound may mean "car". These personal utterances or signs may (but need not) become standardised in the form of conventional speech or signing, and may eventually lead to literacy in print, braille or Moon (an alternative tactile reading system). Here, communication is said to be "formal", with common symbols shared among a wider community.

type of expressive communication	*vocal*	*gestural/ visual (person-based)*	*gestural/ visual (externally-based)*	*tactile/haptic*
non-intentional	cries in response to need	for example arches back in displeasure	looks at things	touches things
intentional	deliberately vocalises to show need	for example *extends arm to attract attention*	points to things	consciously manipulates objects to communicate: for example *proffers object to elicit shared attention*
symbolic	makes personal utterances: for example *says "mmmm" meaning "hairdrier"*	makes personal signs: for example *flaps hand for "yes"*	points at pictures draws	uses **objects of reference**
formal	speaks (using words)	uses conventional signs	points at symbols or words writes (in print)	uses Moon/ braille

Figure 2. The development of early expressive communication

The development of early expressive communication is set out in Figure 2. This table just presents an outline of what may occur; in reality things are not, of course, as simple as this. Phases may overlap, with intentional expression occurring alongside communication of a symbolic or formal nature, for example. Phases may be subsumed, one within another: for instance, formal communication is, by definition, both symbolic and intentional. Development may be inconsistent across domains. For example, a person with a severe visual impairment who can speak may as yet be unable to communicate symbolically in the tactile/haptic domain (that is, perceived through touch). People's levels of expressive communication tend to fluctuate. Hence, someone may speak or sign only on some occasions or in certain contexts. Whilst progress through phases and, where appropriate, across domains is generally desirable, it is not the most important thing: what really matters is how effectively a person's level and mode of communication meets his or her expressive needs.

part one

What are objects of reference?

Objects of reference are objects that have particular meanings assigned to them. They stand for something, each acting as a symbol in much the same way as words do, whether spoken, signed or written.

For example, someone who cannot understand or is unable to express the idea of "having a shower" through a formal medium of communication such as speech or signing, or who would benefit from the word or sign for "shower" being tangibly reinforced, may accept a familiar bottle of shower-gel as a symbol of that activity.



Figure 3. Familiar bottle of shower-gel may symbolise "having a shower"

As Figure 2 shows, objects of reference (often referred to simply as "objects") occupy a distinct place in the field of early expressive communication. They offer a means of symbolic expression which principally operates in the tactile/haptic domain although, as we shall see, all objects are potentially multisensory in nature.

Objects can also play a key role in the development of receptive communication. This invariably precedes that of an expressive kind, ranging from the early understanding that a certain stimulus may mean something (being offered food follows the sound of a spoon clattering on a bowl for example) to the comprehension of formal symbolic language (such as signing, speech, print, braille or Moon). Objects of reference have a special place in this network of possibilities, providing a means of receiving symbolic information in three-dimensional form.

Unlike most other forms of communication, objects of reference potentially register with all the senses. As well as having a certain shape, size, texture, weight and temperature, discernable through touch, they have visual characteristics which can be exploited by those with sufficient sight. Some objects have a distinctive smell too, such as a pair of swimming trunks that have recently been dipped into the chlorinated water of the pool, while others may make a characteristic sound. For example, a small tambourine may be used to mean "music".



Figure 4. Small tambourine meaning "music"

part one

Emphasis on the visual, auditory and olfactory qualities of objects of reference may be particularly important for people whose physical disability prevents them from manipulating objects themselves. In these circumstances, the multisensory properties of objects may be used to enhance receptive communication.

What can objects of reference represent?

Objects of reference can be made to represent anything that words, signs or other symbols can. When setting out to use objects of reference, it can be helpful to start by thinking in terms of three concept groups as follows.

Activities: here, the object will often amount to the same thing as the item used in a given activity, such as

drink	-	a cup
lunch	-	a spoon
swimming	-	a piece of towel
ball-pool	-	a plastic ball

Places: these may include

classroom/workroom	-	bubblewrap, stuck on the door
home	-	key to the front door



Figure 5. Cup meaning "drink"; key meaning "home"; spoon meaning "lunch"; and a piece of towel meaning "swimming"

People: individuals may be represented by a particular wristband, for example, or piece of material from which a familiar item of clothing is made.



Figure 6. Bracelet meaning "Anna"

part one

There are a number of ways in which objects of reference can relate to the things they represent. For instance, an object may form part of what it stands for - a key feature of what is represented. For example:

swings	-	a short length of chain
soft play	-	a piece of plastic material
shopping	-	a coin
horse-riding	-	a stirrup

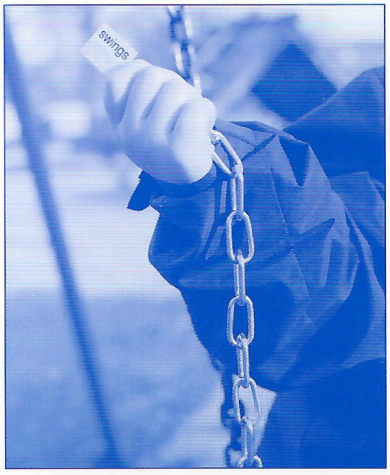


Figure 7. Short length of chain meaning "swings"

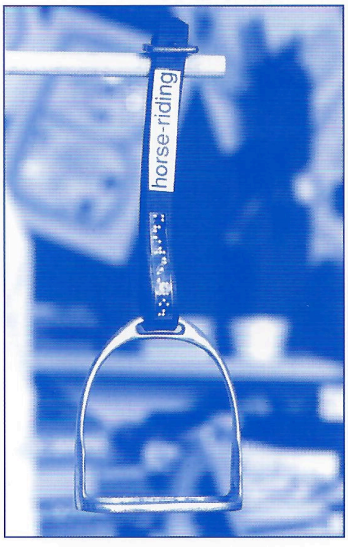


Figure 8. Stirrup meaning "horse-riding"

However, objects of reference need not have any features in common with what they represent, but derive their meaning through association. This is the case, for example, with Anna's bracelet (see p16). Since there is no necessary connection here between the symbol and its meaning, the relationship between the two is inevitably more tenuous than with objects that form part of that which is represented. There is a greater flexibility of choice, though: Anna could be represented equally well by any other type of bracelet, for example, and a room by any sort of texture attached to the door.

Links formed through association are unavoidable when objects of reference are used to convey abstract concepts. For instance, at one residential school a handchime was incorporated into a "goodbye" song that was invariably sung at the end of the school day to mean "4 o'clock", when some children went home, others had their tea, and the rest went out to play.

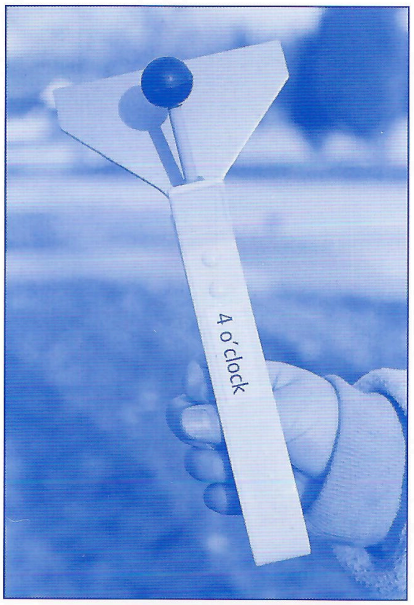


Figure 9. Handchime used in a song to mean "4 o'clock"

Similarly, concepts such as "more" and "finished", and "yes" and "no" may come to be associated with objects such as the following:

part one

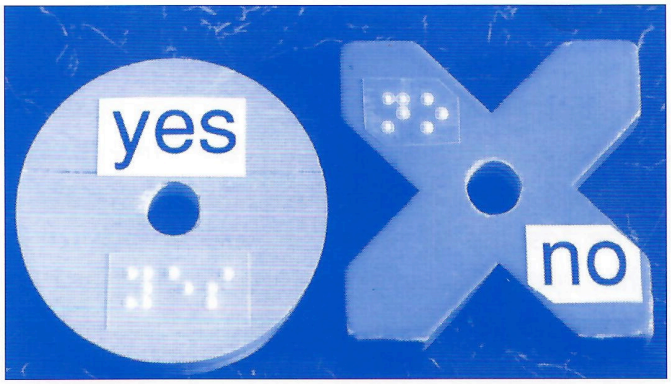


Figure 10. Wooden shapes meaning "yes" and "no"

Choosing objects of reference

Two of the most commonly asked questions in relation to using objects of reference are: "How do you decide what to use as objects of reference?" and "Is it possible and/or desirable to introduce a common system of objects across a school, college or other centre?" Answering the first question sheds light on the second.

The crucial point to bear in mind is that objects of reference are, by definition, not a formal system of communication. That is, unlike a verbal language, objects of reference do not constitute a communal, "top-down" construct with which individuals become familiar and gradually learn to use (albeit in an original way). Rather, one would typically expect objects to arise "bottom-up" from an individual's unique experience and understanding of the world. Hence, although a teacher, lecturer, carer or therapist may ultimately decide what objects to try out in working with an individual, that decision will be made on the basis of painstaking observation - noting how the person concerned interacts with his or her environment, and taking careful account of the things which seem to be particularly important or meaningful - with the aim, wherever possible, of extending current activity rather than trying to impose something new.

It may be, of course, that several individuals in a group or community will accept that a particular activity, person or place can be represented by the same object. If so, all well and good, but you must be prepared for the fact that this will not always happen - in which case, there are two things to bear in mind. First, it may be possible to move towards a formal (shared) system of objects through reduction and simplification (described p24). Second, it is important to ensure that all objects are labelled in appropriate media to avoid potential ambiguity and confusion.

Who is most likely to benefit from using objects of reference?

It is likely that the people who will benefit most from using objects of reference are those whose communication skills are at or approaching the symbolic stage of development (see Figure 2). However, since an individual's communication abilities may well have an irregular profile, and since the degree to which objects are symbolic varies both intrinsically and according to how they are used, it is neither possible nor desirable to be prescriptive. Generally speaking, though, the children and adults for whom the use of objects of reference is most appropriate will be those whose capacity to communicate is impaired, for example, through:

- severe learning difficulties
- autism
- disabilities of sight and/or hearing (or difficulty in making sense of what is perceived)

or, very often, a combination of these.

The potential value of objects of reference for other groups is still to be evaluated. For example, objects may well assist young pre-braillists' understanding of symbolic representation in the tactile/haptic domain, substituting for an area of cognitive

development that typically evolves quite intuitively through seeing that one thing can stand for another. In a rather different context, people (of any age) who have suffered brain damage (including stroke patients) may use objects to support communication, and assist in their recovery. Finally, those with degenerative conditions such as Alzheimer's disease could be helped to use their remaining faculties more effectively through the timely introduction of objects of reference.

Starting out

It is essential that the use of objects of reference should build on a person's first-hand experiences. Context is crucial, particularly in the early stages, and objects should be introduced in everyday situations whenever the need to communicate arises. Initially, it is likely that they will be used to provide or reinforce information presented in other ways. How this is undertaken will depend on the user's level of development in other areas of receptive communication.

If a sufficient level of language has not yet been acquired then you - the person seeking to communicate - will have to rely on the successive presentation of an object and what it represents: swimming trunks followed immediately by a session in the pool, for example, or a cup followed immediately by a drink. Sequences of actions such as these may need to be repeated many times, over an extended period, before the link is made in the user's mind. It is particularly important to adopt a consistent approach, and careful planning will be needed if different people are to be involved in the communication programme.

If the person concerned has sufficient receptive language then a verbal explanation or sign can accompany the introduction of the first object. For example, you may say "Have a drink" as the cup is presented, followed immediately by the drink. Such an explanation

and accompanying action may be repeated as often as necessary for the connection to be grasped.

In either case, the ultimate aim is for the presentation of the object to trigger the thought of the activity, place, or person that it stands for. Then it will have become - for the user - an object of reference.

When starting out, it is advisable to ensure that there is the simplest possible link between an object and its meaning. So it may be wise to start with a simple "concrete" object that has a direct physical connection with that to which it refers. Examples include a cup for "drink" and a spoon for "food". However, this principle need not apply in all cases. The strong motivation to understand or express a more abstract thought, such as "time to go home", or the particularly pleasing texture or visual appearance of an object may be more important factors as far as the user is concerned. Therefore, take account of any strong interests or preferences that the person concerned may have. If his or her favourite thing is chocolate milkshake, then you may decide that the first object of reference chosen should refer to this.

Try to select an object that is as characteristic as possible, that the user will find easy to recognise in whichever sensory modality or modalities he or she prefers. It is important that the person using the object should find it attractive - should want to feel it, look at it, listen to it or smell it ... to "own" it as a symbol in their repertoire of communication.

Once the first object of reference has successfully been introduced, there are various ways forward, which are outlined in the sections that follow. Whilst some of the suggestions may be appropriate for a particular person, others may not be. Progress may be made on several fronts at once, or in only one area at a time. The ideas may be taken up in any order, and not necessarily the one presented here.

part one

Introducing further objects

Having grasped the meaning of one object of reference, something which may occur almost immediately or take many months, further objects may be introduced. Several factors need to be taken into account as this next stage is broached.

Contrast: in the early stages, you may well decide to select objects that are strongly contrasted in texture, shape, colour and in intended meaning. In this way, possible confusion with other objects of reference will be kept to a minimum. Gradually, it may be possible to use objects that are less strongly characteristic to touch, look at, listen to or smell - whose salient features are less clearly defined.

Degree of abstraction: as the user reaches the necessary level of understanding, objects that are more abstract may gradually be introduced - that have less immediate physical connection with what they represent.

From user-centred to the wider community: until the use of objects of reference has become a source of motivation in itself, which will hopefully occur as the user comes to appreciate his or her new-found understanding and control of their environment, you should continue to bear in mind any particularly strong likes or dislikes that he or she may have. Above all, what is it that the person concerned would wish to communicate about? Gradually, it may be possible to move away from the "bottom-up", user-centred choice of objects and adopt a more "top-down" approach - introducing things to communicate about, and symbols for them, that arise from the wider needs of the community in which the user is learning or living. For example, a young adult with learning difficulties may not particularly enjoy sessions in the gym and would not choose to communicate about them. However, since these sessions are a timetabled, group activity, it will be convenient for everyone that he or she is able to do so.

Reducing and simplifying each object

In time, it may be possible to reduce and/or simplify some or all of the objects that a person uses. There are two reasons why this may be desirable. First, to save space. Life-sized objects may be cumbersome and difficult to manage, particularly if the person concerned builds up a healthy object vocabulary! Second, to promote learning. There are educational benefits (which are described on p27).

Reduction: consider, for example, a ball from the ball-pool being used as an object of reference. In time, this may be replaced by one (made of the same or similar plastic) that is slightly smaller, and then by one that is slightly smaller still, and so on. Beware of just reducing objects in size, though, and thinking their equivalence will be maintained for those experiencing them in the tactile/haptic domain. For instance, to touch a small model car bears little or no resemblance to the real thing. Miniaturisation along these lines, which is very much a visual thing to do, may be quite inappropriate for blind children or adults who have learning difficulties. It may be much better to represent "travelling" by using part of the vehicle with which the person has regular contact. So a good way of representing "going in the car", for example, may be to use a seat-belt buckle.



Figure 11. Seat-belt buckle meaning "going in the car"

Simplification: this has two main stages. First, those working with the user must discover the features that are being used to identify an object, and then gradually eliminate those characteristics that are judged to be of lesser importance. For example, a person with little or no sight may be using a cup to mean "drink". Which feature or features of the cup are being used to identify it? The rim? The handle? If so, can the rest of the cup be removed, and still be accepted by the person as meaning "drink"?

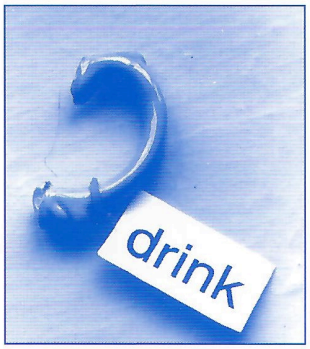


Figure 12. Cup handle meaning "drink"

At a later stage, it may be possible to simplify the remaining features further. For example, the cup handle could be replaced with a plain semicircle.

As objects are reduced in size and simplified, it will be possible to attach them to card. If this is the aim, as the objects are modified over time, it is sensible to move towards a two-dimensional representation. Indeed, people with the necessary visual skills may be able to graduate rapidly from using objects to pictures or pictograms. For those working through touch, the changes may need to be more gradual, and will certainly require careful planning. For example:

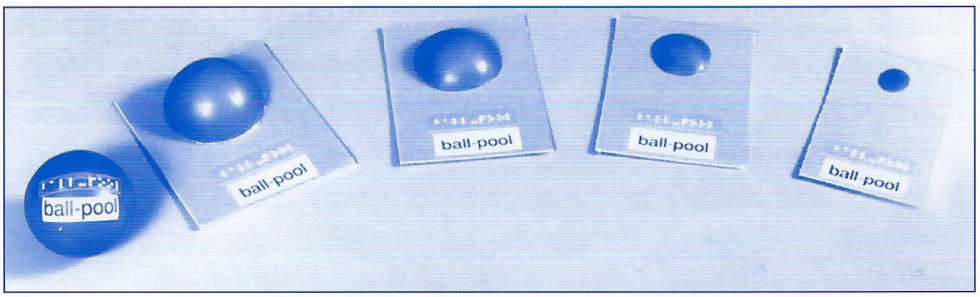


Figure 13. Successive reduction of balls from the ball-pool

With some objects, such as a key, no modification will be necessary.



Figure 14. "Home" card, using an object, and labelled in braille and clear print

By constructing cards like this, objects can eventually be presented in the form of a book, which offers a convenient medium for their storage and use (see p33). It also brings objects of reference one step nearer to reading, in the conventional sense.

Finally, for touch users, the objects, simplified and reduced where necessary, can be copied in tactile form through "thermoforming". This is a vacuum-moulding process, in which a thin sheet of plastic is heated and sucked over the object in question, imitating its every contour.

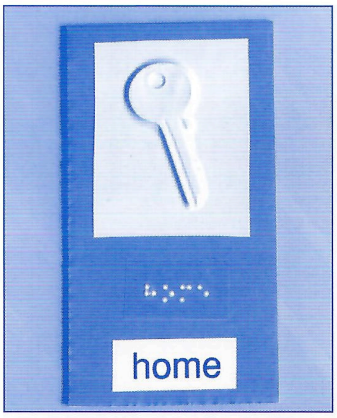


Figure 15. Thermoformed key meaning "home"

In this way, objects of reference can be "mass-produced" fairly easily, and it is a step closer to reading braille or Moon. Indeed, there is no reason why an object should not eventually be transformed into an appropriate Moon or braille character. For instance, a simplified form of the cup handle shown on page 25 may be interpreted as "d" for "drink" in Moon.



Figure 16. Transformation of an object to a character in Moon

The benefits of undertaking programmes of reduction or simplification can be enormous, with the insights they offer into the way a person is thinking. For instance, just how far can a ball

from the ball-pool be reduced and still be accepted as a representation of the original? To what extent do successive reductions have to be graduated for object equivalence to be maintained in the user's mind? So often it is at the point where things appear to break down - upon discovering, for example, a person will not accept that a thermoformed key can stand for the original thing - that the learning process for teachers, lecturers, carers, therapists and other workers really begins, and future individual programmes can be planned with precision. You need to know just where someone is currently standing in order to get a glimpse of the next step along the developmental path, and foster this progression.

Sequencing and the representation of time

The object of reference may gradually be separated further and further in time from that to which it refers. So the ball for "ball-pool" may be presented together with an indication of "in a minute", for example. The activity then occurs after the prescribed time, a period which may slowly be extended as the person concerned comes to accept the new concept. In this way, objects can be used in an increasingly abstract manner.

Having separated the object from that to which it refers, the user can next begin to anticipate sequences of events, starting perhaps with two. For example: "After the ball-pool, we'll have a drink" and "After swimming, it'll be time to go home."

On a table-top these can be presented from left to right, just as in reading.



Figure 17. "After swimming, it'll be time to go home" - a sequence of two activities presented through objects of reference

If two activities can be anticipated successfully then try three. For instance:

"After swimming we'll have a drink, and then it'll be time to go home."

Then four, five, and so on. Once more, it will be valuable to assess the user's level of development in this area. How long a chain of future activities can she or he grasp? How far can this number be extended? By understanding how events are sequenced, people may start to conceptualise the passing of time.

Timetables can be built up that last for a morning, a day, a week, or even longer. It is important to remember, especially with learners with multiple disabilities, that the "curriculum" lasts for all waking moments, so if timetables are to be used, they should not stop at 4 o'clock, or whenever the school or college day ends. Imagine, as a teacher or lecturer, being given a watch while you were at school or college, and then being told to manage without it for the evening!

While consistency is a vital element in the lives and education of people with learning difficulties, the unexpected is always liable to occur, and an object timetable enables changes to be made clear. For example, if the swimming pool goes out of action, this activity can be replaced on the timetable with another, and the alteration shown to the child or adult concerned. In this way, he or she may well be more accepting of the unexpected cancellation of a favourite activity than would otherwise be the case!

Sequences of objects can be used not only to anticipate future events, but to refer to past ones as well. To the typical question "What did you do this morning?" which many people with learning difficulties find so challenging - objects can provide the necessary prompt.

For those whose grasp of language is still in the early stages, when past, present and future tenses are often confused, objects of reference can be an invaluable aid.

The timetable shown opposite is made up of a series of boxes with lids that can be closed to indicate that an activity is finished. The timetable is meant to be consulted at the beginning of a morning or afternoon session, and updated, by closing the appropriate lid, with each change of activity. Just before the end of the session, events can be checked through in full. It is always available for consultation.



Figure 18. Timetable with a box for each object of reference

Extending and refining the meaning of objects

It may be useful to extend the meaning of some objects of reference to encompass complex activities, comprising a number of components that are likely to vary in detail from one occasion to another, such as "work at the table" shown in the timetable in Figure 18 (second box from the left). These can be standardised in the user's mind by always starting with the same "mini-activity" - here, a construction exercise. Following this consistent opening, different combinations and permutations of mini-activity are possible (such as matching and sorting), that are embraced by the one idea of "work at the table". At the conclusion of the session, the feeling of finality can be enhanced by consistently ending with the same mini-activity (such as dismantling the structure assembled earlier).

Conversely, more specific information can be communicated by using objects in combination. For example, consider an object-user who can understand that activities such as swimming, eating and drinking are indeed going to happen, and when, in relation to other events, they are going to occur. He or she may well want to know, who is taking the swimming session? When are we going to eat? Where are we going to have a drink? In fact, the four main questions that need to be answered typically amount to: **what? where? who with?** and **when?** The "activity" object will answer the first of these questions ("what?"), and its position in relation to other objects will supply the information posed by the fourth ("when?"). One solution to the second and third queries is to use cards laid out in the following way:

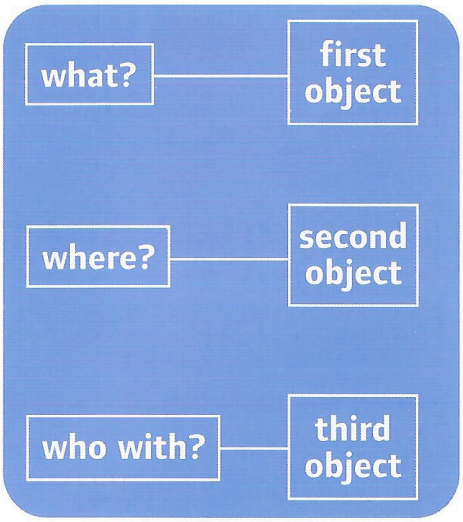


Figure 19. Possible design of information card with three objects

The objects can be attached with Velcro to make the cards easier to set up according to the needs of the moment.



Figure 20. Example of three-object card

A timetable can be made by placing the cards in a ring-binder. For instance:

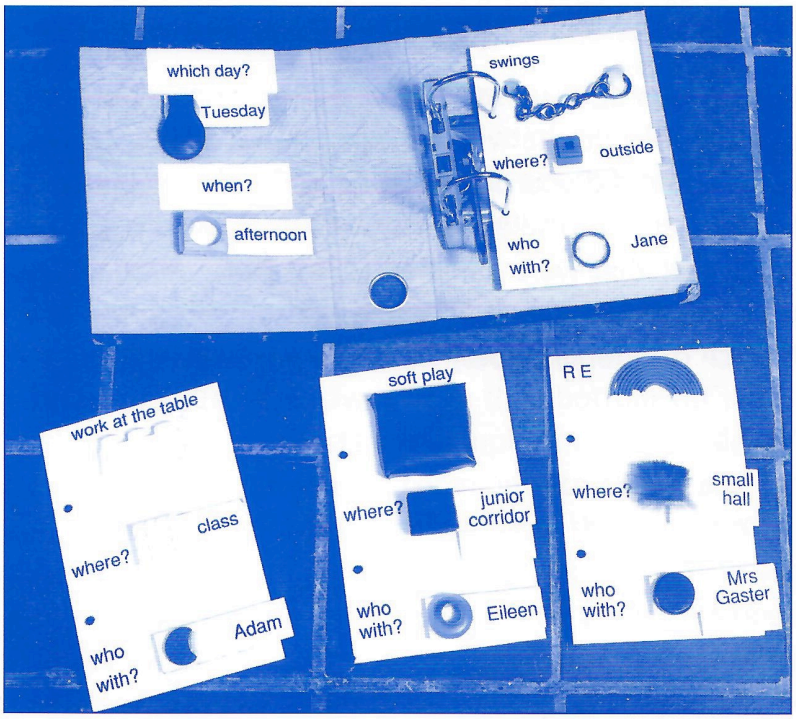


Figure 21. Timetable for Tuesday afternoon made from object cards in a ring-binder (here spread out for display)

Using objects as expressive language

As soon as people become familiar with receiving information through objects of reference, to tell them what is going to happen next, for example, they can be encouraged to use the objects in an expressive way - to choose for themselves the next course of action, for instance, or who it is to be with, or where, or when. This idea can be introduced by offering a choice of two objects, representing, say, a drink of water and a drink of coke, and encouraging the child or adult concerned to select the preferred option. From this ultimate forced-choice situation, the selection can be increased to three objects or more.

If a timetable is in operation, then a space can be left to be filled by the user with an activity of his or her own choice, perhaps to encourage successful completion of the preceding task. This may lead eventually to choices being made spontaneously.

"Sentences" can be completed on the table-top using a Velcro board or suitable alternative. For example, in answer to the question, "What did you do this morning?", the respondent would be expected to select and order the appropriate objects from a number that were on offer. Using these, he or she could communicate the fact that: "We had music [bell] in the hall [small piece of bubble paper] with Alison [wristband]".

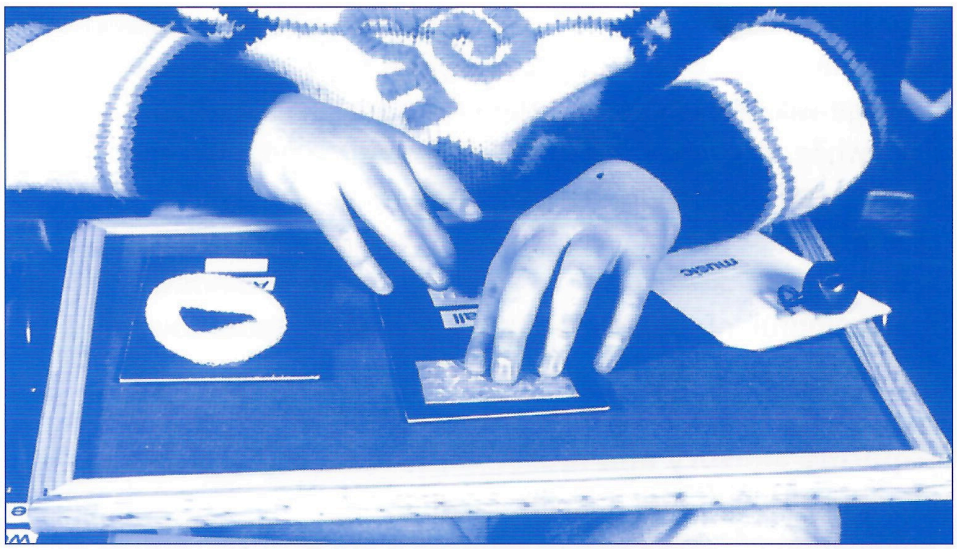


Figure 22. Building up "sentences" using objects on a Velcro board

Other potential benefits of using objects

As we have seen, objects of reference can be used in many of the ways that speech, signing, reading and writing can. However, as well as directly enabling or assisting people to communicate with others, objects have a number of other potential benefits. For example, they can boost confidence in social interaction which is principally through signing or speech; they can promote the acquisition of sensory and motor skills; they can foster concept development and deepen understanding; they can help people remember things; and they can mitigate challenging behaviour.

Confidence in social interaction: people who are just starting to use speech or to sign may well lack the confidence to communicate, perhaps through the painful experience of being repeatedly misunderstood or even not understood at all. How long would you to keep trying if you thought no-one was going

to follow what you were saying? By using objects in conjunction with other forms of communication, it is more certain that the message will get across, and the effort may seem more worthwhile. Because of this, and contrary to some opinion, supplementing speech with objects of reference or other forms of augmentative communication is more likely to promote its development than to hinder it. For a person who finds any form of meaningful interaction problematic, it is essential to explore all potential avenues and combinations of contact.

Acquiring sensory and motor skills: identifying objects of reference through touch, sight, hearing, smell or some combination of sensory input requires a range of perceptual and exploratory skills. These will need to be present initially, if only in rudimentary form. However, using objects will provide a meaningful context for the further development of these abilities and, hopefully, the motivation to develop them further, as the desire to communicate grows.

Concept development and understanding: using objects can promote symbolic understanding, and reinforce the concepts that are conveyed. In addition, objects offer a source of tangible information to which repeated reference can be made, in much the same way as literacy enables people to think ideas through on paper. Consider this publication. Seeing the whole thing laid out, and being able to read and re-read it yourself, makes the concepts easier to grasp than just listening to someone reading the text aloud.

Assisting memory: people write things down as an aid to memory. Can you manage without a shopping list, for example? Think of address books, diaries and timetables. We use them because we don't feel able to rely on memory alone. Similarly, objects of reference can act as a tangible aide-memoire.

Mitigating challenging behaviour: hopefully, objects of reference will help users to understand their world better, and

improve their ability to communicate with others. These two factors in themselves may lead to a reduction in behaviours that challenge. Through being able to anticipate what is going to happen next, with whom, and where, and by knowing when a particular task is completed (through the lid of a timetable box being closed, for example, or the use of an object for "finished"), people's feelings of uncertainty and therefore anxiety may be reduced considerably. Being able to express their needs more precisely to others may ease feelings of frustration. Moreover, a user's dependence on the presence of others should lessen. To find out what is happening this afternoon, consult the timetable! Through using objects of reference, a reliance on sometimes intense personal relationships can be eased, as the user learns to gain more information from the environment, again reducing the need to resort to challenging behaviours.

Conclusion - the importance of careful planning and evaluation

It cannot be overemphasised how important it is to plan very carefully before embarking on a communication programme using objects of reference. A person's development can be difficult to predict, and it would be unfortunate to begin with certain objects, only to find that they led to inconsistencies later and so had to be abandoned. For example, a piece of towel may be chosen to represent "swimming", only to realise that it might have been better saved to mean "washing" or even "drying".

Similarly, in devising a timetable for an extended period such as a week, it is well worth going through the seven days in a "dry run" to iron out possible snags. It is amazing the things that can unwittingly be left out! Even having taken this precaution, I would recommend having a box of "spare" objects ready to be assigned meanings as the need arises. The opportunity to go to the fair may suddenly present itself, for example, or a stranger may arrive

unexpectedly - circumstances which may demand the creation of new objects of reference on the spur of the moment. In the same way that people typically have constant access to speech and to writing, enabling them to communicate with others and helping them understand things and remember them, so objects of reference can inform the whole of a person's life. They are not intended to form the basis of an isolated activity that fills half an hour every morning between other events!

It is essential that the objects are used consistently, even when people and circumstances vary. Hence at the outset, you should seek everyone's co-operation, and agree as to the manner in which objects of reference are going to be used. Training will almost certainly be required. Keep a careful note of the approaches that are adopted, so that as workers come and go and situations change, the structure remains the same, and the user's living and learning environment is held intact.

Beyond the initial stages, progress will depend on systematic record-keeping and evaluation, which will enable future steps to be mapped out with precision. Have clear aims, negotiated with all parties, including, as far as possible, the child or adult concerned. Always seek to help people move on: their progress may well depend on your insight, imagination and perseverance.

part two

2 four case studies

Just as everyone's profile of communication needs and abilities is unique, so the use of objects of reference will necessarily vary from one individual to another. However, since all effective communication has fundamental similarities, there is much to be learnt from shared experiences. The case studies in this section show how objects of reference have been used to help individuals extend periods of concentration and remember things, to promote independence and support social interaction, to structure time and reduce the incidence of challenging behaviour, and to develop the skills necessary for using specialist communication technology.

David: using objects to assist memory and concentration

David could follow simple instructions with someone there to keep him on task. Although he was blind and had severe learning difficulties, his mobility around college showed a reasonable understanding of its layout, and was generally good in brief spells. However, when asked to find his own way to a destination beyond the immediate confines of his base, such as the canteen, David would rarely arrive without intervention. Almost invariably, he would be distracted by a noise or by someone talking, and, having attended to this new interest for a while, he would evidently forget what he was supposed to be doing, and resort to rocking on the spot.

It was easy to imagine that this repeated action reflected David's thinking processes at that point, which had apparently lost their direction and become trapped in a stereotypical loop. A further external stimulus was normally required to break the pattern of thought in which he was imprisoned. Someone passing might say: "David, where are you going?" to which the answer would be, "The canteen". Thus directed, David would set off again until the next slip of concentration delayed him once more.

Clearly, what was needed was something (rather than someone) to prompt him from time to time. In fact, David was greatly helped by having an object to hold that reminded him of his destination. For instance, when going to the canteen, he was given a voucher which entitled him to a snack; he would arrive at the gym with his trainers, and bring the seat-belt buckle with him when it was time to go in the taxi. Using object cues like these helped David to concentrate for longer, and gradually his reliance on them diminished.

part two

Taufiq: using objects as labels to promote independence and social interaction

Although Taufiq could not see, and was unable to manage a formal reading system such as Moon or braille, she had for some time been able to find her coat peg in the cloakroom at school, since it was adorned with a string of plastic beads. However, she often found it difficult to establish which was her chair in the classroom, and isolating her tray from the others tended to be problematic too. So a number of identical strings of beads were obtained, and Taufiq's chair and tray were labelled in the same way as her peg in the cloakroom. Through such simple means, Taufiq's degree of independence was increased substantially. Indeed, the strategy proved so successful that other items - her mug, biscuit tin, games bag, and so on - were labelled with what had become her personal symbol.

Taufiq's classmates were allocated their own objects too, and before long, she was helping her friends to hang up their coats, fetch their games bags and find their mugs. Hence using objects of reference not only enabled Taufiq to achieve more for herself but facilitated social interaction with her peers as well.

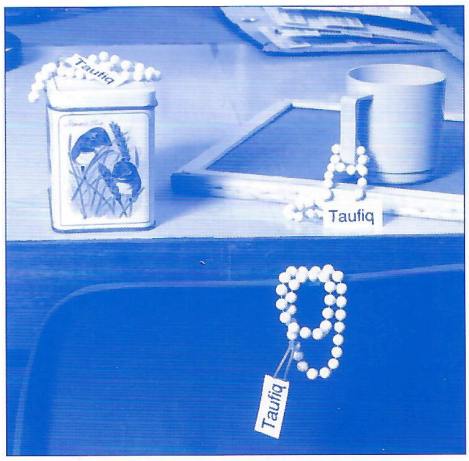


Figure 23. Taufiq's object-labels on her chair, mug and tin

Paolo: using objects to structure time and reduce the incidence of challenging behaviour

For Paolo, aged 11, severely visually impaired and developmentally delayed, the important thing was knowing when a given activity had finished. Worries about many aspects of life, such as swimming, frequently caused his high level of background anxiety to erupt into violence which was usually aimed at the adults who were trying to reassure him. The problem was that while Paolo understood words like "swimming", he was unable to grasp their temporal context, so phrases such as "we went swimming yesterday", "swimming's not till next week", and "we're going swimming this afternoon", were all equal causes for concern. What he really needed was a way of knowing how activities stood in relation to one another - the first stage of structuring time. So Paolo was provided with a special tactile timetable, made up of a series of boxes in which different objects could be placed, each corresponding to a different activity. The boxes had lids that were closed to indicate when an activity was over (see p31).

Paolo consulted his timetable first thing in the morning to give him an overview of the day's events, and then kept updating it by closing the appropriate lid with each change of activity. Just before home time, when his mother came to pick him up, the day's activities were checked through in full. For the first time without verbal prompting, Paolo was able to tell her what had happened during the school day.

part two

Claire: using objects as a medium of expressive communication with a TouchTalker

Claire was an exceptional child. Blind and unable to speak, she nevertheless showed a clear understanding of what was said to her, remembering and anticipating activities, and effortlessly following complex series of instructions. Her pressing need was for an appropriate medium of expressive communication. However, Claire had problems with fine motor control that made signing difficult, and these were compounded by a poor sense of touch that prevented her from using braille or Moon either. Objects of reference, therefore, seemed to be the most appropriate option.

Observation suggested that Claire could discriminate and manipulate shapes and textures as small as one centimetre square, and these dimensions were taken as a working minimum. Because of the speed with which Claire could learn, and the presumed extent of her vocabulary, immense care was taken in planning her object system to avoid potential ambiguities at a later stage. Initially, her objects were divided into five concept groups: activities, places, people, times and what were known as "qualifiers", such as "yes" and "no", and "more" and "less". Among the first objects that were introduced to Claire were those that signified the days of the week. Within a short space of time not only was she able to sequence these correctly, but she astonished everyone by using them to answer questions such as "If today is Wednesday, what was yesterday?"

In only a few weeks, working intensively for about half-an-hour a day, Claire learnt the meanings of around 70 objects. Each was

labelled in print so that people unfamiliar with the system could share her medium of communication too. For convenience, the objects were backed with Velcro and mounted on a large board.

The intention was that Claire's objects should eventually be fixed to a keyboard, linked to a portable computer with synthesised speech, which would enable her to communicate directly with people as she pleased. The problem was that as Claire's object vocabulary continued to expand, the keyboard required would have been impracticably large, and some way of simplifying things had to be found.

The answer lay in the tactile numbering system that had been used for Claire's music book. Just like the other children in her class, she loved to choose the songs in music sessions, and so she was given a book, each page bearing a different song, and each with a distinct tactile marker that Claire could recognise. To make a choice, she just opened the book at the appropriate point and showed the pianist! Her tapes were labelled in the same way.



Figure 24. Claire's tapes and music book, numbered using tactile labels

part two

Claire's tactile system of numbering was transferable to other concept areas, initially activities, places, people and times. All that was then needed was a single abstract object to be assigned to each of these concept groups to enable Claire's 70 objects to be reduced to 15 in different combinations. This proved a viable proposition for use with a keyboard, and left space for other objects to be added that pertained to prepositions, conjunctions and short phrases, offering the possibility of complete and coherent sentence construction. Hence with her TouchTalker Claire might say: "Last night ... I went ... shopping ... with ... Mike". This intricate juxtaposition of objects of reference with the technology of synthesised speech has provided the route along which Claire's continuing quest for fully independent verbal communication can be pursued.



Figure 25. Claire's TouchTalker, with tactile overlay made from small objects of reference

part three

3 further reading

A bibliography compiled by Keith Park.

For those supporting individuals with special communication needs, the more complete their understanding of the underlying theoretical issues the better. The following texts are particularly recommended.

- **Aalborg School** (1991) *Objects of reference* Denmark: Aalborg School

- **Aitken, S. and Buultjens, M.** (1992) *Vision for doing: assessing functional vision of learners who are multiply disabled* Edinburgh: Moray House Publications

- **Bates, E.** (1976) *Language and context: the acquisition of pragmatics* London: Academic Press

- **Bates, E., Benigni, L., Bretherton, I., Camaioni, L., and Volterra, V.** (1979) *The emergence of symbols: cognition and communication in infancy* New York: Academic Press

- **Bloom, Y.** (1990) *Object symbols: a communication option* Sydney, Australia: North Rocks Press

- **Bloomberg, K. and Johnson, H.** (1990) "Augmentative communication in severe impairment cases" [in] S.R. Butler (ed.) *The exceptional child* Sydney, Australia: Harcourt, Brace and Jovanovich

- **Bolt, J. and Ridler, S.** (1989) "Educating Fatima" *Talking sense*, 35(4), 13-15

- **Camaioni, L.** (1993) "The development of intentional communication: a re-analysis' [in] J. Nadel and L. Camaioni (eds.) *New perspectives in early communication development* London: Routledge and Kegan Paul

- **Camaioni, L., Perucchini, P., Muratori, F., and Milone, A.** (1997) "Brief report: a longitudinal examination of the communicative gestures deficit in young children with autism" *Journal of autism and developmental disorders*, 27(6), 715-725

- **Coupe, J. and Levy, G.** (1995) "The object related scheme assessment" *SLD Experience*, 14, 16-18

- **Cross, A., and Park, K.** (2000) "Whose needs come first? The use of objects of reference with people who have severe and profound learning disabilities" *Communication matters*, 14(1), 25-26

- **Downing, J.E. and Siegel-Causey, E.** (1988) "Enhancing the nonsymbolic communicative behaviour of children with multiple impairments" *Language, speech and hearing services in schools*, 19(4), 338-348

- **Dupuis, J.A.** (1996) "Modifying communication symbols for persons with visual impairment" *The ISAAC bulletin* (Quarterly newsletter of the International Society for Augmentative and Alternative Communication), 44, 1-5

- **Goetz, L., Guess, D., and Stremel-Campbell, K.** (eds) *Innovative programme design for individuals with dual sensory impairments* Baltimore: Paul H. Brookes

- **Gomez, J.C., Sarria, E., and Tamarit, J.** (1996) "The comparative study of early communication and theories of mind: ontogeny, phylogeny, and pathology" [in] S. Baron-Cohen, H. Tager-Flusberg and D. Cohen (eds.) *Understanding other minds: perspectives from autism* Oxford: Oxford University Press

- **Hendrickson, H. and McLinden, M.** (1996) "Using tactile symbols: a review of current issues", *eye contact*, 14

- **Joffee, E. and Rikhye, C.H.** (1991) "Orientation and mobility for students with severe visual and multiple impairments: a new perspective" *Journal of visual impairment and blindness*, 85(5), 211-216

- **Kasari, C., Freeman, S., Mundy, P. and Sigman, M.D.** (1997) "Attention regulation by children with Down Syndrome: co-ordinated joint attention and social referencing looks" *American journal on mental retardation*, 100(2), 128-136

- **Legerstee, M. and Weintraub, J.** (1997) "The integration of person and object attention in infants with and without Down Syndrome" *Infant behaviour and development*, 20(1), 71-82

- **McLarty, M.** (1995) "Objects of reference" [in] E. Etheridge (ed.) *The education of dual sensory impaired children: recognising and developing ability* London: David Fulton Publishers

- **McLarty, M.** (1997) "Putting objects of reference in context" *European journal of special needs education*, 12(1), 12-20

- **Murray-Branch, J., Udarvari-Solner, A. and Bailey, B.** (1991) "Textured communication systems for individuals with severe intellectual and dual sensory impairments" *Language, speech and hearing services in schools*, 22, 260-268

- **Ockelford, A.** (1993) "Making sense of the world" *eye contact*, 6, 5-7

- **Ockelford, A.** (1994) "In touch with their needs" *Special needs*, 27-29

- **Ockelford, A.** (1994) *Objects of reference Promoting communication skills and concept development with visually impaired children who have other disabilities* (Revised Edition) London: Royal National Institute for the Blind

- **Ockelford, A.** (1996) *All join in! A framework for making music with children and young people who are visually impaired and have learning disabilities* London: Royal National Institute for the Blind

- **Ockelford, A.** (1998) *Music Moves Music in the education of children and young people who are visually impaired and have learning disabilities* London: Royal National Institute for the Blind

- **Park, K.** (1995) "Using objects of reference: a review of the literature" *European journal of special needs education*, 10(1), 40-46

- **Park, K.** (1997) "How do objects become objects of reference? A review of the literature on objects of reference and a proposed model for the use of objects in communication" *British journal of special education*, 24(3), 108-114

- **Park, K.** (1997) "Choosing and using objects of reference" *The SLD Experience*, 19, 16-17

- **Park, K.** (1998) "Using objects of reference" *Focus*, 25, 26-32

- **Park, K.** (1999) "Whose needs come first?" *Speech and language therapy in practice* (summer edition), 4-6

- **Park, K.** (2000) "Reading objects: literacy and objects of reference" *PMLD Link*, 12(1), 4-9

- **Park, K**. (2001) "Oliver Twist: an exploration of interactive storytelling and object use in communication" *British journal of special education*, 28(1), 18-23

- **Pease, L., Ridler, S., Bolt, J. and Hannah, C.** (1988) "Objects of reference" *Talking sense*, 6(7), 7-9

- **Reichle, J.** (1991) "Developing initial requests" [in] J. Reichle, T. York and J. Sigafoos (eds.) *Implementing augmentative communication strategies for people with severe disabilities* London: Paul Brookes

- **Rowland, C. and Schweigert, P.** (1989) "Tangible symbols: symbolic communication for individuals with multisensory impairments" *Augmentative and alternative communication*, 5, 226-234

- **Rowland, C. and Schweigert, P.** (1990) *Tangible symbol systems* Tucson: Communication Skill Builders

- **Rowland, C. and Schweigert, P** (1993) "Analysing the communication environment to increase functional communication" *Journal of the association for persons with severe handicaps*, 18, 161-176

- **Rowland, C. and Schweigert, P.** (1996) *Tangible symbol systems* (2nd edition) Tucson: Communication Skill Builders

- **Rowland, C. and Schweigert, P.** (1998) "Enhancing the acquisition of functional language and communication" [in] S. Sacks and R. Silberman, R. (eds.) *Educating students who have visual impairments and other disabilities* Baltimore: Paul H. Brookes

- **Rowland, C. and Schweigert, P.** (2000) "Tangible symbols, tangible outcomes" *Augmentative and alternative communication*, 16(2), 61-78

- **Rowland, C. and Schweigert, P.** (2000) *Tangible symbol systems: making the right to communicate a reality for individuals with severe disabilities* Oregon: Oregon Health Sciences University

- **Sinha, C.** (1988) *Language and representation: A socio-naturalistic approach to human development* London: Harvester

- **Stephenson, J. and Linfoot, K.** (1996) "Intentional communication and graphic symbol use by students with severe intellectual disability" *International journal of disability, development and education*, 43(2), 147-165

- **Stillman, R and Battle, C.** (1994) "Developing pre-language communication in the severely handicapped: an interpretation of the van Dijk method" *Seminars in speech and language*, 5(3), 159-170

- **Umholtz, R. and Rudin, D.** (1981) *Teaching time concepts through the use of concrete calendars* Austin: Texas School for the Blind

- **van Dijk, J.** (1966) "The first steps of the deafblind child towards language" *International journal for the education of the blind*, 15, 112-114

- **van Dijk, J.** (1967) *The non-verbal deaf-blind child and his world: his outgrowth towards the world of symbols* Jaarverslag, Holland: Instituut voor Doven

- **van Dijk, J.** (1977) "What we have learned in twelve and a half years: principles of deafblind education" [in] M.R. Jurgens (ed.) *Confrontation between the young deafblind child and the outer world* Sint Michielsgestel, Holland: Instituut voor Doven

- **van Dijk, J.** (1986) "An educational curriculum for deafblind multihandicapped persons" [in] D. Ellis (ed.) *Sensory impairments in mentally handicapped people* London: Croom Helm

- **Vicker, B.** (1998) "Have you used tangible symbols lately?" *The ISAAC bulletin* (Quarterly newsletter of the International Society for Augmentative and Alternative Communication), 51, 1-3

- **Vygotsky, L.S.** (1978) *Mind in society: the development of higher psychological processes* Cambridge, Massachusetts: Harvard University Press

- **Werner, H. and Kaplan, B.** (1963) *Symbol formation* New York: John Wiley

- **Wetherby, A.M., Warren, S.F. and Reichle, J.** (1998) *Transitions in prelinguistic communication* Baltimore: Paul H. Brookes

objects of reference

In the last decade, the use of objects of reference has spread rapidly in the UK, and they now have a place in the communication programmes of many children and adults with severe and even profound learning difficulties. Their potential value for some people with autism and other communication disorders has also begun to be recognised.

Used sensitively within appropriate developmental contexts, objects have proved to be a great asset, assisting some people to understand, anticipate or remember things better, while quite literally unlocking the communication potential of others. However, other efforts have been less successful, particularly where objects have been imposed as an inflexible system in "top-down' fashion. A key aim, therefore, of this third edition of *objects of reference* is to clarify certain key issues, including the extent to which a "whole-school/college/centre" approach is possible or desirable.

This book will be of interest to those working with children and adults who have special communication needs, including teachers, lecturers, teaching assistants, speech and language therapists, music therapists, social workers and educational psychologists. Parents, other family members, friends and carers may also find ideas in the book that are helpful.

© Adam Ockelford, RNIB 2002

£6.50

ISBN 1 85878 529 4

RNIB