

The Development of Speech Comprehension

It is important to note that although speech is used continually during the various procedures it is not dominant, in that at no time is the child expected to depend on speech, and no attempt is made to have him talk. Speech accompanies or just precedes activity, the child's emotional show providing a meter by which to monitor his level of enjoyment of the activity, and later the speech.

Secondly it must be noted that the method implies a different view of the nature of early speech acquisition from the one which is often taken and the manner of presentation of speech to the child stems from a consideration of the processes, as I interpret them, by which the normal child comes to find symbolic signification in the vocalic and articulatory sounds of others, and so becomes to a large extent subject to and controlled by these sounds.

It is often assumed by those who attempt to impose one of the purely arbitrary systems of speech classification, used for convenience by grammarians, on the early speech and understanding of speech in young children, that early language is acquired in the form of words homologous with those used by adult speakers.

Attempts are made to count 'words' in a child's vocabulary, and it has even been inferred that children first acquire 'nouns' followed in turn by 'verbs', 'adjectives', etc.

As a result of this it would be argued that a linguistically backwards child should be exposed to simple 'substantives', in association with the objects these represent in adult speech, to be used as labels for the objects or pictures of the objects. The 'nouns' chosen are those which are imagined to appear in the early speech or understanding of normal children, or those which might prove to be especially useful in communication.

It seems to be argued somehow that by isolating each component vocable as a potential auditory symbol, and pairing it in time and location with its intended referend that (a) the naming function of speech is being promoted, and (b) that the process simplifies and facilitates linguistic development in the child with language problems.

I would deny the validity of both of these arguments as not being consonant with the observed language development of normal young children, and entertain very serious doubts as to their relevance and value in the treatment of linguistically handicapped children.

Firstly, I consider 'naming' to be a fairly advanced linguistic skill and not derived by direct association of word with object; and secondly, I see attempts to tie an isolated and neatly tailored vocable, as a sort of symbol-elect, directly to a referend by simple association not as a process simplification but as a ruthless pruning.

I see no indication from the behaviour of young normal children that early language develops in this way. Even if one argues that such an observation is irrelevant to the case of the 'language disordered' child, the method seems to me to give little heed to the intellectual and emotional status of the child, and to deprive the potential language user of the very aspects and properties, namely, transfer of information and incitement to action, which distinguish the merely consistent responding to stereotyped conventional signals from real versatile and functionally effective language. That is to say direct pairing with an object or picture not only lacks impulsion to effect change but confines the association initially to what is virtually a single reference or image of the referend, instead of exposing the symbol directly to a whole sphere of reference already built up by the child. It appears to be assumed that some sort of secondary transformation, from symbol with unitary intention into symbol with extensive notion sphere, will take place spontaneously.

The use of a non-specific reward, divorced from the satisfaction of particular achievement and the motivating influence of success in communication, seems to me to be a further flaw in the basic argument of some of the standard attempts to induce language function. Responding appropriately to conventionalised auditory signals is not necessarily language, just as talking appropriately is not necessarily speech. It is not difficult, unfortunately, to induce well enunciated 'budgerigar talking' even in singularly backward children and it is commonly to be observed in 'autistic' children; however, I am aware of no evidence to convince me that such direct association conditioning leads towards language function, and I believe that it does not do so.

It is true that once a basic linguistic functioning has been established in a normal child, 'vocabulary', in terms of vocables which can be utilised in the communication system, expands rapidly but not I venture to say by directly linking word to object, at least during the early stages. It is readily to be observed that such vocables as 'ball' or 'mummy' are used by a young child, with or without tonal or stress variations, to represent many kinds of activity, as, e.g. "That's the ball" (indicative in the logical proper-name sense – not naming), "Give me the ball", "It's my ball", "Where is the ball?" "Is it the ball you want?" "Yes the ball", etc., etc.

The language of young children should not be thought of as partial, immature, incorrect or simplified adult language. The normal speech of a two-years-old child is mature two-year-old's speech.

Tonal patterns (mainly in terms of vowels and diphthongs), rhythms and stresses are almost certainly the features of vocalisations to be first understood by young children as having symbolic signification, and it is these patterns which carry most of the emotional significance and implication at this level of communication.

Early speech seems to me to be absorbed under conditions of directional activity (including postural set) together with a high level of accompanying affect.

It is, I think, noteworthy that appropriate responses to such action-invoking phrases as 'clap hands', 'how big', 'give me a kiss', commonly figure much earlier in an infant's behaviour (e.g. 8-9 months) than responses to the word 'mummy' (e.g. 9-10 months), and I would venture to suggest that at this stage it is not to 'mummy', the substantive, that the child responds but to 'mummy' the bound component of one or other of a related group of transitive and intransitive 'doing phrases'.

Language has its beginning in activity - predominantly active movement. As with perception generally, movement is fundamental to the growth of auditory perception and upon movement spoken language depends both in a general and a specific way.

Movement is necessary for the direct acquisition of verbal understanding since it is the vocalisations which the child hears to accompany certain repeated activities which are first associated with the activities and come more and more symbolically to represent them.

First is the activity and then the speech, short circuiting, abbreviating, and taking much of the effort out of the demonstration of activities to be mimicked. Gradually it is an engrammatic perceptual recall elicited by the speech pattern which is reiterated in movement and manipulation; and this we call responding to speech.

When I suggest that activity should be an integral part of any technique designed to promote linguistic function in a young or 'non-communicating' child I do not mean simply that one ought or must use activity as part of the programme; I mean that *movement is the essential and natural precursor of spoken language* and that any chance of bringing language to the older ailing child rests upon a recognition of this fact.

Speech is not only a substitute for bodily activity – it has grown out of movement.

It is not my intention to attempt to outline a system for the teaching of language but rather to suggest ways, based on the observation of normal children and children with auditory or speech dysgnosia, to encourage the linguistic habit – to introduce the child to the possibilities of communication and control which language brings.

Hence it matters little in the pre-linguistic and very early linguistic stages with a dysgnosic child whether the 'words' used are likely to have an immediate adaptive function in everyday social intercourse. It does not even matter whether the vocalisations used are part of any conventional language system as long as they can acquire symbolic signification for the child.

Thus any classification of speech, from our point of view at least, should be in terms of physical activity. Even the process of naming or labelling with words at first demands an active indicatory function.

The use of language in a 'labelling' or 'naming' function I consider to be a relatively complex abstractive process which can only come when linguistic development is fairly well advanced.

Labelling or naming in this sense is quite different from the mere indicating by means of the 'name' of an object. This indicative function directs the attention to some region, object or property, being therefore the linguistic analogue of the logical proper name, and its activity-bound nature needs to be accentuated in the early acquisition of speech.

The various injunctive functions require that a child performs some action such as 'clap hands', 'So big', 'Give me a kiss', 'Put that in the box', 'Show me the light', 'What is that?'

Indicative functions such as 'That is the' accompanied by pointing later extends to the more complex form e.g. 'It's by the tree' or 'In the box', (can have the form: 'Where is?' when intended to indicate a state of uncertainty) or contracts to the naming operation.

There is no fundamental difference between indicative and injunctive forms, for learning that an object or activity is or can be associated with a verbal utterance depends on the active direction of attention towards the object in response to the utterance whilst the early indication that an utterance requires an energetic response is often carried by the

movement gesture which accompanies the speech. For example: "Give this (or 'the ball') to Mummy" is spoken together with handing the article to the child so that he discovers that the sequence of his being handed something accompanied or followed by speech usually requires action of some sort. The 'key' element of the spoken sequence (in this case 'Mummy') can now give direction to the operation, which can if necessary be further reinforced by gesture or glance so that simply handing an article to the child comes to imply 'do something with this', to imply that an operation is required of him. This is further reinforced by such forms as "Put the" or "Give this" which gradually inherit the more specific significations which become induced in them.

That an understanding of speech is dependent, in the first instance, on its association with activity is no more to be doubted than the importance, especially during the early stages, of environmental context in supplying necessary categorising and defining clues, in directing the attention and encouraging appropriate postural set.

At the earliest stage the speech is narrowly confined to, and supported in conveying information by, a situational context. For example, 'Come and sit up' might be meaningful for the young child if the table has recently been laid, there are smells of cooking in the air, or his tummy indicates a need for refreshment, but elicit no clear outward response without these indicators of an approaching meal.

At nine months a child may respond identically and appropriately to 'clap hands' and to / æ æn / or / æ æ? / if spoken by mother on whose lap he is sitting whilst father is within view, but not under other circumstances. A month later he may respond under less set conditions and soon may not respond regularly to less than the correctly articulated sounds.

These points might be further illustrated by a consideration of the early growth of an understanding of those linguistic structures which parallel and describe the operations and states of positional relationships (acquisition of prepositional understanding) as I interpret the process.

In a relatively analytic language such as English I see such structures, which might loosely be called predicative, as being more representative of linguistic prowess in the young child than mere size of vocabulary. This sweeping statement becomes less and less approximate as language develops and becomes functionally less and less divisible into predominantly lexical and syntactic elements.

It is suggested that at some early stage a substantive embedded in a short injunctive utterance and used by an adult may be understood by a child to indicate or refer to a particular referend whilst the verbal context represents "meaningless" noise for him. Any further implications about operations to be performed on that referend must be understood from situational clues, gesture, and a statistical knowledge of the probabilities concerned.

At this stage the response varies not at all whether the full utterance, the substantive alone, or together with voiced jargon, is used. The word order is irrelevant but the emotive features and stress patterns are already important.

For example a fourteen months old child might be handed a ball with the instruction: "Give the ball to Mummy". That the child takes the ball and hands it to his mother cannot be taken to indicate his understanding of the lexical elements and syntactic construction of the utterance in this particular situation. It is only required that he recognise the vocable "mummy" under these conditions as indicating a particular person and the implication that he should do something with the object he has been given. Thus the single word "mummy" is all that is necessary to produce the required response under these conditions.

Likewise: "Put the ball (it) on the chair" said under similar circumstances would tend to result in the proffered objects being brought into apposition with the referend of the substantive "chair". Statistically the operational relationship described by "on the chair" might well be a more probable choice than that described by 'under', 'in front of', 'beside' or 'behind the chair' and therefore the likely one to be adopted by the child. At this stage although the preposition may be present it carries no information.

The first linguistic element capable of implying the positional relationship is the action word or phrase which comes to express linguistically the physical displacement or instructive gesture of the earlier development. Now the nature and direction of a positional relationship (prepositional understanding) is implicit for the young listener in certain verbal phrases as a result of their repeated usage in fairly restricted contexts and where situational clues continue to be abundant.

Thus most prepositional relationships would appear to be implied by certain verbal forms and are at an early stage in the development of verbal understanding, 'tied' fairly intimately to particular actions such as: 'jump over', 'hide behind', (association pointed out to me by Dr. Angela Broomfield) 'go round (behind)', 'sit down', 'stand up', etc., or more

loosely such as 'put', or 'lock.....', where understanding of the actual prepositional relationship is more dependent on the context.

Gradually, as auditory memory and sequencing facility develop, and the ability to handle more complex sequences becomes sophisticated, meaning is induced by the listening child in the prepositional clause.

At first meaning or signification is understood from the complete phrase or phrase-word as the word group as a whole becomes imbued with the implication of prepositional relationship. At this stage we might say that in the decoding process the preposition is 'tied' to the substantive or to a number of substantives.

The more varied the substantive combinations involved the sooner the signification denoted by the preposition, when transferred in novel combination to another substantive, is comprehended.

Such phrases as 'sit on your chair', 'put your feet under the table', 'throw that in the bin', 'going round the corner', etc. may early tie verbal elements such as 'in', 'on', 'under', or 'behind' etc., to particular substantives in association with elements signifying actions so that concrete linguistic concepts, such as 'on the chair', may become recognised as complete units by the child some time before a phrase such as 'on the house' is recognised as a whole or is capable of being understood in terms of its component words.

In the meantime the meaning induced in the prepositional noun clause condenses towards the 'preposition' where it becomes more flexible and capable of use with a larger number of different substantives. In this way the preposition acquires a more individual importance in conveying information about relationship thus freeing the other lexical elements for use in increasingly varied syntactic combinations and allowing them to assume more extensive and versatile roles.

The preposition comes eventually to be understood in abstraction, its meaning being readily comprehended in any context. The criterion of mature use of the preposition from this particular point of view would be the ability of the child to correctly recognise and respond to it in any appropriate context, that is to say it has acquired infinite transferability.

The preposition continues to evolve beyond this stage and become imbued with a wide range of subtle shades of meaning according to its

interaction with its lexical, syntactic and suprasegmental phonemic (e.g. emphasis, intonation, etc.) context.

Encouraging Linguistic Function

When attempting to initiate and foster the spirit of language in the alinguistic or linguistically backward child it is necessary to couple speech with the activity it is to describe, replace or invoke, and under the most suitable conditions.

Naturally a lexical candidate for an injunctive function should supervene at a suitable time interval prior to the action with which it is to be operationally yoked and this is the manner in which speech must generally be used; however, it is also effective in practice to use repetitive speech simultaneously with repetitive activity. It is also convenient sometimes to follow an accomplished action by descriptive speech and, although probably not leading directly to meaningful associations in the early phases, it helps to make up the linguistic environment.

The speech, whilst inviting responses, should not be allowed to *demand* one, and no attempt, other than a minimal delay following a verbal command, to deliberately test language function should be made lest anxiety be introduced. It is important, therefore, that as far as possible every command is reinforced by its being followed by the action.

The two main methods to be used in encouraging interest in speech involve its use in association with (a) 'passively imposed' activity or (b) anticipated imminent action, either fortuitous or contrived. The methods may be applied casually whenever an opportunity presents itself during the day, and also at times under more organised and set conditions.

This might be an appropriate time, before going on to outline some practical details, to point out a major pitfall which is too readily neglected and which I find to be one of the greatest stumbling-blocks to progress when working through the agency of a parent, or even a teacher sometimes. One form of response a child can give, which is useful in its correct place, is the vocal response. In its earliest stages this will take the form of echoing the speech of others so that vocal utterance is responded to by an attempt at repeating the vocalisation. Unfortunately the delight at hearing the speechless child 'speak', as occasioned by a deep and powerful biological need and expectation of speech from a child after the

early months, can seduce us towards encouraging echoing responses from the child at the expense of his deriving real understanding from speech. If he is rewarded for the reproduction of the vocalisation, which he may find easier than interpreting its meaning, he may well develop high grade but non-linguistic 'budgerigar talk' and fail to realise that speech requires adaptive action.

Not only is following such a wayward course a waste of time and effort, it may also seriously impede linguistic progress and can readily lead to severe emotional upset when attempts are made to redress the situation at a later date.

Geoffrey Waldon 1967

Genesis of Prepositional Concept

Appendix

No relevant linguistic understanding

No recognition of required response. Objects simply taken and brought together spontaneously.

No recognition of relationship between objects other than that there is one (approximation).

Recognition that action is required. Proffered object approximated to named object.

Non-linguistic information suggesting or indicating a relationship.

As above but with contextual clues and memory statistics guiding – establishing the character of the particular spatial relationship.

Early linguistic information about relationship.

Verb (with prepositional implication) + prep → noun
Preposition present but redundant e.g. "Hide behind(behind) → object". "Sit down (down)".

'Verb' with implied 'preposition' induces the condensation of preposition-substantive phrase-words.

Verb —+ preposition — substantive
e.g. "look - - - under - - - the chair".
"look - - - - - under the chair".

Phrase-word consisting of preposition 'tied' to the substantive. Preposition not 'understood' in abstraction and not transferable to other substantives. New phrase-words may be readily learned at this stage but the relationship not transferable.

Preposition understood in abstraction as representing a relational concept. Comprehensible in any context, e.g. 'under', 'on', 'behind', etc. are recognised as representing relational concepts of 'under-ness', 'on-ness',

Verb → preposition → substantive
Abstracted connotation of preposition gives preciseness of meaning to the complete phrase

'behind-ness', etc., and as symbolising a positional relationship between two or more objects, substances, qualities, etc., the 'sense' or direction of the relationship being given by the word order.

Extension and differentiation of connotation of prepositions.

Behind obscured by
..... beyond
..... coming after, etc.
Under lower than
..... sheltered by