Age of Arrival and Second Language Acquisition of English Copula and Auxiliary Constructions: A Study on Bengali-English in East London

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1. Introduction

During the last two decades, research in Second Language Acquisition (SLA) has not only dealt with the analysis of the acquisition process and the description of interlanguage stages, but has increasingly focused on extra-linguistic factors that influence the acquisition process and its final success, that is learners' eventual proficiency in the target language (henceforth TL). In this connection, the factors of learners’ age of arrival and their length of residence (henceforth LOR) in the TL country have been of interest of both linguists and psychologists. Both age and LOR seem to be connected with the speed learners acquire the TL, and with their eventual proficiency in terms of native-speaker likeness. Very often it is assumed that the ability to acquire any TL up to a level of native speaker likeness decreases the older the learners are.

In this paper, I analyse the influence of the age of arrival on the acquisition of English auxiliary and copula constructions among a community of Bengali immigrants in East London. I will argue that there is no negative correlation between the age of learners’ arrival and their TL proficiency such that their proficiency decreases with increasing age. In fact, I will suggest that learners’ length of residence in the United Kingdom is a much stronger predictor for copula and auxiliary performance.

The current study bears the character of a pilot study, in order to evaluate the linguistic situation of the Bengali community in the borough, which has so far been hardly affected by in-depth SLA research.

2. Socio-cultural and economic setting: Tower Hamlets

The Bengali community of Tower Hamlets is rather large: About 33.4 per cent of the population of Tower Hamlets are of Bengali origin (National Statistics Office); the overall number of Bangladeshi people is approximately 54,500 (Tower Hamlets Council 2001); informants interviewed in course of this study report up to 60,000 Bengali residents – one of the largest communities of Bengali people outside Bangladesh. Most Bengalis in Tower Hamlets come from the district of Sylhet in north-west Bangladesh, and refer to themselves as “Sylhetis” during the interviews in course of this study, and state “Sylheti” as their first language. Furthermore, Tower Hamlets is considered to be one of the most deprived areas in England: in 2001, 17 out of the 19 wards in the borough belonged to the most deprived 5% in the United Kingdom (Tower Hamlets Council 2001).

The first Bengali people arrived in Tower Hamlets during the early 1970s (Eade 1989). As in many migration processes (compare for example the guest worker migration into Germany from the 1950s onwards) it were predominately male immigrants who settled in the borough; even during the 1980s Eade observed “still a striking imbalance in the male/female ratio of the borough’s residents” (1989: 26). By 1981, Tower Hamlets contained “by far the largest proportion of Bangladeshis in the metropolis” (1989: 26). From the very beginning, most settlers came from the district of Sylhet, and spoke various form of the Sylheti dialect. From a socio-economic perspective, the Bangladesh residents in the borough have been disadvantaged from the very beginning, with a broad social and economic cleavage between white and Bengali residents (Eade, 1989: 29). According to interviews with informants of this study, most male Bengali residents work in the service sector, mainly in...
restaurants, while women seem to predominantly stay at home and cater for housework and the upbringing of children.

3. L1 interference – L1 transfer

3.1. Overview: Theories and aspects of L1 transfer

An important issue in the area of SLA research is the influence of other languages represented in a learner's mind. Research has shown that L2 learners often produce structures that are different from the TL (or are simply wrong), but which show notable similarities to the learner's L1. Ellis (1994: 315) claims that "transfer constitutes an important factor in L2 acquisition".

Nicol (2001: 121) argues that though they have automatized the retrieval and use of L2 rules, even highly proficient L2 speakers might – unconsciously – use production routines from their native language, leading to ungrammatical L2 utterances. This negative transfer may sometimes lead to drastic divergences from the rules of the TL (Odlin, 1989: 25). However, in contrast to negative transfer, positive transfer may facilitate SLA. For example, similarities in the lexicon (cf. e.g. striking lexical similarities in Romance languages) may make it easier for learners to acquire vocabulary (Odlin, 1989: 25). Similarly, analogies in L1 and L2 may provide learners with advantages in the acquisition of certain grammatical structures (cf. Ellis, 1994: 303).

Odlin (1989) distinguishes between four different types of transfer, of which the aspect of underproduction seems of particular interest for this study, for reasons explained later in this paper. Underproduction describes the phenomenon in the area of language transfer which involves not so the errors learners do make, but in what learners do not say: if learners realize that particular structures in the TL are very different from their counterparts in their native language, they may try to avoid these structures, a phenomenon also known as avoidance (Odlin, 1989: 36). However, as pointed out by Ellis the empirical identification of avoidance is difficult. According to Ellis (citing Seliger 1989),

1. However, phonological similarities in vocabulary may also slow down the acquisition process. Cf. e.g. English sensible and German sensibel (=sensitive).

L1 influence […] occurs only at the point in the sequence where the particular property becomes relevant; for example, the fact that Spanish marks subject-verb agreement only speeds up the acquisition of the subject-verb agreement in English by Spanish speakers in advanced stages of acquisition. (Hawkins, 2001: 75)

As summarized by Ellis (1994) L1 transfer is subject to certain constraints (Ellis 1994: 334). According to Ellis, language transfer mainly takes place in the areas of lexicon, phonology, and discourse, while transfer of L1 syntax seems to be inhibited by learners' metalinguistic awareness of grammar. Furthermore, Ellis suggests that L1 transfer is less common in formal situations (e.g. classroom settings), but takes place to a greater extent in informal contexts. No clear empirical evidence exists yet about the transfer of marked and unmarked L1 forms. Furthermore, it is unclear whether early or later learners tend to transfer structures from their L1.

In early stages of the L2 acquisition of English simple NP-AP utterances, which lack the obligatory copula verb (and, thus, IP) occur with high frequency (Hawkins 2001):
Hawkins (2001) argues that "in native English copula-'be' and auxiliary-'be' are verbs which project to VP, but which also raise to I to pick up agreement and tense inflections" (Hawkins, 2001: 62). Hawkins proposes that copula-be is likely to move from VP to IP early in the acquisition process; furthermore, he suggests that the acquisition of copula-be triggers the development of IP (Hawkins, 2001: 63).

With reference to a study by Stauble (1984) Hawkins (2001: 59-62) claims that copula constructions are acquired before auxiliary constructions. Firstly, copula-be is the least specified morpheme under I in English; as an expletive verb it lacks conceptual content. Its function is almost purely formal. Secondly, copula-be can freely select its complement (namely AP or PP or NP), while auxiliary-be can only be followed by a VP with V-ing form. Thirdly, based on Stauble's study on the acquisition of English by Spanish speakers, Hawkins argues that the acquisition of copula constructions takes place early in the acquisition process.

3.2. Bengali/Sylheti copula and auxiliary constructions

Sylheti is generally considered a dialect of (standard) Bengali, although some scholars argue that Sylheti is a language of its own (Chalmers, 1996: 4). For my analysis, the following characteristics of Bengali/Sylheti syntax seem to be of possible importance: Unlike English, subject-complement constructions such as Bimal is very naughty, where a copula verb is used in order to link noun phrase and complement, neither Standard Bengali nor Sylheti require copula verb ("zero-verb") (Chalmers, 1996; Radice, 1994: 51).

(1) Ini [∅] amar ma  
She [is] my mother  

(2) Bimal [∅] khub dushtu.  
Bimal [is] very naughty

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3) Nozrul [∅] bangali.  
   Nozrul [is ] Bengali. 

4) Ishkul [∅] bondo.  
   [The] school [is ] closed. 

While Bengali does not possess copula constructions at all, it has a complex system of verb inflection. Bengali/Sylheti does not possess auxiliary verbs; in fact, their function is fulfilled by suffixes which carry tense, aspect and agreement marking. These suffixes are attached to the verb root: 

Root + Suffix [+tense; +aspect; +agreement]

5) ami kor –i  I do
6) ami kor –chi I am doing
7) ami kor –chilam I was doing
8) tumi kor –a you do

4. Age-of-arrival, LOR, maturation, and accessibility of UG in SLA

In course of this study I will look at the question whether TL proficiency is subject to learners' age, and, if so, to which extent. As summarized by Johnson and Newport (1991: 216), most studies on SLA show that learners' proficiency is to some extent influenced by the age of their arrival, i.e. by the age from which they are regularly exposed to the target language (mainly due to immigration into a TL country). It is generally agreed that the later learners are regularly exposed to the target language, the lower their final TL proficiency will be – as pointed out by Bialystok children are usually more successful in acquiring a second language than adults (Bialystok, 1997: 117). Flege, Yeni-Komshian, and Liu (1999) claim in their study on SLA of English by native Korean speakers that the later learners arrive in the United States, the lower their scores in a grammaticality judgment test were.

Thus, it is assumed that SLA is influenced by some sort of critical or sensitive period, a period of time during which humans are particularly receptive to acquiring a second language. This paper neither intends to prove the existence or non-existence of a critical phase empirically (as e.g. Bialystok 1997), nor to find empirical evidence for or against the participation of Universal Grammar in SLA, but assumes the empirically already proven fact that age of arrival/starting age of L2 acquisition are related to some extent. However, the debate shall be summarized here briefly, as the general findings are of interest for the present study.

In the course of their 1989 study Johnson and Newport tested native speakers of Korean and Chinese with a grammaticality judgement test. The test design included several inflectional (past tense, plural, 3rd person singular, present progressive) and syntactical structures of English (amongst them word order, wh-movement and particle movement). Referring to their results, Johnson and Newport argue that there is a direct relationship between age of arrival and TL proficiency, whereby a linear decline of performance takes place until puberty, and a further decrease with high variability amongst individual learners after puberty (Johnson, 1989: 97). They furthermore conclude that actual exposure to TL does not have a positive effect on TL proficiency after the first few years (Johnson&Newport 1989: 82). Thus, length of residence has no or hardly any effect on TL improvement after an initial stage.
In their subsequent 1991 study on the acquisition of English subjacency by native speakers of Korean and Chinese, based on two experimental data collections, Johnson and Newport (1991) conclude that

\[
\text{[\ldots] linguistic universals such as subjacency become less accessible with increasing maturation. [\ldots] By either measure, performance declined gradually with increasing age of arrival. (Johnson&Newport, 1991: 253-254)}
\]

However, the existence of a critical period could not be proven empirically without ambiguity (Bialystok 1997: 133). White and Genesee argue in their 1996 paper that non-native speakers can attain native-likeness within the domain of Universal Grammar; in fact, only few learners actually achieve NS like competence. In addition, White and Genesee subjects showed no maturational decline in performance with increasing age of initial L2 acquisition (White, 1996b: 258). Given this, White and Genesee conclude that

\[
\text{[\ldots] there is no decline with age in access to UG, hence, no critical period in this domain} \\
\text{[\ldots]} \quad (\text{White, 1996b: 258})
\]

In a later paper on the acquisition of English by native speakers of Chinese in the USA, Flege and Liu conclude "many adults eventually do succeed in learning an L2" (2001: 247). Furthermore, their results show that TL proficiency increases over time (i.e. length of residence in the USA), but also reveal a significant difference between student and non-student learners, leading to the assumption that other factors (e.g. education) influence the learning success (2001: 546pp).

As already indicated, it has been assumed by several researchers that the change in the ability to acquire a second language is related with the period of puberty. Amongst others, Klein (1992: 21-23) refers explicitly to the biological/physiological process, and argues that puberty is the period after which language acquisition is more difficult respectively different with regard to its eventual outcome - though this difference is not necessarily based on the actual biological changes within a learner's brain. Schwarz (1996) refers to several studies arguing that language acquisition is subject to changes which are based on biological maturation – a softened approach to Lenneberg's (1967) claims.

Developmental psychology usually defines puberty as the period from approximately 12/13 to 16/17 years of age – with a generally lower onset and end for females (Berk, 2000: 200-219). Similarly, Johnson and Newport in both their 1989 and their 1991 study define the pre-puberty group as 3 to 15 years, and postpuberty from 17 years onwards.

Within the discussion about the existence of a critical phase, researchers have in recent years particularly focused on the availability and accessibility of Universal Grammar by L2 learners. With respect to differences in the adult and child second language acquisition of German word order Clahsen und Muysken in their 1986 study reject the availability of UG for adult learners, and argue that while children possess innate language learning capacities, adults use learning strategies that are derived from general problem solving strategies (Clahsen, 1986: 111). DePlessis et al. (1987)(1987) reject to Clahsen and Muysken's hypothesis of restricted influence of UG on SLA, and argue that "[\ldots] the interlanguages of L2 learners fall within the range of grammars permitted by UG". (DuPlessis, 1987: 73). Within the discussion on the presumed extent of UG influence on SLA, three different approaches have been established during the last two decades.

As already mentioned above, White and Genesee (1996) reject the hypothesis that access to UG decays over maturation. In a paper the same year, White states that, although the grammar of their interlanguages may be different from that of the TL, they are "[\ldots] nevertheless constrained by UG" (White, 1996a: 115). This hypothesis on Full Access to UG by L2 learners is supported in Flynn's 1996 paper. As claimed by Flynn, all principles and parameters are fully accessible to both child L1 and adult L2 learner (Flynn, 1996: 151). L2 acquisition, therefore, is constrained by UG the same way L1
acquisition is (Flynn, 1996: 151), and differences in L1 and L2 acquisition must be accounted for by other factors (Flynn, 1996: 129). As opposed to this Full Access hypothesis, the No Access hypothesis rejects any influence of UG on SLA. As claimed by Schachter, UG is inaccessible to L2 learners (Schachter, 1996: 187).

As a third approach about UG influence on SLA, the Partial Access theory tries to find a compromise between Full Access and No Access hypothesis. Flynn argues that

*UG is available to the L2 learner inasmuch as the principles and parameters instantiated in the L1 are also realized in the L2. (Flynn 1996: 130)*

If principles and parameters differ in L1 and L2, other learning strategies are applied. A parameter re-setting is not possible. Hawkins made a similar approach with respect to L1 transfer.

As announced earlier, I will focus on the impact of learners’ age of arrival, as well as their length of residence in the United Kingdom, on their ability to acquire (and produce) auxiliary and copular constructions, in order to provide evidence for or against the theories above.

5. Methodology

Speech data was collected by use of open interviews: The interviewer (i.e. myself) elicited speech data by trying to develop a rather “natural” conversation (Keim, 1978; Keim, 1984). The interviews were partly ethnographic in nature, but also included general topics the informants felt comfortable talking about. I chose to work with groups of two to three foreign speakers in order to avoid informants’ inhibitions and distance towards the interviewer that might occur in face-to-face, or one-to-one interviews – a phenomenon also known as “observer paradox” (Milroy, 1987: 59). Informants were contacted and the interviews took place at further education institutions and community centres in Tower Hamlets. In addition to the interviews, a short questionnaire was used to cover basic social variables. For the analysis of the current study data for 10 informants is available.

This method has both advantages and disadvantages: As data collection takes place in rather normal conversations at a place familiar to the informants, it is possible to elicit rather natural speech data, without or with only few disturbing effects that may occur with (laboratory) experiments or standardized testing situations. The data elicited may allow insights not only whether participants are able to produce certain syntactic construction (i.e. pure competence), but also to what extent, i.e. with what frequency they actually use them (i.e. performance).

However, by using open interviews as an elicitation method, the researcher has almost no influence of the type of data elicited. Certain syntactic features may only be investigated when they occur by chance. Nevertheless, I decided to use open interviews to elicit speech data from informants, for the reasons mentioned above.

6. Data Analysis

The interviews of ten informants were analysed for use of auxiliary and copular constructions. For this first analysis, negation and passive constructions were excluded. Furthermore, the study does at this stage not include the formation questions. In order to obtain comparability, the sentences were ‘normalized’ according to Klein and Dittmar’s criteria (1979: 117):

- Exclusion of utterances that apparently “broke down”, i.e. where the original sentence planning was abandoned
- Exclusion of utterances that were stopped and than corrected (only the corrected utterances were analyzed)
- Exclusion of elliptic answers, as it is not clear whether these are due to lack of language proficiency or usual gapping in question-answer sequences
- Exclusion of immediate repetitions
The following criteria were taken into account when judging the grammaticality of the constructions:

(a) Existence/use of auxiliary/copula, i.e. is the appropriate position filled in obligatory contexts?

She is my mother vs. *She [Ø] my mother
I am working as a support teacher vs. *I [Ø] going to fetch the papers

(b) Existence/use of –ing verb form or past participle in auxiliary constructions

I am working vs. *I am work-[Ø]
I have heard vs. *I have hear

(c) Word order/V2: Is the finite verb located in second position after the noun phrase?

She is my mother vs. *She my mother is

(d) Subject-verb agreement

He has worked vs. *He have worked

As this study focuses on the criteria mentioned above (i.e. the general ability to form auxiliary and copula constructions), no attention is being paid to whether tenses were actually used appropriately.

The following table summarizes sex, current age, age of arrival (AoA), and length of residence (LOR) of the ten informants (all ages in years). Furthermore, the table displays the informants’ individual relative frequencies for auxiliary and copula performance (for an explanation of the judgment of syntactic structures see next section).

<table>
<thead>
<tr>
<th>SEX</th>
<th>AGE</th>
<th>AoA</th>
<th>LOR</th>
<th>AUXok</th>
<th>AUXdel</th>
<th>AUXfault</th>
<th>COPok</th>
<th>COPdel</th>
<th>COPfault</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>male</td>
<td>45</td>
<td>15</td>
<td>11.00</td>
<td>0.11</td>
<td>0.78</td>
<td>0.11</td>
<td>0.20</td>
<td>0.80</td>
</tr>
<tr>
<td>SA</td>
<td>male</td>
<td>30</td>
<td>8</td>
<td>20.00</td>
<td>0.80</td>
<td>0.20</td>
<td>0.00</td>
<td>0.96</td>
<td>0.00</td>
</tr>
<tr>
<td>MFA</td>
<td>male</td>
<td>25</td>
<td>8</td>
<td>2.00</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>MMA</td>
<td>male</td>
<td>34</td>
<td>30</td>
<td>4.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.74</td>
<td>0.16</td>
</tr>
<tr>
<td>MT</td>
<td>male</td>
<td>28</td>
<td>26</td>
<td>0.30</td>
<td>0.63</td>
<td>0.38</td>
<td>0.00</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>NA</td>
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<td>31</td>
<td>26</td>
<td>3.00</td>
<td>0.81</td>
<td>0.13</td>
<td>0.06</td>
<td>0.79</td>
<td>0.00</td>
</tr>
<tr>
<td>HB</td>
<td>female</td>
<td>25</td>
<td>13</td>
<td>12.00</td>
<td>0.83</td>
<td>0.00</td>
<td>0.17</td>
<td>0.33</td>
<td>0.00</td>
</tr>
<tr>
<td>SB</td>
<td>female</td>
<td>25</td>
<td>20</td>
<td>5.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SNF</td>
<td>female</td>
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<td>23</td>
<td>9.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.86</td>
<td>0.14</td>
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<tr>
<td>AF</td>
<td>female</td>
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<td>15</td>
<td>17.00</td>
<td>0.73</td>
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<td>0.89</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>mean</strong></td>
<td><strong>31.00</strong></td>
<td><strong>19.90</strong></td>
<td><strong>8.33</strong></td>
<td><strong>0.77</strong></td>
<td><strong>0.19</strong></td>
<td><strong>0.04</strong></td>
<td><strong>0.68</strong></td>
<td><strong>0.22</strong></td>
<td><strong>0.10</strong></td>
</tr>
</tbody>
</table>

Table 1: Social statistics and individual scores for ten informants

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4 Agreement is judged as "correct", even if the according noun phrase is incorrect, e.g. although There is problem seems to miss either a determiner (There is a problem) or plural marking (There are problems) the utterance is judged as correct as the copular is agrees with problem.
7. Results

7.1. Error rates and auxiliary/copular proficiency

The following table (table 2) provides the means, standard deviations, as well as minimum and maximum values for the proportions of the following 6 variables, based on the entire sample with n=10. It shall be emphasised that all figures presented in this paper are based on the current, non-random sample only, and, thus, do not provide probability values that project to the whole community. The grammaticality judgement and scoring of the utterances analysis was as follows:

(a) correct auxiliary/copula constructions (Aux ok/Cop ok)

I am a housewife. I am working in a restaurant

(b) incorrect auxiliary/copula constructions (Aux{fault}/Cop{fault}, i.e. position is filled with auxiliary/copular, but with incorrect agreement)

He have worked.

(c) omitted auxiliary/copula verb in obligatory context (AuxDel/CopDel).

They [Ø] all very helpful.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aux ok</td>
<td>9</td>
<td>0.11</td>
<td>1.00</td>
<td>0.77</td>
<td>0.28</td>
</tr>
<tr>
<td>AuxDel</td>
<td>9</td>
<td>0.00</td>
<td>0.78</td>
<td>0.19</td>
<td>0.26</td>
</tr>
<tr>
<td>Aux{fault}</td>
<td>9</td>
<td>0.00</td>
<td>0.16</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>Cop ok</td>
<td>10</td>
<td>0.20</td>
<td>1.00</td>
<td>0.68</td>
<td>0.28</td>
</tr>
<tr>
<td>CopDel</td>
<td>10</td>
<td>0.00</td>
<td>0.80</td>
<td>0.22</td>
<td>0.28</td>
</tr>
<tr>
<td>Cop{fault}</td>
<td>10</td>
<td>0.00</td>
<td>0.67</td>
<td>0.10</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Table 2: Descriptive values/overall

The minimum and maximum values for each category illustrate that the sample comprises learners from various different stages of SLA: while both SNF and SB attain native-speaker-like competence with auxiliary constructions (cf. table 1), and therefore confirm that even non-native speakers can attain full L2 competence, MA represents the lower end of the range with only 11 per cent of all auxiliary construction produced correctly. Almost as drastically, performance in copula constructions ranges from full native-speaker likeness (SB), to a very low level proficiency (MA, 20 per cent). This result is also reflected in the standard deviations: With 27.88% and 27.58%, the standard deviations of both variables are significantly equal (for $\alpha=0.05$).

The results are interesting in the following respect: As mentioned earlier in this paper, research on SLA of English has shown that copula constructions are acquired before auxiliary constructions (Hawkins, 2001; Krashen, 1982). In the present study, however, statistically auxiliary constructions are produced correctly in an average 76.82%, while only 67.64% of all copula constructions are grammatically correct. However, the differences between the means are not statistically significant on the level of $\alpha=0.05$. Nevertheless, this might indicate that learners acquire auxiliary constructions before they acquire copula constructions, or, at least, that they proceed to a higher auxiliary proficiency level sooner than with copula constructions.

Interestingly, while performance is not significantly different between sexes (T-test: $p=0.262$ for auxiliaries, $p=0.414$ for copulas), i.e. males and females have no significantly different performance, intra-group performance varies: the difference in average auxiliary and copula performance is not significantly different with female learners ($p=0.654$), but the difference in performance amongst male
learners approaches significance with p=0.055, i.e. male learners have a statistically significant deficit in the performance of copula verbs. Although there might not be a direct relationship between sex and the ability to acquire a L2, we should reconsider this result in further studies, particularly with respect to the inclusion of other social variable (see 8).

7.2. Age of Acquisition and L2 proficiency

One of the questions of this study is the examination of the relationship between the age of arrival in England, and learners' TL proficiency with respect to auxiliary and copular constructions. Johnson and Newport revealed "a clear and strong relationship between age of arrival […] and performance" (Johnson&Newport, 1989: 77).

However, the analysis of speech data collected from the Bengali community in Tower Hamlets suggests that this relationship is rather weak. Table 3 presents the correlation coefficient for age of arrival and correct auxiliary/copula constructions. Although the figures may indicate a weak positive correlation (r= 0.312 for auxiliary, r=0.35 for copula construction), the results are not significant with p=0.414 and p=0.913. As in most social and psychological research, significance level for this study is defined as p≤0.05.

<table>
<thead>
<tr>
<th>Age of arrival</th>
<th>Pearson Correlation</th>
<th>Cop ok</th>
<th>Aux ok</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (2-tailed)</td>
<td>1.00</td>
<td>0.04</td>
<td>0.31</td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Cop ok Pearson Correlation</td>
<td>0.04</td>
<td>1.00</td>
<td>0.71</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.92</td>
<td>.</td>
<td>0.03</td>
</tr>
<tr>
<td>N</td>
<td>10</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Aux ok Pearson Correlation</td>
<td>0.31</td>
<td>0.71</td>
<td>1.00</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.41</td>
<td>0.03</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 3: Correlations

Auxiliary and copular constructions correlate significantly at r=0.71 (p=0.031), i.e. correct use of auxiliary verbs increases with correct use of copulas, which provides further evidence for a close relation in the acquisition of both structures.

7.3. Length of Residence as 3rd variable: A multiple regression analysis

In order to investigate the influence of length of residence (LOR) on the relationship between age of arrival and performance, a multiple regression analysis was carried out. Based on previous research, which has shown the importance of age of arrival (see 4), the analysis was conducted in two steps with age of arrival as the first independent variable, and length of residence as the second, controlled variable.

With respect to auxiliary construction, the multiple regression analysis shows that age of arrival accounts for only 1% of the variance in auxiliary proficiency, while length of residence accounts for 53.8% of the variance. Together, age of arrival and length of residence account for 55% of the variability in auxiliary proficiency. This is, 45% of the variance cannot be explained with either age of arrival or length or residence, but must be accounted for by other, yet unknown factors. Furthermore, the T-test shows that LOR is a significant predictor for proficiency within the multiple regression model with p=0.054, while age is not (p=0.318)
The results of the multiple regression analysis with regard to copula constructions are explicitly different: Less than 1% of the variance in copula proficiency can be accounted for by age, and approximately 7.3% of the variance in copula proficiency can be accounted for by LOR. Together, age and LOR can explain only 7.5% of the variability in copula performance, which leaves 92.5% of the variance unexplained. Beta coefficients indicate that LOR has a greater impact on proficiency. Simultaneously, the T-test shows that neither age nor LOR are significant predictors within the multiple regression model (p=0.633 respectively p=0.483).

8. Discussion

Statistical analysis has shown that the impact of age of arrival is marginal for both auxiliary and copula constructions. According to the results, LOR is a better predictor for L2 performance outcome. However, while LOR is a significant predictor for auxiliary performance, neither age of arrival nor length of residence can significantly predict copula performance: more than 90% of the variance in copula performance amongst the informants remains unexplained. Variability in auxiliary performance remains unexplained to 45%.

These results can lead to the following conclusions: Firstly, SLA is not necessarily influenced by learners' age. This supports hypotheses that argue against the existence of a critical period (cf. White and Genesee 1996, White 1996, Clahsen and Muysken 1986 et al.). We have seen that even adult, respectively post-adolescent learners can achieve native-speaker-like competence, although only one learner in the sample attained full competence in both auxiliary and copula constructions. However, exposure to the TL, too, cannot completely account for variability in performance.

The question remains: Which other factors influence SLA? It seems reasonable to consider L1 transfer as one possible source of influence. Although Bengali/Sylheti does, unlike English, not possess auxiliary verbs in terms of free morphemes under I (IP), settings in both English and Bengali are similar in some respect. Both Bengali/Sylheti and English show agreement marking for tense, aspect and number. Simultaneously, copula constructions differ fundamentally in L1 and L2, with a zero-copula in the L1. If we recall the results of the multiple regression analysis, with variability in copula performance predicted by both age of arrival and LOR to only 7%, this may suggest that L1 transfer is much stronger for copula constructions. I suggest that the significantly different structures in L1 and L2 can to some extent override the influence of age and LOR along the acquisition continuum. In other words, L1 influence is so strong that it cannot be compensated by time. On the other hand, similarities in auxiliary constructions may enable the learner to acquire L2 auxiliary constructions more easily, with improvement over time.

However, it seems unlikely to me that L1 transfer accounts for variability to such an enormous extent. Further research may show the impact of social factors, particularly in terms of a Social Network Theory (Scott, 1991) which investigates community structure in more detail, on the acquisition process. This approach might also provide answers to differences in auxiliary and copula performance amongst male learners: Gender-specific differences in social networks, with differences in exposure to the TL, may facilitate, respectively hinder the acquisition of structures which show striking differences between L1 and L2 (such as copulas).

References

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Other sources

