

Child Language: A Book of Readings

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ROMAN JAKOBSON

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Here is another sample from Roman Jakobson's work on child language. This great scholar, whose impact on the linguistic treatment of child language can hardly be overestimated, certainly needs no further introduction here. Cf. the introduction to his "Les Lois Phoniques . . .", and see his next reading on "Phonemic Patterning," with Morris Halle.

The anthropologist George Peter Murdock, published in 1957 his "World Ethnographic Sample," including among the tables of kinship 1,072 parental terms (531 for mother, and 541 for father). In a linguistic seminar in 1959 he tried to verify, on the basis of these data, the alleged tendency of historically unrelated languages "to develop similar words for father and mother on the basis of nursery forms," and challenged linguists to "clarify the theoretical principles that account for those established facts" of convergence. The present paper by Jakobson is a linguist's response to this challenge.

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WHY "MAMA" AND "PAPA"?

In Spring 1959, during a linguistic seminar at the Center for Advanced Study in the Behavioral Sciences, George Peter Murdock endeavored to verify the alleged tendency of unrelated languages "to develop similar words for father and mother on the basis of nursery forms." Murdock's (1957) tables of kinship terms assembled for his "World Ethnographic Sample" supplied the investigation with 1,072 terms (531 for mother and 541 for father). The valuable seminar report has recently been published by Murdock (1959). As the author concludes, "the purpose of this paper is merely to present the data, which clearly confirm the hypothesis under test"—a striking convergence in the structure of these parental kin terms throughout historically unrelated languages. He asks whether linguists—"now that the facts are established"—could not "clarify the theoretical principles that account for them." On May 26, 1959, at the same seminar, I ventured to answer Murdock's call, and now I am happy to contribute those remarks to the book dedicated to Heinz Werner.

"The child," H. Werner (1940) stressed, "grows out of his child's world into an alien world of adults. His behavior is the result of an interaction between these two worlds." One could add that likewise the behavior of adults with regard to the child they nurse and educate is a result of an interaction between both worlds. In particular, the so-called

"baby talk" used by the grownups when speaking with infants is a kind of pidgin, a typical mixed language, where the addressers try to adjust themselves to the verbal habits of their addressees and to establish a common code suitable for both interlocutors in a child-adult dialogue. The socialized and conventionalized lexical coinages of this baby talk, known under the name of nursery forms, are deliberately adapted to the infant's phonemic pattern and to the usual make-up of his early words; and, on the other hand, they tend to superimpose upon the child a sharper delimitation and higher stability of word meaning.

Some of such nursery forms overstep the limits of the nurseries, enter into the general usage of the adult society, and build a specific infantile layer in standard vocabulary. In particular, adult language usually adopts the nursery forms designating each of the two mature members of the nuclear family. Very frequently these intimate, emotional, childish tinged words coexist with more general and abstract, exclusively adult parental terms. Thus, for instance, in English, *mama* (*mama*, *mammy*, *ma*, *mom*, *mommy*) and *papa* (*pap*, *pappy*, *pa*, *pop* or *dada*, *dad*, *daddy*) differ in use from the higher terms *mother* and *father*; in a similar way, Russian distinguishes *mama* and *papa* or *t'at'a* from *mat'* (Common Slavic *mati*) and *otec* (Common Slavic *ot'ec*). In Indo-European the intellectualized parental designations **mātēr* and **pātēr* were built from the nursery forms with the help of the suffix *-ter*, used for various kin terms. I am inclined to trace to these prototypes not only the cited English nouns and the Slavic *mati* but also the root of the Slavic paternal term *ot-* and similar forms in some other Indo-European languages: cf. Vasmer's (1954)

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data on Rus. *otec*. The root in question could have lost its initial *p*- through an infantlike elimination of consonantal diversity in **pətēr* when this adult term went down into the nursery.

As an instructive example of the difference in formal and functional properties between the two levels of parental appellations, the use of Bulgarian words *mama* and *majka* "mother" may be cited. The nursery forms like *mama*, adequately characterized by E. Georgieva (1959) as intermediate between common and proper nouns (*polunaricatelni, naricatelno-sobstveni imena*), can be used in standard Bulgarian neither with articles nor with possessive pronouns. The bare *mama* means either "my, addresser's mother" or "I, addressee's mother." As to the term *majka*, it may appear with any "short possessive pronominal form" (*ti, mu, i, vi, im*) except the first person pronoun *mi*. One's own mother is spoken of in Bulgarian as *mama* or occasionally as *majka* "mother," as far as it is clear from context or situation whose *majka* is meant. Finally, in a distancing fashion, the expression *mojata majka* "the mother of mine" may be used, while the turn *majka mi* "my mother" is ordinarily avoided. If the parental terms assembled by Murdock could be divided into these two—*mama-papa* and *mother-father*—classes, his statistical test would yield even more overwhelming results.

Nursery coinages are accepted for a wider circulation in the child-adult verbal intercourse only if they meet the infant's linguistic requirements and thus follow the general line of any interlanguage, as formulated in the indigenous name for Russenorsk, the hybrid tongue of Russian and Norweign fishermen: *moja pā tvoja* "mine in your way" (Broch, 1927). Those settled nursery forms adopted by speech communities ostensibly reflect the salient features and tendencies of children's speech development and their universal homogeneity. In particular the phonemic range of the intimate parental terms proves to be "severely limited." The principles underlying the successive stages in the child's acquisition of language enable us to interpret and clarify the "cross-language parallels" in the structure of such terms throughout the world.

Consonantal clusters appear in no more

than 1.1 per cent of the 1,072 parental terms counted by Murdock, and child's speech at its early stages uses no consonantal groups but only combinations of consonants with vowels. Such combinations are nearly constant in the *mama-papa* words, and purely vocalic roots are exceptional: only three among the tabulated instances.

Stops and nasals—briefly, consonants formed by a complete oral closure—predominate in parental terms. According to Murdock's tabulation, stops and nasals approach 85 per cent of nonsyllabics. The exact ratio cannot be stated, because all nonsibilant fricatives are lumped together with corresponding stops.

Labial and dental—briefly, backward flanged, or, in acoustical terminology, diffuse consonants—prevail over velars and palatals—briefly, forward flanged (hornlike), acoustically compact consonants. More than 76 per cent of all the terms counted include a labial or dental as opposed to more than 10 per cent with velars and palatals. A more exact computation would ask for a split of Murdock's class of sibilant fricatives into hissing (diffuse) and hushing (compact) consonants.

Wide vowels, especially /a/, are obviously preponderant, but it is impossible to extract numerical data from Murdock's table, because the narrower and wider vowels within each of the three classes—front, unrounded back, and rounded back—are lumped together, and the relation—/e/:/i/ = /a/:/ə/ = /o/:/u/—which underlies many vocalic patterns is disregarded.

The contrast between the consonantal presence and vocalic absence of an obstruction in the vocal tract finds its optimal expression when a consonant with a complete oral closure, and especially a backward flanged consonant with a closure in the front of the oral cavity, is opposed to a forward flanged vowel with a wide frontal opening. On the acoustical level, vowels differ from consonants by a sharply defined formant structure and a high total energy. The compact vowel displays the maximal energy output, while the diffuse consonant with an oral occlusion represents the maximal reduction in the energy output. Thus nursery names for mother and father, like the earliest meaningful units emerging in infant speech, are based

on the polarity between the optimal consonant and the optimal vowel (Jakobson and Halle, 1957).

The principle of maximal contrast accounts for the constituents common to the majority of the *mama-papa* terms. As to the order of these constituents, the sequence "consonant plus vowel" appears to be almost compulsory; yet this question has been omitted in Murdock's test. During the babbling period in the infant's development, many of the uttered syllables consist of a vocalic sound succeeded by a consonantal articulation. The most natural order of sound production is an opening of the mouth followed by its closure. Among Russian interjections, one observes such infantile sound gestures as [ʼap] and [ʼam]; when changed into verbal roots, they are adapted to the Russian phonemic pattern by substituting a fricative velar for the initial aspiration: *xapat'*, *xamat'*, *xamkat'*. As soon as the child moves from his babbling activities to the first acquisition of conventional speech, he at once clings to the model "consonant plus vowel." The sounds assume a phonemic value and thus need to be correctly identified by the listener, and since the best graspable clue in discerning consonants is their transition to the following vowels, the sequence "consonant plus vowel" proves to be the optimal sequence, and therefore it is the only universal variety of the syllable pattern.

Among 436 dentals and palatals, briefly, medial, acoustically acute consonants (the T, N, C, and S classes in Murdock's table), there are 159, or 39 per cent, which are followed by a palatal, i.e., acute vowel, while among 507 labials and velars, briefly peripheral, acoustically grave consonants (Murdock's P, M, K, and ŋ classes) only 88, or 17 per cent, are accompanied by acute vowels. The considerably higher percentage of acute vowels after acute rather than grave consonants reflects an assimilative influence of consonantal tonality upon the tonality of the subsequent vowel, and the same tendency is manifest in the early stage of children's speech. At this stage, vocalic differences do not possess their own phonemic value, and the consonant functions as the only carrier of significative distinctions, the only genuine phoneme. The *mama-papa* terms, like the

primary word units in infant language, do not comprise different consonants, and a disyllabic form usually reiterates one and the same consonant. At first child's language is devoid of any hierarchy of linguistic units and obeys the equation: one utterance—one sentence—one word—one morpheme—one phoneme—one distinctive feature. The *mama-papa* pair is a vestige of that stage of one-consonant utterances.

The reduplication of syllables, while passed over in Murdock's test, appears, however, as a favorite device in nursery forms, particularly in parental terms, and in the early word units of infant language. At the transition from babbling to verbal behavior, the reduplication may even serve as a compulsory process, signaling that the uttered sounds do not represent a babble, but a senseful, semantic entity. The patently linguistic essence of such a duplication is quite explicable. In contradistinction to the "wild sounds" of babbling exercises, the phonemes are to be recognizable, distinguishable, identifiable; and in accordance with these requirements, they must be deliberately repeatable. This repetitiveness finds its most concise and succinct expression in, e.g., *papa*. The successive presentations of the same consonantal phonemes, repeatedly supported by the same vowel, improve their intelligibility and contribute to the correctness of message reception (cf. Pollack, 1959).

The most spectacular results of Murdock's test concern the distribution of nasal and oral consonants between maternal and paternal terms: 55 per cent of the words denoting mother and only 15 per cent of those denoting father belong to M, N, and ŋ consonant classes. Thus the traditional assertions that "the mother is usually named with an *m*-form, the father with a *p*, *b*, *t*, or *d*-form" (Lewis, 1951) obtain an instructive statistical corroboration. The origin and the evolution of the *m*-form can easily be traced, if one rejects any, as Lewis says, "mystical" beliefs in the weak *m* "suited to name a woman" or in the "centripetal" connotation of the nasals as opposed to the "centrifugal" meaning of the oral stops, as well as the equally superstitious speculations about the child's "meaningless" syllables, "arbitrarily" interpreted and taught by the grownups to the children

"in the nurseries of all countries" (Jespersen, 1922).

Often the sucking activities of a child are accompanied by a slight nasal murmur, the only phonation which can be produced when the lips are pressed to mother's breast or to the feeding bottle and the mouth is full. Later, this phonatory reaction to nursing is reproduced as an anticipatory signal at the mere sight of food and finally as a manifestation of a desire to eat, or more generally, as an expression of discontent and impatient longing for missing food or absent nurser, and any ungranted wish. When the mouth is free from nutrition, the nasal murmur may be supplied with an oral, particularly labial release; it may also obtain an optional vocalic support. Eloquent material on the shape and function of those nasal interjections has been collected by such sagacious observers of infant speech as Grégoire (1937), Leopold (1939), Smoczyński (1955), and others. It should be noted in this connection that of the two Russian catching interjections ['ap], ['am] the latter and the corresponding verbal root *xam-* are associated with nutrition.

Since the mother is, in Grégoire's parlance, *la grande dispensatrice*, most of the infant's longings are addressed to her, and children, being prompted and instigated by the extant nursery words, gradually turn the nasal interjection into a parental term, and adapt its expressive make up to their regular phonemic pattern. Some investigators, however, for example, Leopold (1947), insist that not seldom this transition from the *m*-interjection to the maternal term proved to be delayed, and one of the two parental terms, *papa*, appeared as the first thoroughly designative verbal unit, whereas, for instance, the form *mama* existed in the language of Leopold's daughter as an interjection only: "it had no intellectual meaning and cannot be considered to be a semantic alternative of *papa*, which was learned with real meaning at 1; 0. *Mama* with the standard meaning was not learned until 1; 3."

The transitional period when *papa* points to the parent present, while *mama* signals a request for the fulfillment of some need or for the absent fulfiller of childish needs, first and foremost but not necessarily for the mother, is attentively described by Grégoire: "Edm. a paru réclamer sa maman, absente

ce jour-là, en disant [mam: am:]; or, c'est [papa] qu'il émet, lorsqu'il la voit rentrer. . . . Edm. me voit lui préparer une tartine; il énonce [mamä], et non [papa]." Likewise Smoczyński's children in the middle of their second year, when begging for something from their father, addressed him: [mama ma-ma ma:-ma:-ma:].

The priority of paternal terms with their oral stop, in relation to the maternal terms with nasal, is well founded both on the semantic and on the phonological level. Parsons' (1955) observations on the preoedipal mother-child identity in its plain contradistinction to the father's role give an answer to the question why the first distant, merely deictic, rudimentarily cognitive attitude in child's verbal behavior is embodied in the paternal term, which "heralds just the transition from affective expression to designative language" (Jakobson, 1941), whereas in the maternal term, the purely referential value arises in a later (Parsons would probably suggest—oedipal) stage. It would be interesting to examine whether there is a difference in the settlement of *mama* "with the standard meaning" in the speech development of boys on the one hand and girls on the other. On the phonological level, it may be observed that the optimal consonant-vowel contrast is achieved by the backward flanged vowel. The addition of a new, open resonator brings the nasal consonants closer to vowels and thus attenuates the maximal contrast. The phonemic formation of nasal consonants implies the existence of the consonant-vowel contrast and is a superstructure upon this contrast.

Although the *mama-papa* terms are nursery words, they conform to the developmental character of infant language, and neither their penetration into the national language nor their international diffusion invalidates this basic conformity. Therefore the complete exclusion of "forms resembling *mama* and *papa*" from Murdock's text, "unless comparative data on related languages clearly demonstrated their indigenous origin," seems to be superfluously rigorous.

The captivating test of the eminent anthropologist deserves to be continued and developed. The phonemic relation between the maternal and paternal term should be examined and tabulated. How frequently do

both terms belong to the nasal or to the oral class? How often do both of these terms contain a labial or both of them a dental? What are the types of combination between the opposition labial-dental and nasal-oral within the pairs of parental terms? Reinforced, multiform polarizations seem to play here a noticeable role. Cf. such pairs as Russian *mama-t'at'a*, where the feature nasal-oral is combined with the two tonality features—grave-acute and sharp (palatalized)—plain (nonpalatalized). The coincidence of the latter two features creates the optimal contrast of high and low tonality.

Among familial terms the nursery forms are not confined to parental designations, and it would be a tempting task to trace how the different degrees of relationship designated correspond to the development of the child's language. Thus Russian *baba* "grandma" and *d'ad'a* "uncle" (cf. *papa* and *t'at'a*) introduce the voicing of consonants, a later feature in the phonemic patterning of Russian (and all Slavic) children. The terms *d'ed* "grandpa" and *t'ot'a* shift from /a/ to other vowels, which belong to the later phonemic acquisitions of children. Nurse is called either *mamka*, a diminutive from *mama*, or *n'an'a* "nanny," opposed by its nasals of high tonality (sharp and acute), briefly by a typically diminutive sound symbolism, to *mama* with its nasals of low tonality (plain and grave).

We observe that only seniors in age and function are supplied here with nursery names, and we face the relevant question: for what kinsmen are there such names in a given language or stock of languages? A wide field is open for productive joint work of linguists, anthropologists, and experts in psychology of mental and behavioral development.

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