The role of socialisation in the development of phonological, syntactical and lexical aspects of language: a psycholinguistics view

Ghozayel Mohsen Elotteebi
University of Hafr Albatin
Saudi Arabia

Abstract

Rapid linguistic development is believed to occur in early childhood because of the malleability of this period (Hutterlocher, et al., 1991; Maccoby, 1992). The aim of this paper is to evaluate the role of socialisation as a contributor to first-language acquisition in terms of the phonological, lexical and syntactical aspects of language. The relative importance of nativist-and usage-based approaches to language is examined. Following from that, the role of the amount, type and period of exposure to speech in the process of learning English as a first-language. This paper explores a number of studies of typical and atypical children in the relevant literature. It concludes that language acquisition is driven both by innate ability and by environmental factors, i.e. society, or social elements are significant as activators of the human being's innate ability to acquire language. According to this paper, the deprivation of socialisation is critical to many aspects of language development, most importantly syntactic, and least importantly phonological. Deficits in phonological aspects are only seen in the case of atypical children, and the cases of autistic children, while lexical development can be seen in both cases; typical and atypical. The results of the studies investigated in this paper suggest that syntax is aspect of language most affected by inadequate exposure to language. It also concluded that these three aspects of language acquisition are also likely to be influenced by a critical period, which is a proposal of nativism.

Keywords: socialisation; phonological; lexical; syntax; nativist-based approach; usage-based approach

1. Introduction

A pervasive assumption is that children learn almost everything from their families, before they begin to experience socialisation outside the home (Hart and Risely, 2003). Children's exposure to their first language in early childhood can make parents and/or caregivers the major agents in the process of childhood socialisation (Maccoby, 1992). The topic of language development has been of great interest to researchers: psychologists and sociologists, as well as linguists. There are many approaches to language acquisition and language development, including both 'nativist' and 'usage-based' approaches (Pinker, 1954; Tomasello, 1995). The major difference between the two approaches, or theories, is that nativism views the language as an innate instinct, while the usage-based approach views language rather as a social phenomenon (ibid.).

A great deal of literature has been written on fundamental contributors to first-language acquisition, and whether these factors are innate or usage-based; many studies appear to overestimate the role of innate

preparedness over socialisation whereas other studies underestimate the relevence of innateness to children's linguistic development, (see e.g. Pinker, 1954; Chomsky, 1962; Tomasello, 1995; Ambridge, et al., 2011). The aim of this paper, following thus introduction, is to evaluate the role of socialisation as a contributor to first-language acquisition by, firstly, comparing the relative importance of nativist-and usage-based approaches to language in section 2. Secondly, in section 3, we shall focus on the amount, type and period of exposure to speech in the process of learning English as a first-language. This will be explored through a number of studies of typical and atypical children in the relevant literature. The relevance of lack of socialisation to autism will be considered in section 4, where potential effects of environmental factors on lexical, syntactical and phonological developments will be summarized. In section 4.2.2, we shall estimate the significance of conversation as a form of exposure to language and an aspect of socialisation to first-language acquisition.

2. Language as innate versus usage-based

In this section, theories introduced in the introduction are briefly explained. On the one hand, nativist theory views at least some aspects of language as innate rather than acquired, i.e. children are presumed to have an innate knowledge of language (Ambridge & Lieven, 2011). The theory of nativists is sometimes referred to as Universal Grammar theory because of their proposal that children are born with similar innate structure of language (syntax) (ibid). However, although advocators of nativism believe in the innateness of language, they consider the childhood to be a critical period in which children should be exposed to their first language (ibid). If they fail to do so, children are not expected to develop a full range of language skills (ibid).

On the other hand, a usage-based theory of language views the process of first language acquisition as acquired through exposure to this language, and that the hypothesises innateness is in the ability rather than the knowledge (Ambridge & Lieven, 2011). According to this theory, first-language acquisition is motivated by communicative drives, i.e. children learn their first language in order to communicate, socialise and understand others, and thus deprivation of exposure to a first language or impairment of social skills, are likely to hinder the process of learning the first language (ibid). The subtler meaning of aspects can be inferred through the speaker's attentional focus and communicative intent (Akhtar & Tomasello, 2000; Baldwin, 2000).

Since this paper aims at examine the role of socialisation in first-language acquisition, the following section will attempt to evaluate the importance of amount, type and period of exposure to English as a first language. These factors will be discussed with reference to nativism and usage-based theory as two contrasting approaches to language.

3. The role of amount, type and period of exposure to input in first-language

acquisition

The amount, type and period of exposure to speech necessary for learning a first language have been areas of great debate for many researchers (see e.g. Sachs, J. et al, 1981). This section will be divided into three parts, relating to three factors: amount, type, and period of exposure. The first part which concerning the mount of exposure will focus on lexical development. The second part, type of exposure, will consider more than one aspect of language development, and will be subdivided into two parts: conversational interactions, and direct versus indirect speech. Similarly, is the last part of this section, dealing with the period of exposure, focus on more than one aspect of language development. It is noteworthy that some studies mentioned in one part can be cited as supporting evidence for another part; and in distributing studies between the three parts, the aims of the studies are taken into consideration.

3.1 Amount of exposure

Advocators of nativism argue that competence in a first language can be achieved quickly by minimal exposure to language in a short period (Chomsky, 1962). However, the amount of exposure to speech is believed to have a critical influence on first-language acquisition, and especially on lexical development (Huttenlocher, et al, 1991). Nativists argue that children pass through identical steps when they acquire their first language (Dabrowska, 2004) although they accepted that there are noticeable linguistic differences between individuals, especially in regard to their vocabulary (McCarthy, 1954). Little attention has been paid to lexical development compared to syntactical development, regarding the variation in the amount of exposure, although children acquire a certain number of words before they combine them into sentences (Huttenlocher, et al, 1991).

Huttenlocher, et al (1991), conducted a study on 22 children from the age of 14 to 26 months, aiming at systematically exploring the role of variation in exposure to speech on child's early lexical development. To do so, researchers observed a child's and their parents at several time points (Huttenlocher, et al, 1991). The findings showed that there is a strong link between individual differences in vocabulary achievement and variations in the amount of language children experienced with their mothers (ibid.). This study suggests that variation in the amount of exposure to language is a substantial factor in children's vocabulary development (ibid.). It may also suggest the importance of early exposure to language. Further studies which will be investigated in the following parts, may add to our understanding of the significance of the amount of exposure to language development.

3.2 Type of exposure

Having examined the role of the amount of exposure to first-language acquisition, we will now move to the type of exposure, to examine its function in the process of acquiring a language. This section will be divided, as previously indicated, into two parts: the first part will attempt to examine conversation as a type of exposure to language; while the second part will attempt to examine the role of direct and indirect exposure to input in this context. In this section, studies of both typical and atypical cases of children will be referred to.

3.2.1 Exposure to speech through conversational interactions

Conversation can be seen as the typical form of socialisation, and it has considerable importance to first-language acquisition because it provides significant data within the context of actual language use (Hoff, et al, 2002). The data provided in conversational interaction is likely to introduce children to new words, as well as to the syntactical structures in which these words are used (ibid.). Furthermore, in conversational interactions, children are supported by the non-linguistic context (ibid) and the mutual engagement (Pinker, 1984) to infer the meaning of a particular aspect of language (Hoff, et al, 2002).

One study has been undertaken into how children use conversation as an input to acquire vocabulary by Erika Hoff and Letitia Naigles (2002). The aim of the study was to evaluate the roles of the social-pragmatic and data-providing functions of conversation (Hoff, et al, 2002). The study concluded that word learning in first-language acquisition makes use of the human being's social interest and ability to interact with others (a usage-based approach) which are offered in the form of a conversation (ibid.). In addition, conversation undoubtedly provides multiple sources of information, and thus a frequent and motivating opportunities for language learners, (Akhtar & Tomasello, 2000 in Hoff, et al, 2002). The study also suggested that hearing words frequently in a conversational environment is found to be useful for children, not only in regard to lexical richness, but also in the provision of multiple syntactic frames in which words are used (Hoff, et al, 2002). Thus, lexical and syntactical variations in a mother's use of language are significant in their children's linguistic development (ibid).

Along with the benefit of conversation as a delivery mechanism for lexical and syntactical data, verbal responsiveness in conversation has specific importance in language development, (Hoff and Naigeles, 2002; Hart and Risely, 2003). One of the findings drawn from the study of Hart and Risely (2003) conducted with children of three groups of families at different levels of socioeconomic status (SES), professional, working-class and welfare, relates to the quality of verbal responsiveness (Hart and Risely, 2003). The results showed that each SES group differs in the extent of experience with language and socialisation which the adults provide to their children, and in the quantity and quality of verbal responsiveness in their interactions (ibid.). The professional SES families were found to use 32 affirmatives and 5 prohibitions per hour; the working-class SES families used 12 affirmatives and 7 prohibitions per hour: and the welfare SES families used 5 affirmatives and 11 prohibitions words per hour (ibid.). This factor appears to considerably influence the number of words used by each group; children of professional, middle-class and welfare families differ in the quantity of words they hear per hour: with 2,153, 1,251, 616 respectively (ibid.). Thus, it is not only the quantity (amount of exposure), but also the quality (type of exposure) of verbal input in conversational interactions that are significant for language development.

3.2.2 Direct versus indirect exposure to speech

This section attempts to weigh or estimate the significance of direct and indirect input to first language acquisition, i.e. to ask: do children acquire the language from overhearing it used by others, or do they rather need a direct input (Sachs, et al., 1981)? Regarding the significance of direct or tailored speech in first-language acquisition, there has been much research investigating its importance, among which

Thiessean et al (2005) have researched the influence of infant-directed speech (IDS) on the process of learning English as a first language. Their study concluded that children benefit considerably from IDS in that they are shown to be more able to discriminate between sounds, (Thiessen, et al., 2005).

On the other hand, in regard to children's ability to learn a language from overhearing it, studies of atypical cases of children are much more significant than those of typical children, because it is difficult to estimate the effect of socialisation on typical children who have had sufficient communicative interaction (Sachs, et al., 1981). An example of such studies is the one conducted on Jim and Glenn, two normally hearing brothers of deaf parents. They are regarded as atypical because they learned their first language (English) in a quite different linguistic environment from that of the average child (ibid). The older child, Jim, was aged 3.9 at the onset of the study whereas Glenn, the younger child, was 1.8 when the researchers started to study his language (ibid).

Before the intervention, Jim had indirect exposure to the English language through TV and nursery school (Sachs, et al, 1981). His linguistic ability was generally below his age level (ibid.). He had severe problems with articulation and made unintelligible, short utterances which were syntactically odd, e.g. My mommy in house apple, spoken while looking at a picture of an apple; House chimney my house my chimney, pointing at a picture of a house (ibid.). Regarding Glenn, the younger child, it has been observed that he used his older brother as a linguistic model to acquire English (ibid.). Furthermore, he was exposed to language via direct speech from adults visiting his older brother (ibid.). In general, the results of researchers' observations of Glenn did not show that he had deviant language development, as was the case with his older brother, Jim, i.e. no major language problem was observed (ibid.). Examples of his utterances are: He is going to get me; I want play with that; you cannot get on my bus (ibid.).

After many conversational sessions for both brothers, their linguistic abilities improved to be almost at their age level (Sachs, et al, 1981). Their main weakness was verbal and facial expression (ibid.). It can be inferred in the case of Jim that exposure to language only via T.V was not enough for him to acquire and develop his English language ability (ibid.). He was suffering from severe linguistic difficulty, especially in regard to his syntax (ibid.). However, with minimal exposure he was able to produce some words, though with odd structures (ibid.). On the other hand the case of Glenn, who was exposed to the English language directly through his brother and adults visiting his brother, suggests that direct speech is of considerable importance in first language acquisition (ibid.). Glenn did not show the language which was observed in his older brother, Jim (ibid.). It can also be inferred from the difference between the cases of the two brothers that very early childhood is critical to first-language acquisition. This will be further examined in the following section.

3.3 Period of exposure

Having examined the role of amount (section 3.1) and type (3.2) of exposure, now we will move to the critical issue of time in first-language acquisition. One of the arguments for nativism is that there is a critical period in first-language acquisition between the ages of about 2 and 12 (Lenneberg, 1967). To examine the validity of this argument, this section will investigate Hart and Risely's study, which was previously used as evidence for the role of type of exposure (section 3.2).

Hart and Risely (2003) conducted their study in an attempt to measure the vocabulary growth of 1 and 2 year-old children from families at three different levels of socioeconomic status (SES): professional, working-class and welfare. A half-day intensive programme was set up for the children, to teach them new words (Hart & Risely, 2003). At the onset of the study, the primary aim was to monitor the language the children were using on an everyday basis, and to evaluate its development (ibid.). However, it seemed later that the children's progress was temporary, as the new words tended to disappear as the children aged (ibid.). This led the researchers to include the children's families in the study sample (ibid.).

The findings of two years' observation of language experience was surprising for the researchers in that: a) each child's vocabulary reflected their parents' vocabulary (86-98%), in spite of all the efforts made to build the children's language, and b) there was a big difference between the language of children of professional, middle class and welfare SES in the quantity of words they heard per hour: 2,153, 1,251 and 616 words respectively, and c) professional, working-class and welfare SES families differ from each other in their language experience and the socialisation they provide to their children: 32 affirmatives and 5 prohibitions per hour, 12 affirmatives and 7 prohibitions per hour, 5 affirmatives and 11 prohibitions per hour respectively (Hart and Risely, 2003). It can be inferred from this study that there is a critical period in first-language acquisition, according to the nativist approach. However, rapid lexical development in early childhood is a manifestation of the human being's innate ability to learn language (Huttenlocher, et al, 1991) which is an argument for the usage-based approach to language.

4. Autism and socialisation

Having examined the role of some aspects of socialisation in first-language acquisition in the previous sections, in this section, we aim to examine the linguistic impact of social deficits in cases of autism. Some of the key diagnostic criteria for children with autism are impairments in linguistic ability and reciprocal social interaction (Tager-Flusberg, 1999). It has been argued that deficits in social ability have a deep impact on social interactions for autistic children (ibid). Many reports from mothers of autistic children show that their children have no interest in people, and no preference for listening to their mother's speech (ibid).

Some studies of autistic children's linguistic development have revealed that they have atypical voice quality and intonation patterns (Tager-Flusberg, 1999). The lexical development of autistic children is considered to be relatively strong, but their syntactic development is found to be similar to that of Down's syndrome children, with a rate of development slower than that of average, normally developing child (ibid). The most seriously impaired aspect of language in autism is pragmatics (Tager-Flusberg, 1981), i.e. the autistic children's communicative competence is impaired because he/she needs socialisation (Hoff and Naigles, 2002), which has been found to be the core impairment of autism (Tager-Flusberg, 1999). This can result in delays and deficits in first-language acquisition (ibid). Other results of observation show that the language used by autistic children is imitative rather than spontaneous (Prizant, 1983).

It might be argued that the linguistic ability of autistic children, in spite of their social deficits, provides evidence against the proposal of the usage-based approach, i.e. the importance of contribution of socialisation in first-language acquisition. However, levels of functional language and communicative

ability within the autistic population are variable, ranging from high normal use of language to no functional language and very inadequate communicative ability (Tager-Flusberg, 1999). This suggests that there are factors other than the human innate ability which contribute to first-language acquisition, among which is the role of socialisation.

5. Discussion

The studies cited throughout this paper have mainly taken into consideration three aspect of language development: phonological, lexical and syntactical. Deficits in phonological aspects are only seen in the case of atypical children, i.e. the cases of Jim and Glenn (section 3.2.2), and the cases of autistic children (section 4). This suggests that phonological development is the least likely aspects of language development to be affected by the role of socialisation, among the three aspects considered. In other words, it seems that only extreme deprivation of socialisation has an obvious negative impact on phonological development.

The impact of socialisation on lexical development, however, can be clearly seen among both typical and atypical children, e.g. in section 2.1 we saw that the amount of exposure relates to the number of words heard; in section 2.2 we considered the importance of conversation in first-language acquisition; and section 2.3 dealt with the significance of direct exposure to speech in first-language acquisition. Throughout these sections, exposure to speech is seen as a contributor to richness of vocabulary, with regard to both quality and quantity. However, the case of autistic children who show relative strength in their lexical development may question the role of socialisation in language acquisition. This importance of socialisation, however, can be justified by the variation among autistic children in their communicative abilities.

With regard to syntactic development, it is appeared, the results of the studies investigated in this paper suggest that syntax is aspect of language most affected by inadequate exposure to language. The cases of Jim and Glenn illustrate this, with Jim's syntactically odd utterances (see section 3.2.2). This is likely to challenge the nativist proposal about a universal grammar, and also the assumption that minimal exposure to language is enough to gain the competence of a native speaker (Chomsky, 1962).

6. Conclusion

The purpose of this paper was to examine the role of socialisation in language development. Two theories of first-language acquisition were introduced with their relevant arguments. The role of socialisation in language development was approached through examining the role of amount, type and period of exposure to speech in acquiring English as a first language in many studies from the literature. Attention was focused on conversation, including direct and indirect speech as forms of socialisation, and studies of both typical and atypical cases of children were used as evidence. The role of socialisation was further examined through investigating the case of autistic children. Following this, the potential impact of socialisation on phonological, lexical and syntactic development were discussed, through the studies

investigated in this paper.

It can be concluded, from the studies investigated in this paper, that according to the usage-based approach to language, innateness refers to user's ability to use language, not to the language itself. Language acquisition is driven both by this innate ability and also by the environmental factors, socialisation being an example. Society, or social elements are significant as activators of the human being's innate ability to acquire language, and therefore, the deprivation of socialisation is critical to many aspects of language development, most importantly syntactic, and least importantly phonological, according to this paper. Moreover, the combination of the learner's innate capacity and his/her exposure to language is reflected in their lexical development. This is consistent with the study of Huttenlocher, et al, (1991) which was investigated in section 3.2. First-language acquisition is also likely to be influenced by a critical period, which is a proposal of nativism (see section 3.3).

7. References

Akhtar, N. and Tomasello, M. (2000) The social nature of words and word learning. In R., Golinkoff and K., Hirsh-Pasek (Eds.) *Becoming a Word Learner: A debate on lexical acquisition*. Oxford: Oxford University Press

Ambridge, B. and Lieven. E. V. M. (2011) *Child Language Acquisition: Contrasting Theoretical Approaches*. Cambridge: Cambridge University Press

Baldwin, D. A. (2000) Interpersonal understanding fuels knowledge acquisition. *Current Directions in Psychological Science*, 9, 40-45

Chomsky, N. (1962) Explanatory models in linguistics. In E. Nagel, P. Suppes and A. Tarski (Eds.) *Logic, Methodology, and Philosophy of Science*. Stanford: Stanford University Press

Dabrowska, E. (2004) *Language, Mind and Brain: Some psychological and neurological constraints on theories of grammar*. Edinburgh: Edinburgh University Press

Hart, B. and Risely, T. R. (2003) *The Early Catastrophe: The 30 million word gap by age 3.* Online access. [Accessed December 2015]

Hoff, E. and Naigles, L. (2002) How children use input to acquire a lexicon. *Child Development*, 73 (2), 418-433

Huttenlocher, J., Haight, W., Bryk, A., Seltzer, M., and Lyons, T. (1991) Early vocabulary growth: relation to language and input and gender. *Developmental Psychology*, 27 (2), 236-248

Maccoby, E. E. (1992) The role of parents in the socialization of children: An historical overview. *Developmental Psychology*, 28 (6), 1006-1017

McCarthy, D. (1954) Language development in children. In L. Carmicheal (Ed.) *Manual of Child Development*. 2nd ed., 492-630. New York: Wiley

Lenneberg, E. H. (1967) *Biological Foundations of Language with Appendices by Noam Chomsky and Otto Marx*. New York, London: Wiley

Pinker, S. (1954) *The Language Instinct: The new science of language and mind*. Harmondsworth: Penguin

Pinker, S. (1984) *Language Learnability and Language development*. Cambridge, MA: Harvard

University Press
Sachs, J., Bard, B. and Johnson, M. L. (1981) Language learning with restricted input: Case studies of two hearing children of deaf parents. *Applied Psycholinguistics*, 2, 33-54
Tager-Flusberg, H. (1981) On the nature of linguistic functioning in early infantile autism. *Journal of Autism and Developmental Disorders*, 11, 45-56
Tager-Flusberg, H. (1999) Language development in atypical children. In Barret, M. (Ed.) *The Development of Language*. Hove: Psychology Press
Thiessen, E. D., Hill, E. A. and Saffran, J. R. (2005) Infant-directed speech facilitates word segmentation. *Infancy*, 7, 53-71
Tomasello, M. (1995) Language is not an instinct. *Cognitive Development*, 10, 131-156