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Autonomous Languages of Twins

Peter Bakker

Institute of General Linguistics, University of Amsterdam, Netherlands

Abstract. Twins are regularly reported to invent languages of their own, unintelligible to others. These languages are known as autonomous languages, cryptophasia or idioglossia. Despite current belief, this is not a rare phenomenon. Autonomous languages exist in about 40% of all twins, but often disappear soon. In this study, nine autonomous languages are compared: the circumstances in which they emerge, how these languages relate to the parents' language (the model language) and how they are structured. The prototypical situation is one in which two or more close siblings (not necessarily twins) grow up closely together during the language acquisition period. If an adult model language is frequently absent, the children use each other as a model and acquire the language imperfectly. The language may stabilise at that level. If a model is completely absent, the children probably do not create a language. In all cases known, the language consists of onomatopoeic expressions, some invented words, but for the greatest part of words from the adult language adopted to the constrained phonological possibilities of young children. These words being hardly recognizable, the language may turn out to be completely unintelligible to speakers of the model languages, but they resemble each other in that they lack morphology and that word order is based on pragmatic principles such as saliency and the semantic scope of words. Neither the structure of the languages nor its emergence can be explained by other than situational factors.

Key words: Autonomous languages, Language acquisition, Language disorders

INTRODUCTION

Twins are regularly reported to have invented private languages. It sometimes turns out that they speak a language unintelligible to others, including the parents. This is a well known phenomenon, described under names like twin language, secret language, cryptophasia and

autonomous language, but it has at most been a side-issue in twin studies. The linguistic and social aspects of the phenomenon have rarely been analysed. A number of myths about these languages persist that need to be corrected.

We use the term “autonomous language” for this phenomenon. An autonomous language is a language [4] that young children may come to speak that is different from language(s) used in their environment and incomprehensible to others, except for the one or two children acquiring language at the same time. Most of the children acquiring language simultaneously will naturally be children of multiple births, but not all. The term “twin language” should be avoided. For reasons that will become clear, we also reject the terms “secret language” and “cryptophasia”.

A child who speaks his or her mother’s language defectively or even unintelligibly, will normally be seen as a pathological case and medical assistance will be considered. If twins speak an unintelligible language among each other, however, it is looked upon as a kind of miracle: twins invent a language! In fact the twin case is just a special case of the individual child. In the individual cases, the child is usually hard to understand for anyone else, but in the twin case the children understand each other well. Language learning patterns deviant from the model language of the parents are reinforced by the cotwin. Their deviant articulation can stabilise, since it does not hinder communication. They also form a different syntax.

In this paper we will compare the autonomous languages described in the literature, most of which are completely unknown to researchers in this field. The complete study is published elsewhere [1] and contains an appendix with all the linguistic material.

MATERIALS AND METHOD

An attempt was made to locate all linguistic data described in the literature on autonomous languages [5,6,8-10,13,14,17]. It was surprising to discover how few recent descriptions have been published, despite the interest the phenomenon arouses in psychological literature and the popular press. Nearly all of this material has shortcomings so that the results cannot be considered final. The data was too scarce to permit statistical analysis, but some clear tendencies could be discerned that contradict current ideas.

Nine cases provided enough linguistic data to make structural analysis of the language possible and 13 cases gave sufficient information regarding the circumstances in which the autonomous language emerged. The autonomous languages appeared to share social as well as linguistic features, despite the fact that the languages of the environment were rather divergent (English, German, Danish, Icelandic, Russian, Estonian).

RESULTS

Some of the ideas expressed regularly in the current literature about the nature of autonomous languages appear to be incorrect. We found that:

- (a) the phenomenon is not restricted to twins;
- (b) the phenomenon is not rare among twins;
- (c) the languages are not intended to be secret languages;
- (d) the languages are not invented languages.

(a) Not only twins speak autonomous languages in a period of their life. In fact, any child shows a stage in its development in which it appears to converse, but in an unintelligible way.

Furthermore, all children tend to make mistakes in articulation and to invent words in certain stages of their language acquisition. Only if there is a co-speaker, however, who is acquiring language simultaneously, the articulation mistakes may be reinforced and taken over by the partner and maintained, since they do not influence communication adversely. This is the situation in all twin pairs and multiple births, but not only there: it is also possible in (and reported for) close siblings and even close friends. The cause is obviously the type of situation in which two or more children grow up together. These are often, but not necessarily, twins.

(b) All reliable and independent reports [7,11,15,19] of the existence of autonomous languages in larger populations of twins, concluded that these languages exist in 40% - 47% of all twin pairs in early childhood. Triplets score somewhat higher. Usually, however, this unintelligible language disappears soon, but in some twin pairs the autonomous languages may persist for a longer period.

(c) A language is only a secret language if one can intentionally choose to use this language or another one. If one speaks only one language, this may sound like a secret language for interlocutors who do know the language, but it is not. In all but one of the 13 cases described, the children who spoke an autonomous language were monolingual. They usually understood their parents' language, but could not speak it (with only one, dubious exception). In only 2 of the cases, other members of the family had a smattering of the autonomous languages and used it with their children. It was sometimes reported that the children got upset when they were not understood by their parents when speaking their autonomous language. All this indicates that these languages are not intended to be secret languages. The terms "cryptophasia" and "secret language" should therefore be abandoned.

(d) In all 9 cases in which a certain amount of linguistic material has been preserved, it appears that at least 90% of the vocabulary in the autonomous language can be directly related to the language of the parents or to onomatopoeic expressions, even though the parents had reported that it was completely unintelligible. Usually, these words are distorted in such a way that they become incomprehensible. Here follows a random example from a Danish twins pair [5,8]:

Danish:	Mandse	hesten	?
twins:	bap	ep	dop
English:	Mandse	horse	broken

"Mandse has broken the hobby-horse". In Danish, the language of the parents of these twin boys, this would have been: "Mandse har slaaet hesten itu".

In this example the consonant clusters /nds/ of "Mandse" and /st/ of "hesten" both have changed into /p/. The voiced labial /m/ changed into a related voiced labial stop /b/. Unstressed syllables all have disappeared. "Dop" may be an invention, perhaps a sound imitation, but may be Danish too, though it is unclear from what Danish word. The result, though incomprehensible, is clearly related to Danish. The same is valid for 90% of the other material, including that of the other twins. The phonological distortions in this and other autonomous languages are not exactly predictable, but there are certain patterns: since fewer phonemes are used, the contrasts between these are increased to facilitate perception. More "difficult" sounds in the production capacities of young children are replaced by "easier" sounds: diphthongs and consonant clusters are simplified. Sometimes sounds are used that do not exist in the language of the parents.

As far as grammar is concerned, all of the nine languages share a number of phenomena. All morphemes (plural markers, verb endings, case markers) are absent in the autonomous languages and so are articles, copulas and prepositions/postpositions. There are no formal possibilities to combine two sentences into one: there are no relative clauses, no embedded sentences, non complex sentences. The languages consist of nouns and verbs strung together, most often with the syntactic principle: the most important element first. The languages tend to have free word order of subject, object and verb, though negations and vocatives tend to appear sentence-finally or sentence-initially. Word order does not normally coincide with the word order of the model language. In short: the words of the autonomous languages are imitations of words from the parents' language or sound imitations. The grammar can be considered as differing in many respects from the language of the parents. The vocabulary is imitated, but not the grammar.

In what situations do autonomous languages appear? There is not much known about the language development of twins or siblings who grew up totally isolated from the speaking world, eg, fed by animals or raised in closets (see Bakker [1] for a couple of examples). As far as we know, these children did not develop a language. Nor was a language developed by the couples and groups of children who were isolated on purpose from mankind by investigators who wanted to see what language they would speak afterwards. Without a language model around them, they did not seem to develop a language [2].

But when do children develop an autonomous language? A number of factors that might be relevant are summarised in the Table. More factors can be found in Bakker [1]. We see that the children were all mentally normal, but some suffered a minor physical handicap that will not have influenced language development (columns 1 and 2). In column 3 it can be seen that (in these somewhat extreme cases) the languages were spoken until the fourth to sixth year, the age in which children are likely to come into contact with other children, though there are some exceptions. The languages tend to disappear rather slowly, by adopting more and more words and grammatical rules from the parents' language. Column 4 shows that nearly all pair children spoke *only* their autonomous language. And in general the children understood their parents' language (column 5), though other members of the family generally did not understand the autonomous language (column 6). Column 7 shows that the children were nearly always reported to speak fast and fluently among each other. This may mean that their language functioned adequately between themselves.

But what circumstances contributed to the emergence? I think that there are mainly three factors. In column 8 it can be seen that all children were often left to themselves, thus creating the possibility of an autonomous language among the children. Second, the lack of an adequate language model reinforces the mistakes in pronunciation in the children and this forces them to create a kind of grammar. Column 9 shows, finally, that the parents did not recognize the children's gibberish as meaningful utterances. If they would have done so, they could have provided more language input for the children.

CONCLUSIONS

We may conclude that environmental factors, notably the twin situations itself, are of the utmost importance in the development of autonomous languages. A strong psychological bond and relative isolation from other children and family members contribute to its emergence.

The fact that autonomous languages are reported to be more frequent among triplets than twins [7], more frequent among boys than girls [11,15] and somewhat more frequent among

Table. Circumstances in which autonomous languages emerged in the cases studied

CASES	Source	1	2	3	4	5	6	7	8	9	10	11
Iceland 1830's	[5]	no?	no?	M: died young? F: until death ?-5 or 6	mono	no	yes	?	?	?	2(1M,1F)	?
Toronto 1840's	[6]	no	no?		bi??	yes	understood by nurse	yes	yes	?	2M	no
Kingston Ont. 1850's	[6]	?	?	F: ?-at least 4.0 M: ?-at least 5.0	mono	?	no	yes	from 4.0	?	2(1M,1F)	no
Albany N.Y. 1860's	[6]	no	no	M: ?-at least 2.10 F: 2.0-at least 4.6	F: mono M: bi?	?	no	yes	?	?	2(1M,1F)	no
Boston 1860's	[6]	no	no	?-7.0	mono	?	no	yes	yes	?	2(M)	yes, MZ
Danmark 1900's	[5,8]	?	no	?-5.6 and later	mono	partly	no	yes	yes	?	2(M)	yes, MZ?
Unknown 1880's	[6]	no	?	?-4.0 and later	?	?	no	yes	yes	yes?	2(1M,1F)	yes, DZ
Russia 1930's	[10]	no	maybe little.	4?-ca. 5	mono	partly	no	yes	yes	yes	2(M)	yes, MZ
Estonia 1930's	[14]	no	no	at least 8,9,11	mono	yes	no	yes	yes	?	3(2M,1F)	no
California 1970's	(p.c.)	no	no	ca. 10	mono	yes	no	yes	yes	yes	2F	yes, MZ
Switzerland 1970's	[9]	no	one	?-ca. 5.3	mono	yes?	one older brother sometimes	yes	yes	yes	2M	yes, DZ
Netherlands 1970's	(p.c.)	no	no	1.6-4.0	?	?	no	?	2 by 2	?	4 (4M)	yes, 4-plets
Britain 1970's	[18]	no	no	?-23(?)	bi?	?	no	yes	yes	yes	2(F)	yes, MZ

1. Do the autonomous language speakers suffer from mental defects?
2. Do they suffer from physical defects?
3. Age period in which the language was used.
4. Are the speakers monolingual or bilingual?
5. Do they understand their parents' language?
6. Was the autonomous language used by other members of the family?
7. Do they speak fluently among each other?
8. Are the children often left to themselves?
9. Did the parents think for a long time that the autonomous language was only meaningless gibberish?
10. Number and sex of children using the autonomous language.
11. Are they twins or not? If so, what is their zygosity?

MZ than DZ twins [11] seem to confirm this: girls tend to be closer to the mother more often than boys and the psychological bond between DZ twins is less intense than between MZ twins. Triplets always have playmates and have one more child to speak with than twins.

The same cause (simultaneous acquisition of language, in which situation errors can be maintained and reinforced by the partner) can be seen as responsible for the fact that twins are always reported to be slower in their language acquisition than single children, especially in articulation [3,12,16]. There does not seem to be any necessity to assume genetic influences to be involved.

REFERENCES

1. Bakker P (1986): Autonomous languages. Signed and spoken languages created by children in the light of Bickerton's Bioprogram Hypothesis. Publications of the Institute of General Linguistics, University of Amsterdam.
2. Campbell RN, Grieve R (1982): Royal investigations into the origins of language. *Historiographia Linguistica* 9:43-73.
3. Day EJ (1932): The development of twins. I. A comparison of single children. II. Their resemblances and differences. *Child Dev* 3:179-199, 298-316.
4. Eliasberg W (1928): Ueber autonome Kindersprache. *Monatsschr Ohrenheilkd Laryngo-Rhinol* 62:779-783.
5. Forchhammer E (1939): Ueber einige Fälle von eigentümlichen Sprachbildungen bei Kindern. *Arch Ges Psychol* 104:395-438.
6. Hale H (1886): The origin of languages, and the antiquity of speaking man. *Proc Am Assoc Advancement of Science* 1886:279-323.
7. Howard RW (1946): The language development in a group of triplets. *J Genet Psychol* 69:181-188.
8. Jespersen O (1922): *Language, Its Nature, Development and Origin*. London: Allan & Unwin.
9. Lübke H (1984): *Soziologische Aspekte einer Theorie des Spracherwerbs. Eine empirische Studie über den verzögerten Spracherwerbs eines Zwillingspaares*. Freiburg/Breisgau: Hochschulverlag.
10. Luria AR, Yudovich FI (1959): *Speech and the Development of Mental Processes in the Child*. London: Staples Press.
11. Mittler P (1971): *The Study of Twins*. Harmondsworth: Penguin.
12. Matheny AP, Bruggemann CH (1972): Articulation proficiency in twins and singletons from families of twins. *J Speech Hearing Res* 15:845-851.
13. Nice MM (1922): A child would not talk. *The Pedagogical Seminary and Journal of Genetic Psychology* 32:105-142.
14. Saareste A (1936): *Language Enfantin Conservé par Trois Jeunes Estoniens de Onze, Neuf et Huit Ans*. Tartu: Publications des Archives de la Langue Estonienne.
15. Sandbank AC (1986): The effect of twins on family relationships. Paper presented at the Fifth International Congress on Twin Studies, Amsterdam.
16. Savic S (1980): *How Twins Learn to Talk. A Study of the Speech Development of Twins from 1 to 3*. London: Academic Press.
17. Stumpf C (1901): *Eigenartige Sprachentwicklung eines Kindes*. *Zeitschrift fuer Paedagogische Psychologie und Pathologie* 3:419-447.
18. Wallace M (1986): *The Silent Twins*. London: Chatto & Windus.
19. Zazzo R (1960): *Les Jumeaux. Le Couple et la Personne*. Paris: Presses Universitaires de France.

Correspondence: Dr. Peter Bakker, Institute of General Linguistics, Spuistraat 210, 1012 VT Amsterdam, Netherlands.