Acquisition of Jamaican Phonology

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1 Introduction

1.1 Language Acquisition

Language acquisition is often distinguished from language learning, with the former referring to the process by which a child comes to know a first language or mother tongue, and the latter referring to the process by which one comes to know a second or subsequent language. The latter could apply to a child or adult. However, when a child develops two or more language systems relatively simultaneously, this process is referred to collectively as language acquisition. This dissertation focuses on language acquisition as defined here, including the possibility that some of the children studied might be simultaneously acquiring more than one language.

Acquisition studies in general can serve many functions. They contribute of course to scientific knowledge, but may also have clinical and educational applications. All general theories of grammar should ideally include an account of language acquisition. The study of the acquisition of a particular language therefore contributes to the general debate on the adequacies of theories but also to discovering both the universal and language specific features of the language acquisition process. In the context of Jamaica, the study of language acquisition is necessary for all the reasons mentioned above.

Academically, this study contributes to the body of knowledge on the acquisition of different languages. More crucially it contributes to filling the gap that exists due to the dearth of studies on the acquisition of Creole languages. Practically, it provides a much-needed database for the further study of the Jamaican language situation and the language varieties in general, and their acquisition in particular. The database contains general language data on Jamaican children between the ages of one and four and a half years and can be used to explore most areas of language acquisition. The focus of this dissertation, however, will be the acquisition of the sound system by Jamaican children, that is their phonological development. The study of this development gives an indication of the normal development path for Jamaican children acquiring the sounds of their language or languages. Speech pathologists, therapists and educators should find this useful in determining cases of phonological disorder. It can thus have both a clinical and educational impact. The results of the project can also contribute to the socio-political debate on the Jamaican language situation in particular with regard to education.

This is primarily a descriptive study, aimed at discovering the processes by which the Jamaican children studied acquire the phonology of their language or languages, in a language situation that includes significant variation. This variation and its impact on the path of acquisition are an important aspect of this study. Both speakers and linguists
acknowledge this variation whether they recognise the multilingual nature of the speech community or assume that it is language-internal variation in a monolingual society. In this project two different socio-economic groups were studied with the aim of capturing some aspects of this variation.

Notwithstanding the fact that this is a primarily descriptive study, various theoretical concepts are discussed and theoretical proposals are made where relevant. The most significant theoretical insights derived from this study concern an account of the Creole continuum within the Optimality Theory framework (§3.5) including an account of the interaction between the phonologies of a first and second language (§3.5.4). Additionally, I consider some of the theoretical models available (Chapter 2) and explore possibilities of adaptations of existing proposals. Arising from this is an account of sub-segmental representation in Dependency Phonology and Optimality Theory that may impact on phonological theory generally and phonological development in particular. This proposal is discussed with examples from the database of this study. However, it is not treated in the main body of this dissertation since it has no direct impact on my primarily descriptive approach to this study. It is discussed in a separate Theoretical Excursus at the end of the dissertation.

1.2 Phonological Development

Phonology is the study of how languages organise a subset of speech sounds to function distinctively in their sound systems, as opposed to phonetics, which is the study of how the language sounds that can be made by the human vocal apparatus are produced, transmitted and perceived. The child’s first year is usually regarded as the pre-linguistic phase and it is studied in phonetic terms. The actual development of phonological systems is considered as beginning in children above 1 year old. I maintain this tradition in this project by focusing on children between one and four and a half years of age.

There is evidence in the literature that children’s perception and production of speech sounds do not develop in parallel and that perception precedes production. Vihman (1996: 60) reports on several experiments that show that infants can discriminate between speech sounds at two months and, she assumes, quite likely from birth. For example, they can perceive the distinction between syllables with voiced as opposed to voiceless initial consonants (e.g. ba vs. pa) (cf. Eimas et al., 1971). There are competing theoretical accounts of these facts. Vihman goes on to show that it is only from about six months old that the particular phonological processes of the specific language to which the child is exposed appear to play a significant role in perception. There is more consensus on speech production than on perception. For example, several researchers identify five stages of vocal development up to around 13 months old (cf. Oller, 1980; Stark, 1980 and Roug, Landberg & Lundberg, 1989). However, there is sufficient evidence of individual differences to weaken any model set up in stages (Vihman, 1996: 118). There is more consistency in phonological development after the first year (see Chapter 2). In this dissertation the focus is on phonological production, not perception, after the first year.

The study of phonological development seeks to determine the process by which a child acquires and uses the sounds that are distinctive in her language. Such studies have mainly been analyzed in terms of syllable structure and segments, with the position of the segment in the syllable being significant since segments have been frequently
observed to develop asymmetrically in the different positions. Some studies focus on sub-segmental distinctive features and others identify phonological processes that serve to link child production to adult production.

In this study all these options are combined in an effort to get a fairly comprehensive view of the phonological development of the Jamaican children studied. Syllables and segments are analysed with main focus on the position of the segment in the syllable (syllable-initial or syllable-final for consonants). The development process is also described in terms of sub-segmental features and the phonological processes that could be viewed as bridging the gap between the adult phonological system and that of the child.

In Chapter 2, particularly §2.2, I discuss some of the theoretical approaches to phonological development. I also discuss some of the earlier studies of phonological development such as Jakobson (1968) and Smith (1973), in addition to more recent publications such as Grunwell (1982) and Fikker (1994). The Jamaican data from this study is compared primarily with Grunwell's, as it offers an account of children acquiring English, compiled from the results of a number of independent studies. There are no sufficiently detailed studies of acquisition in an English Creole environment to allow for comparison.

1.3 Language and Education in Jamaica

In addition to the scientific interest in child language in Jamaica there is a practical need to understand the nature of the linguistic competence of children entering the primary school system at the age of six or seven. In addition to English being the official language it is also the language of educational instruction. This suggests that there is an assumption that the children, when they enter the formal school system, are either speakers of English or, at least, have a good enough command of the language in order to be able to learn other subjects via that medium. The stated policy of the Ministry of Education in Jamaica, quoted in (1), is to recognise that most of the children enter schools speaking Jamaican Creole (JC) and to encourage children to develop literacy skills in Standard English (SE).

(1) The majority of our people are speakers of Creole or Patois as we call it. The target of the Ministry of Education through the schooling system and ending ultimately in the University is that our students develop proficiency in reading and writing Standard English. Some may never speak competently SE but by reading and modelling and practice, they will be able to write it ... We are not trying to substitute one for the other.

(Senior Education Officer in the Ministry of Education, Jamaica on a talk programme on the 4th of July 1988, quoted from Shields, 1989: 3)

It has been a significant step for the Ministry to formally recognise that JC is spoken by most Jamaicans. However, this has not yet been translated into language teaching and usage methodologies in schools that ensure high numbers of high school graduates
that are sufficiently competent bilinguals. At the moment there are school text books that include short texts in JC, but there is no requirement from the Ministry of Education for English to be taught using methods that recognise that it is the second language of most of the students, as opposed to the first. One may argue that the aim of the Ministry is limited to literacy in English as opposed to full communicative competence. However, most high school graduates, including some of those who matriculate for university, do not achieve even adequate literacy in English. The University of the West Indies found it necessary to conduct English proficiency tests and to introduce a pre-university course, Fundamentals of English, for the unsuccessful candidates.

A number of suggestions have been made for teaching English in this and other similar situations with the recognition that it is a distinct language from the Creole. Carrington (1983), Bryan (1997) and Carpenter (2000) are but a few of those who have made proposals. Although it is clear that the Ministry of Education recognises that JC is something different from English, it is not clear whether they recognise it as a different language. One cannot just assume that the language status of JC is recognised by the Ministry in light of the fact that it is frequently viewed as bad English. Even Jamaican bilinguals have difficulty conceptualising JC as a separate language (cf. Carpenter, 2000: 75). They apparently just think that it is natural to speak ‘badly’ in informal situations. The social aspects of the language situation are considered in more detail in §3.3.

What can be helpful to the Ministry of Education is a series of studies to not only reinforce the fact of the distinctiveness of the languages but, more importantly, to get an idea of what language or languages the children enter the formal school system with. This should help to give an indication of the extent to which particular language policies may be successful in achieving the desired competence in English.

As stated in the previous section, there has been very little work on language acquisition in Creole languages in general and on Jamaican Creole in particular. Chen-Wellington’s (1996) study of the phonology of Jamaican primary-school-aged children is restricted to a set of rural children recorded cross-sectionally only for their production of syllable-initial consonant clusters. This project, on the other hand, looks at both rural and urban children and encompasses syllable structure as well as segment and feature development. The language situation is discussed in more depth in §3.3 and §3.4. This study gives an indication of whether pre-schoolers tend to be bilingual or monolingual and in which language. It should then contribute to general policy making for education, for example, by assisting in the selection of the language variety or varieties to be used and/or taught in schools and the methodology preferred for teaching. Secondly, as mentioned above, it should help teachers to have an idea of what the norm is for a child at various ages and what is deviant.

1.4 Goals

The goals of the project are set out in (2). The primary goal (2a) is to produce a descriptive analysis of the process of development of the phonology of children acquiring Jamaican, where Jamaican refers to both Jamaican Creole (JC) and Jamaican English (JE). The project also has two secondary goals (2b and 2c) as discussed above. The specific research questions that arise from these goals are discussed in §4.2.
Goals of the project.

a. To produce a description of the process, including time-lines and sequence, by which the Jamaican children studied acquire their phonologies to include:

i. determining how features of the input (the phonetic forms and phonological structures the child is exposed to) affect the process and speed of child language acquisition;

ii. determining the nature of child language acquisition in situations with a high degree of language variation, including any developmental differences between children in different socio-economic groups.

b. The development of a data base, with longitudinal and cross-sectional child language data, accessible to scholars, non-government agencies (NGOs), government ministries and other interested parties, which will contribute to the provision of a much needed resource for basic education and child development programmes in Jamaica.

c. To begin to fill the significant gap in child language acquisition studies with respect to Creole languages.

1.5 Related Projects

Research on children’s acquisition of Creole languages has been very limited. Of note are projects done by Roberts (1976) and Chen-Wellington (1996) on Jamaican; Youssef (1990) on Trinidadian Creole and by Adone (1994) on Mauritian Creole. Both of the previous studies of Jamaican children involved children over five years of age and were cross-sectional. There have been no longitudinal/developmental studies that have sought to follow the developmental process of the same set of children, from the earliest stages of language acquisition, over a significant period of time. Recently two such project proposals have been drafted. Both projects are far more extensive than this study since they aim to include many more language aspects than phonology. This study clearly stands in relation to these projects and can provide data for them, so they will be outlined briefly here.

The Department of Language, Linguistics and Philosophy at the University of the West Indies (UWI), Mona Campus, drafted a proposal to develop a database of the acquisition of language by Jamaican children. The aim of the Department is to include children between six months and five years of age from a number of rural and urban communities in Jamaica. They intend to look at various components of grammar including phonology, morphology, syntax and lexico-semantics for both individual developmental analyses and inter-group comparisons.

The Creole Acquisition Research (CAR) group, consisting of linguists and education specialists from the Universities of Amsterdam (UvA), Leiden and Harvard prepared the second proposal. The CAR project concept is basically similar to that of UWI but is more extensive. It seeks to study the acquisition of four separate Creole languages:
Papiamentu, Jamaican Creole, Haitian Creyol and Cape Verdean Creole. The studies should take place not only in the countries where the languages are primarily spoken but also in major migrant communities in the USA and the Netherlands. 80 subjects should be involved from each location, consisting of 20 one year old and 20 two and a half year old children for each of two social groups.

Although these two projects and the present study were basically independently motivated, it was quickly realised that the projects were closely related. The current concept is for this study to feed into the larger UWI database and for the UWI database to feed into the more extensive CAR database. With this in mind the project designs had to be sufficiently similar to allow for the interchange of compatible data. The basic idea is for the individual studies to match the CAR group design as closely as is feasible for the individual or team conducting it. The goals and methods used in the study reported on in this dissertation correspond to the CAR project in several respects. The research questions (see §4.2) are similar to four of the six CAR project questions (see (3)). The research questions of this dissertation are however more limited in their scope.

(3) CAR group research questions.

a. How, in detail, does the process of acquiring a Creole language occur, and are there notable differences or similarities in the process of acquisition (e.g., in the order of acquisition, in the types of errors observed, in the ages at which certain milestones are achieved) across the various Creoles to be studied?

b. What language level can be expected of a child Creole speaker of a given age, in terms of standard language-general measures like mean length of utterance, lexical diversity, conversational competence, and use of a variety of grammatical structures, as well as language-specific measures such as control over language-specific procedures for marking tense/mood/aspect, for producing novel lexical items, for marking topic, etc?

c. What is the relationship between the child's language level as assessed from spontaneous speech production and the level assessed with other methods, ranging from maternal report to highly structured elicitation procedures.

d. Does the language level and/or acquisition process of children in primarily monolingual settings differ from that of children in bilingual settings, where the Creole is not a societally dominant language? Does the child's proficiency in the other language relate at all to proficiency in the Creole? Is the Creole variety spoken by parents (and thus by children) influenced by the societal language?
e. How do features of the input (density of parental talk, degree of sociolinguistic variation in parental talk, richness of parental talk in terms of lexicon or of exploitation of language-specific devices such as lexical innovations, use of serial verbs, etc.) affect the process and speed of child language acquisition, and particular properties of children's language development as mentioned in b.

f. How do features of the educational setting (e.g., caretaker's responsiveness, distribution of educational responsibilities and availability of developmentally enriching materials) affect the process and speed of child language acquisition?

The other methodological similarities, including selection of subjects, situational setting, duration and frequency of recordings and the transcription methodology are discussed in §4.3 to §4.8. The main differences stem from the relatively limited scope of this study, both in terms of the number of subjects and the number of modules of grammar considered. I describe only the acquisition of phonology and did recordings for a total of 24 children, whereas the CAR project seeks to look at the entire grammar and at other, non-linguistic, factors and targets 80 subjects per location.

This current study provides a good basis for these two projects and will hopefully lead to the realisation of these larger projects in the near future.

1.6 Preview

As stated above, the main aim of this project is to provide a description of the phonological development of the Jamaican children studied. No study on acquisition can be carried out without a theoretical framework and there are several approaches to phonological acquisition. In Chapter 2, I discuss the relevant theoretical concepts from the then pioneering view of phonological development by Jakobson to more recent studies in the generative framework.

In Chapter 3, the background is provided for the reader to understand the forms and status of the target (adult) language varieties. The chapter begins with a brief historical account of contributors and contributing factors to the present language situation, followed by a description and model of the relationship between the various language varieties. A description of the Jamaican phonological system is given in §3.4 with the phoneme inventories and distinctive features of JC and JE. An OT account of the grammars is also provided, particularly of the intermediate variety of JC referred to as the mesolect in Creole continuum models. There are at least three language varieties coexisting in Jamaica.

The methodology presented in Chapter 4 begins with a discussion of the research questions and the project design that is required to address them. The motivation to select children from the ages of 1;0 and 2;6 is explained, as well as the education and area of residence of their caregivers. After discussing the recording and transcription procedures, a detailed account of the data analysis is presented.

The results are presented in Chapters 5 and 6. Chapter 5 focuses on syllable structure and segment acquisition. Chapter 6 considers feature development, the use of
phonological processes and the effect of variation in the input. It concludes with a summary of the answers to the research questions. Chapter 7 presents a discussion of some implications of the findings.

The Theoretical Excursus follows Chapter 7. There I discuss Dependency Phonology and the more recent Optimality Theory and propose an account of sub-segmental representation. This proposal is discussed with examples from the database of this study.