

SPECIFIC LANGUAGE DISORDERS IN TWINS DURING CHILDHOOD

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The delay in the development of the language often found in twins is usually interpreted as being strictly connected with the twinning situation and on the assumption that a model of verbal, tendentially cryptophasic, communication would more easily exist between twins. Two types of language pathology in twins, diverging from this classic framework, are presented: (1) Developmental dyslalia (or developmental dysarthria); in these cases no abnormality could be found in the modality of verbal communication between the cotwin; (2) Developmental dysphasia; in these cases not only no tendency toward cryptophasia was observed, but indeed the verbal communication between the twins was markedly reduced. These two types of language disorders, as well as the classic one, are discussed in the light of a neurolinguistic interpretation.

There is a common idea that *all* twins begin speaking a little later than other children *because* they prefer to speak between themselves, and consequently use less the speech patterns of adults. Different observations of twins with language disturbances have confirmed this idea: *some twins* continue to speak little and poorly because they have their private language, made up of few words, *passee-par-tout*, and of sympraxic expansions; that is, gestual and situational. This cryptophasia develops, however, when there *also* exists a notable condition of social isolation which channels the natural tendency to verbally communicate into a nearly exclusive communication between the two twins. Perhaps if the Savage of Aveyron had with him a twin, we would have seen an extreme case of this clinical description.

The language pathology in twins demonstrates to us, though, that matters are not always this way. Not all of the twins who speak poorly are unlearned because of this private usage of language. Some twins speak as much between themselves as with others; other twins, instead, are moved by the actual language difficulty to not speak between themselves, but almost solely with others. These diverse solutions we have seen in clinical practice depend in great part on the type of language disturbance presented. Before presenting our clinical findings, it is helpful to outline the specific language disturbances which are typically present in the child.

A. The disturbance in absolute more frequent is *developmental dyslalia*. This clinical condition, for various neurolinguistic aspects, resembles developmental dysarthria (which is found in children with cerebral palsy), except for the different pathogenesis and a much better prognosis. The children with developmental dyslalia have a specific and maturative difficulty in categorizing and producing the word-sounds of their mother tongue: the profile of their phonemic development characteristically resembles that of children two or three years younger.

The production of the word-sounds mastered can be, moreover, more or less limited when the word-sounds come in combination in words. The disturbance is more serious when the word-sounds are combined in a manner in which the distinctive features of successive word-sounds are confused and switched, and the resulting word is severely deformed. When the disturbance is less serious, it con-

sists solely of infantile simplification of the phonemic code. In both cases, developmental dyslalia does not strike, or strikes much less at the lexical semantic structuring and the morpho-syntactic structuring of the sentence.

B. The second disturbance, which is much rarer, is *developmental dysphasia*. This syndrome, besides the difficulty already described for developmental dyslalia, reveals two other linguistic disabilities: (1) dysphasic children use a very primitive vocabulary, with poor lexical-semantic differentiation; with a single word, they categorize a very ample semantic area; (2) dysphasic children use a very implicit syntax: knowing some syntactic rules, in their verbal production, they tend to put together words in sentences without utilizing or modifying the morphological-grammatical elements. These two clinical situations, from a neurolinguistic point of view, reveal two different disturbances which affect two different levels of linguistic codification. Developmental dyslalia seems to be a disturbance of performance at the level of phonologic audio-articulatory codifying; this hypothesis explains the simplified use of the phonologic system, and the lesser disturbance of the lexical and syntactic performance. Developmental dysphasia seems instead a disturbance of competence which strikes also the semantic and syntactic organization, and which creates more profound cognitive and communicative problems. As we will see from the diverse characteristics which the two disturbances take on in twins, with respect to the mode of interpersonal communication, we will derive some suggestions with regard to these neurolinguistic hypotheses.

Our clinical cases consist of 20 pairs of twins (3 MM and 2 FF MZ; 6 MM, 3 FF, and 6 MF DZ) chosen from about 400 cases of children who have been brought to our Center in the last three years because of language and learning difficulties. This percentage of nearly 5%, for the incidence of twins in our population of children with language difficulties, is as such, indicative of a great risk among twins in the area of language development. All the children, in addition to the routine intellectual tests, were subjected to the neurolinguistic testing used at our Center, which comprise, for both verbal production and comprehension, phonologic, lexical and syntactic items. The children were also the object of various behavioural observations to analyze their form of verbal and nonverbal communication between themselves, with other children, and with adults.

The results of our clinical observations can be summed up as follows:

1. Four pairs demonstrated a language retardation in the context of a general intellectual retardation, and were therefore of no interest for our study.
2. In 13 pairs, one or the other of the twins showed developmental dyslalia, with differing grades of seriousness, with or without secondary stuttering. In all of these pairs, modification of the individual verbal pattern could not be found; nor could it be found in their interpersonal communication. Notwithstanding the language disturbance, these children communicated between each other, with other children and adults without significant difference. The only protruding characteristic was (typical for all children with language problems) to make the speaker prepare his sentences in such a way as to require a response of as few words as possible. In two cases, one twin corrected the other for his phonological mistakes without noticing his own.
3. Three MZ pairs (2 of girls, 1 of boys) showed developmental dysphasia: in 1 pair, one little girl showed developmental dysphasia while the other showed developmental dyslalia. In the other 2 pairs, both children showed developmental dysphasia. In these 3 pairs there was an evident tendency for the twins not to talk between themselves. It was determined that, besides not speaking between themselves, these twins did not develop any symbolic, representative game together, and did not organize any coordinated action together. Contrary to this, the same twins, in parallel manner, played some manipulative games, and often included themselves in the activity commenced and left unfinished by the cotwin. We must realize, after all, that in all these three cases we had to carefully evaluate some suspected behaviour in the sense of a secondary psychotic disturbance. The cases of language disturbances found in twins until now were always tied to deprived linguistic and social conditions. In these conditions, a major risk for twins, the twins have a private language with which they communicate between themselves: on one hand, this affects their subsequent relations

with others, and on the other, this capability to organize a private language has probably allowed some twins to develop a verbal language also under conditions of severe isolation.

The two patterns we have described are different both clinically and pathogenically. Dyslalic twins have no difficulty communicating with others or speaking with each other, whereas dysphasic twins have great difficulty in oral language organization and to make themselves understood by adults. Faced with this difficulty, dysphasic twins give up speaking between themselves and maintain verbal communication only with adults.

These different actions seem to be tied to the different neuropsychological and cognitive level that the disturbance strikes in the two syndromes.

In developmental dysphasia, the disturbance of communication between the twins seems tied to the much wider range of neurolinguistic disturbances. In this syndrome, a disturbance at the level of competence indicates a general difficulty in conveying nonverbal information into verbal information and in the control of all the complex rules that make up the linguistic code.

We would conclude with the following interpretation: the more the neurolinguistic disturbance strikes the organization of the inner speech and its possibility of cognitive representation, the more difficult it makes communication between the twins who are developing language and thought.