SOME FEATURES OF THE PHONOLOGY OF A FOUR-YEAR-OLD BOY

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This is a description of the speech of Albert, called ‘Bert’, who was born on the 13th of August, 1943. The period covered by the present observation extends from September to the end of December, 1947. A prior period is attested by Bert’s mother and an uncle, formerly a member of the household. The testificatory qualifications of these two persons, who are not linguists, are outlined below.

Bert’s birthplace is Westfield, Massachusetts, about nine miles west of Springfield. The infant was taken to Woronoco, six miles northwest of Westfield, where he still lives with his parents. His father and mother were born in the same district. They are native speakers of English and their English reflects the language of that part of Massachusetts. The mother is a graduate of a teachers’ college. She has not been linguistically trained and she does not speak any foreign language. No foreign language is heard in the home nor in the neighborhood. The father is away during the day. The uncle is a graduate student in journalism. He studied Spanish in college. He is not a trained linguist.

Bert is one of three children, none of whom has shown nor now shows the speech pattern here described. Bert’s younger sister, Anita, is about two years old. His older sister, Alice, whom he calls aewis, is about six and a half years old.

The mother does not use baby talk to Bert and the other children. She has not at any time imitated Bert’s speech in the presence of the children, nor has she corrected Bert. In conversation with the children she employs her usual normal pronunciation. She does not correct their errors.

The house is somewhat isolated and the children play mainly among themselves. Alice has been going to school for about a year.

Bert is a normal, healthy boy, with good hearing. His lips, dentition, and larynx are normal. Except for the phonological features here outlined Bert’s speech, in pronunciation and intonation, reflects the speech of the area.

The observations here recorded are based upon the following examinations and checks: (1) his spontaneous speech, caught in conversation or in bedtime stories repeated to himself; (2) identification of animals, plants, and inanimate objects from colored pictures; (3) repetition of words pronounced correctly by his mother; (4) stories told by him to other persons; (5) recitations, alone or in chorus; (6) songs sung in chorus.

By far the most prominent feature of this speech is the treatment of the labiodental spirants f and v. He uses s for f in all positions; he uses z for v medi ally and finally. Initially, at the time covered by this observation v was represented by b. This substitution of the voiced and voiceless labiodental occurs in both familiar words and new words heard for the first time. The change was
found in the following (though Bert’s treatment of numerals does not depart from his general phonology, I have for the sake of convenience listed the numerals separately): afraid, butterfly, drive, driven, drove, face, fall, fallen, far, father, fault, fed, feed, feel, fell, fellow, fell, field, fight, fill, find, fine, finish, fly, food, for, forget, fork, forgive, fought, found, fox, freeze, fresh, Friday, friend, from, froze, fruit, full, give, gave, have, leave, leaves, left, of. These are pronounced areid, batessi,1 draiz, drizn, drouz, seis, sool, soeln, saa, saada, scot, sed, sii, siil, sel, selou, seli, sii, sai, sii, sain, sainj, suu, sai, suud, soo, soo, sook, sogniz, sool, sound, sak, sriiz, sref, sraiti, srend, sram or sram, swou, swouit, sul, giz, geiz, haez, iiz, iiz (leaves same as leave), est,3 az or az. The name of a friend, (Cynthia) Foster, is pronounced (Sinsie Sosta). V was pronounced in the song ‘Silent Night’ in one instance as m: holy virgin > houwi meijn (a nonce word, unfamiliar except in this context).

During the period of the present observation initial v was treated as b: very > beri, vegetable > b-, visit > bizit, voice > bois.

The interdentals θ and ð are replaced by s and z, respectively, in all positions: bath > bes, thank > senk, the > za, think > sijk, Thursday > səzdə. The name Cynthia, as already noted, > Sinsie. But mother and father are exceptions: they show d.

Initial l disappears without replacement by glottal stop:4 lay > ei, laid > eid, lead > iid, leave > iiz, lean > iin, learn > øen (as English earn), left > ed, lend > end, let > et, lie > ai, light > ait, lit > it, lose > uuz, lost > ost. One word shows initial l as y: led > yed. In phrases, if a vowel precedes, l > y3 yits boi, a little boy; a big, ag a big log.

Intervocally, l > w: fallen > sooun, Cinderella > Sindarewə, swollen > sooumn, stolen > stouwn. But fellow > selou. Note also agwi ugly.

Final l > w or u: ball > boxx, wall > woccu, with exceptions at what we may regard as a transition period: all has always been ool. Well has become ‘almost wel’. Fall > sool, fell > sel, feel > stil, fill > sil, full > sul, swell > sel.

As appears from the list previously given, the cluster consonant + l generally shows the l lost: flew > suu, floor > soo, fly > sai, flee > sii, sleeve > siiz. But please > puuiz, bleed > buuwid, bled > buued, blow > buou, blew > buu. Ugly > agwi in a sentence, yuu iz ø agwi men.

The following is the recitation of the numerals: wen, tuu, srii, soo, saiz, siks, sezn, eit, nain, ten, eewn or eeen. No glottal stop was noticed here.

**TEXTS**

**Cinderella [Sindarewə]**

Wens øpan ø taim søø waz ei gæew [girl] neimd Sindarewə. Sii hæd ø stepmāde huu waz sool [awful] min tuu hao. Sii hæd ø yat ø dzresø ænd ðuuø ænd ø3

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1-3 Animals identified from a picture book.
2 This accords with treatment of l, discussed later.
4 Jespersen, *Language* (New York) 107, records the loss of initial r and r in consonantal combinations in an English child’s speech: room>oom, brush>bush.

FLAG SALUTE

Ai pvedj ayiidjëns tuu az sæg az ze Yunaitid Steits az amerikë ënd tuu az ripbwik sæo witj it stëndz. Wen neifjon indibizabl wiz ibeti ënd djëstis sæo col.

This text contains a number of new words that have not become assimilated to Bert's vocabulary. Yet it illustrates his treatment of $f$, $v$, and $l$. The treatment of the intervocalic phoneme $l$ of allegiance may represent the result of what Jespersen has termed metanalysis. This also applies to the $v$ of indivisible which may be analyzed as unknown indi + visible, where $v$ is treated as an initial word sound. There is no indication that assimilation to the $b$ of the final syllable plays a part in the change.

General Conclusion. The transformation $f$-$v$ $s$-$z$ is striking and unique enough to warrant the recording of this speech without reference to any other sound shift. More than that, it is not only the labiodentals, but also the interdentals that become $s$-$z$. That is, whenever there would be a play of teeth (edge of teeth) and tongue or teeth and lips there is a passage to $s$-$z$. There is no transformation of our $t$ and $d$, which are not dental as are French $t$ and $d$ and there is no shifting of the labials $p$-$b$, $m$.

The present indications are that Bert's speech stands at the opening stages of a transition period. If the pattern here described is a language of early childhood Bert is now being made aware of the difference between his speech and that of his environment. Alice comments on his speech by remarking: 'He says saks [for fox]; he says iiz [for leaves].' These comments cause Bert to remain shyly silent when asked to repeat what the picture of a fox shows. Alice's readiness to ridicule and correct would probably accelerate the passage from this dialect to the language of the family. The latest report is that the mother has forbidden Alice to correct Bert and to make any comments on his speech.

While I have no other childhood cases of labiodental and interdental shifts to $s$-$z$ my attention has been directed to an opposite shift from $s$ to $f$ found to exist in the pronunciation of Hebrew practiced by French Jews in and near Carpentras in Southern France.

$F$-$v$ and $s$-$z$ are acoustically and structurally similar. "Visible speech" pictures of the sound spectrograph show that $f$ and $s$ ($v$ and $z$) produce similar patterns.

On August 21, 1948, Bert's speech, while it still preserves the features illustrated in the foregoing texts, now exhibits a considerable overlay that must be due to a reproduction of his mother's deliberate diction. On this date a recording was made of Bert's rendition of 1. Flag Salute; 2. Lord's Prayer; 3. God Bless America [A song by Irving Berlin]; 4. America; 5. Three Blind Mice;
6. The Little Girl With A Curl. What may soon be regarded as vestigial remains of his early speech are sporadically present even in the new dialect that is illustrated in the Lord's Prayer.

In number 1, Bert's language is as in his early rendition, represented above.
In number 2, we have a new dialect, reflecting his mother's pedagogic English:

\[ \text{æur faaða wït}s \ \text{aat in hevn, hæloud bï ðai neim.} \]
\[ \text{ðai kîndøm kæm. ðai wil bïi dan in əəθ, æz it iz in hevn.} \]
\[ \text{Giv æ ðis dei aur deili bred ænd ñærgiz æs aur [etc.]} \]

He recites this at a very rapid tempo.

Number 3. Gaad bwes əmerikə

\[ \text{Lænd ðøt ai lov} \]
\[ \text{Stænd bisaid hër ænd gaïd hër} \]
\[ \text{Sr uu [only here, elsewhere truu for ðruu] ðøñait wið ø ait [for laï]} \]
\[ \text{fram øbøv.} \]
\[ \text{Truu ø mauntøn, truu ø prøeriiz, truu øeer ðens [for œuʃnə]} \]

Number 4. Mai kæntøri tiz ø zii

\[ \text{swiit lænd øz ibaøti} \]
\[ \text{ø zii ai siŋ} \]
\[ \text{Lænd weer mai saadørz daïd} \]
\[ \text{Lænd øv ø pilgriøm praið} \]
\[ \text{Fram emi mauntøn saïd} \]
\[ \text{et frïidøm riŋ.} \]

Number 5. Srio bwaind maïs, srio bwaind maïs,

\[ \text{Sii hau ðei ræn, sii hau ðei ræn,} \]
\[ \text{ðei œøl ræn æftø ø faamøæ waiß,} \]
\[ \text{Huu køø øf ðøøø røilz wið ø kaarvøø naïf,} \]
\[ \text{Did yuu evø øøø søtøø ø ðøøø in yuur laïf} \]
\[ \text{æz srio bwaind maïs.} \]

Number 6. ðøøø waz ø itø gøøø huu hæd ø itø køøø

\[ \text{Rait in ø middø ov høøø søøørøød[This pronunciation of faɾid evidently} \]
\[ \text{reflects his mother's teaching].} \]
\[ \text{Wen žii waz bæd Ŧii waz høøød [This order} \]
\[ \text{wen Ŧii waz gød, Ŧii waz veri veri gød.} \]

Bert's speech now shows an almost complete elimination of the transmutation ð-ð: s-z. If he does not say s-z, he says t-d.

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