

## Bilingual's Advantages of not Using Mutual Exclusivity

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**Abstract:** It is a known fact that monolingual children will take advantage of the principle of mutual exclusivity (ME) in the process of early word learning, i.e., the names of two different objects are mutually exclusive (one label for one referent). With the help of ME, they can expand their vocabulary effectively with a rapid speed. However, for bilingual children, it seems this principle is not that friendly to them, since they are exposed to two languages at the same time, so there could be at least two labels for the same referent. Hence bilingual children may be confused and encounter difficulties in learning words, which will slower their word learning process. This paper tries to, based on earlier research, probe into the question that how bilingual children acquire words without the help of ME, and explore whether there are advantages of not using ME in word learning for bilingual children.

**Key words:** Bilingual; Advantages; Mutual exclusivity; Word learning

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### 1 Introduction

In today's world, there is a large number of children being raised up bilingually or with linguistic exposure to three or even multiple languages. Research on early language development has aroused many researchers' interest and has been conducted through case studies and experimental methods. Early research focused on whether monolingual and bilingual children employ different word-learning strategies when they are acquiring a language, and evidence was provided that monolingual and bilingual children do

differentiate from each other in the process of early word learning. Based on this, some researchers have done research to investigate the effect of bilingual language experience, i.e., whether exposure to two (or more) languages facilitates or hinders word learning when children are young, and whether this language experience distinctively changes the typical language development path of children, by resulting in delays or deviations (see de Houwer, 1990; Leopold, 1939, 1949 and others). Another key research area is about how bilingual children separate their two language systems and when they are capable to do so (see Brysbaert, 1998; Genesee, 1989; Pye, 1986 and others). In addition, some researchers have focused on examining the connections between bilingual language exposure and cognitive development (see Bialystok, 1991; Malakoff & Hakuta, 1991 and others).

To learn a label name, children need to build arbitrary relationship successfully between a sequence of sound (a word) and a real referent (an object). But one main question is that how children succeed in word learning when they only have one label but multiple potential referents. Lexical principles, also referred to biases and constraints, have been proposed by many to explain children's rapid expansion of vocabulary. It is suggested that the use of lexical principles reflects children's ability to narrow the large number of hypotheses about word meanings (see Markman, 1992; Waxman & Kosowski, 1990 and others), and researchers have proposed several these principles, such as the principle of contrast (Clark, 1983, 1987), Golinkoff et al.'s (1994) system of six principles, and the mutual exclusivity assumption (Markman, 1984, 1992; Markman & Wachtel, 1988). In this paper, main attention will be given to the last one, the principle of mutual exclusivity (ME).

The principle of ME suggests that, for children, they assume that the names of two different objects are mutually exclusive, i.e., one referent can only have one label (e.g., Markman & Hutchinson, 1984). In practice, when a child has two objects at hand, and s/he already knows the name of one object, the hearing of a novel word will lead them to assume that the novel label is the name of the unnamed object since the other one already has a name, or this novel word refers to some parts or properties of the named object. This bias is suggested to underlie the disambiguation effect (Merriman & Bowman, 1989) and it is proposed that this principle is a default function that facilitates children's early word learning. Research has shown that monolingual children frequently apply the ME principle in daily life in whole object naming (e.g., Hall, Waxman & Hurwitz, 1993), while for bilingual children, some findings indicate that they are less inclined to use ME compared to same-aged monolingual children, which may be due to the fact that bilinguals must suspend using ME between their two languages, thus they may be more willing to accept two labels for an object (see Merriman & Kutlesic, 1993; Davidson et al., 1997). In this case, people may ask, is this an advantage or a disadvantage for bilinguals in the process of word learning?

## 2 Studies & Argumentation

Living in a bilingual environment means children need to violate the ME principle consistently since an object will always be given two names from the two languages children are acquiring. Some people have pointed out that this bilingual language experience may make the word-learning process harder for children acquiring two languages, on the one hand, they may not be willing to use the ME principle in certain ambiguous situations, which may slow down the rapid development of their vocabulary in early stages; on the other hand, as Davidson and Tell (2005) suggest, bilingual children may be less confident in their use of constraints that simplify the language learning task. However, opposing evidence has been given by a number of studies that the suspension of using ME, contrarily, may make bilingual children more flexible in choosing word learning strategies, more sensitive to social and pragmatic cues, and more aware of the arbitrariness of the word-

referent mapping when they are acquiring languages compared to same-aged monolingual children; and these advantages may help them outperform their monolingual counterpart in word-learning tasks.

Different from the ME principle, researchers proposed the socio-cognitive account for bilingual word learning. This account claims that bilingual children can make good use of social and pragmatic information, as well as cognitive information, for example, the communicative intention and their interlocutor's knowledge state, to assign the novel label to a likely referent (e.g., Tomasello, Strosberg & Akhtar, 1996). Evidence supporting this proposal has been growing, showing that bilingual children are capable of using these social and pragmatic cues to assign reference. Under this account, children living in bilingual environment need to switch between their two languages frequently and constantly, and they have at least two labels referring to a single object, thus a bilingual child will violate ME within a language when they notice the social and cognitive cues from the interlocutor, and assign a novel name to a familiar or named object. This socio-cognitive advantage of bilinguals has been investigated by plenty of researchers and supported by considerable evidence. Specifically, bilinguals are more aware of the intrinsically social nature of the words (Rosenblum & Pinker, 1983), are better at understanding other people's perspective (Genesee, Tucker & Lambert, 1975; Goetz, 2003), and are good at monitoring their interlocutor's intentions and knowledge state (Lanza, 1992; Genesee, Boivin & Nicoladis, 1996).

The use of socio-cognitive cues, however, does not mean that bilingual children refuse to use ME completely, but only means that they place less reliance on the use of word-learning constraints which are employed by their monolingual peers. Studies show that bilingual children do employ the ME principle in certain situations and learn new label-referent mapping this way. For example, in Davidson and Tell's (2005) study, they found that both monolingual and bilingual children used ME in their whole object naming experiment, though older bilingual children were less reliance on the use of ME. Another study, conducted by Frank and Poulin-Dubois (2002), pointing out that bilingual language experience does not significantly alter adherence to the ME principle before the age of three years, i.e., bilingual children use ME from time to time in their

first three years, just like their monolingual peers.

Bilingual's adoption of these two word-learning strategies, that is, the ME principle and the use of socio-cognitive information, on the one hand, shows that bilinguals are more flexible in choosing word-learning strategies than their monolingual peers. That is to say, bilinguals may cope with different situations with different word-learning principles: when there is socio-cognitive information provided, they will use that; while when they have not received any socio-cognitive cues, bilinguals may go for the ME principle. This flexibility, as Peal and Lambert (1962) suggest, due to the need for bilinguals to switch language codes in various situations and on various tasks. On the other hand, it indicates that bilinguals are more sensitive than their monolingual peers to socio-cognitive cues which aid their language learning. The more attention bilinguals pay to subtle extra-linguistic cues, the more developed their socio-cognitive abilities are, such as the abilities of perspective-taking and intention-reading, which play an important role in later language and cognitive development.

In Healey and Skarabela's study (2007), they tested monolingual and bilingual children's behavior when ME conflicts with a social cue from the experimenter. Consistent with previous studies, monolinguals and bilinguals performed differently in the experiment, with the latter less inclined to use the ME principle. They pointed out that the sensitivity of bilinguals to social cues may account for monolingual and bilingual's different performance in their experiment. However, they also indicated that bilingual children may have a meta-linguistic advantage than their monolingual peers. Children acquiring two languages need to build two linguistic systems, that is, one object can be labeled by two words in their two languages, and thus, the violation of the ME principle enables them to have the knowledge that people give name to objects, and each language may have its own word for the same object. In his study, Bialystok (1988) claims that the bilingual language experience makes bilingual children more aware of the arbitrary word-referent relationship. Therefore, it is possible that bilingual children will outperform monolingual children, as a result of their enhanced meta-linguistic awareness, in tasks where the conventional word-referent relationship is changed (e.g., Cromdal, 1999). Moreover, with the development of age, bilingual

children have greater meta-linguistic awareness of the distinction between dual labeling situations within a language and across two languages (Frank & Poulin-Dubois, 2002). This meta-linguistic awareness helps bilinguals learn the arbitrariness of word-referent mapping and make them more willing to accept more than one label for a familiar object.

### 3 Discussion & Conclusion

Taken together, the studies mentioned above suggest that bilingual children may have more advantages than disadvantages without using the ME principle. In the first place, the suspension of using ME means that bilingual children need to employ other effective word-learning mechanisms or strategies to help them when they are acquiring languages. Considerable evidence has been provided by linguists and psychologists that bilingual children will collect useful socio-cognitive or pragmatic cues from the context and their interlocutor as well in word-learning tasks. There are also studies suggesting that bilingual children have other word learning strategies, for instance, they may rely on sensitivity to statistical regularities (Montague & Akhtar, 1999; Houston-Price, Plunkett & Duffy, 2006), and more studies are needed to figure out other bilingual word-learning strategies. Here, in this paper, of particular interest is bilingual's use of socio-cognitive cues. The use of this information makes them more flexible in choosing appropriate word-learning strategies, and they may deal with different situation with different solutions. In other words, bilinguals will use ME when it's helpful, while if ME fails, they will pay more attention to social and pragmatic information to help them out. In this case, they become more sensitive than their monolingual peers to social and pragmatic cues in the context, and this will in turn help their cognitive development, for instance, the abilities of perspective-taking and intention reading. Nevertheless, it is important to notice that monolingual children will use social and pragmatic information too in some cases, but they are using this word learning strategy in a less effective manner compared to their bilingual counterpart. More research is needed to examine in which specific condition(s) bilingual and monolingual children apply the ME principle, and in which they do not; and also, to what extent do bilingual and monolinguals use



each word-learning strategy is also a research area for further studies.

The violation of ME, secondly, may help bilinguals gain a better understanding of word-referent arbitrary mapping. The setup of two comparatively independent linguistic systems makes bilingual children have the awareness that people assign labels to objects, and one object can have more than one name (at least one name in one language). Thus, they will be more willing to accept another unknown name for a familiar or already named object, both within a language and across their two languages. In a word, this meta-linguistic advantage helps them understand the arbitrariness between word and its referent better, and thus makes the word learning process easier and more efficient.

In conclusion, a number of studies suggest that bilinguals may be less reliance on ME when they are acquiring their two comparatively different languages, and positive evidence has also been provided from various studies and experiments that this seemingly disadvantage does not affect bilingual children's normal development of word learning. Conversely, the suspension of ME use may bring bilinguals more advantages compared to their monolingual counterpart. Specifically, bilingual children may be more flexible in choosing word learning strategies, more sensitive to social and pragmatic cues in context, which leads to an earlier and better cognitive development, and lastly, they may be more aware of the arbitrary relationship between a word and its referent, which makes an easier and more effective word-learning path.

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