Semantic approximations intra concept vs inter concepts in early verbal lexicon: flexibility against error

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Abstract
Two crucial phenomena are intrinsically related during the key period of early lexical development (in children 1-4 years old): categorization and lexicalization (Waxman & Gelman (1986). The relationship between categorization and lexicalization is particularly relevant for the investigation of metaphor. Metaphor has been broadly defined in linguistic (Kleiber, 1999; Prandi, 2002) as well as in psycholiguistic studies (Gardner & Winner, 1979; Marti , 1986; Laganaro, 1997; Fourment-Aptekman, 1994, 1996) as the crossing of categorical boundaries. It is their pivotal role, between categorization and lexicalization, which confers great importance to metaphor-type productions. Thanks to this role, processes linked to lexical categorization spontaneously arise to the surface of discourse (Duvignau, 2000; Duvignau & Gaume 2003). Nonetheless, studies in this field focus almost exclusively on the categorization and/or the lexicon of nouns, forgetting to often the investigation of verbs (Bowerman (1978), Bernicot (1981), Tomasello & Merriman (1995), Bassano (2000), Tomasello (2003).

Our research follows the line of Vygotsky (1935) and Piaget (1945,1985) as well as Jakobson (1956), Clark (1973, 1993, 2003), Le Ny (1979), Gentner (1978, 1981), Hofstadter (1995) and Gentner & Boroditsky (2001) whose observations and work on linguistic and conceptual development in children allows us to propose the following hypothesis: semantic and cognitive flexibility play an important role in the structuration of verbs/concepts of action.

We analyze 200 metaphor-type verbal productions – semantic approximations intra or extra domain ("she has cut the orange"or "she has undressed the orange", "she has broken the balloon") produced by 60 young children -from 2 to 4 years of age- during a naming task of 17 actions presented on a video. The data show first of all to point a strong semantic flexibility in the use of verbs during this early phase of lexical development (Duvignau, 2003). Consequently, within the framework of children's productions, we consider the produced forms as *semantic approximations by analogy* and no more as 'errors' or even 'metaphor' concepts. Secondly, the data gives a better insight in the construction processes: the child appears to learn first verbs with the status of "capitals", and to use these forms in order to refer to a wide conceptual domain. The child, in his effort to communicate an event A (for example, tearing up a book) for which he has set or not verbal category (1) can draw an analogy with a previous event B (breaking a cup) already memorized with a lexical item *to break* and, (2) by analogy, would produce a semantic approximation : the *book is broken* to communicate the event A. Then the child would progressively acquire the verbs

corresponding to "cities", more specific concepts, becoming thus more conventional in his labeling. Finally, we will present a computerized modelization of the structuration of the verbs/concepts of action according to semantic proximity (Prox). This modelization will be tested on the children's produced utterances (Gaume & Alii. (2002); Gaume (2004), Duvignau & Gaume (2004)). The obtained results are a first validation of our model of the construction of a verbal lexicon by children.

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