SOME ASPECTS OF ENGLISH LANGUAGE INTERFERENCE IN LEARNING GERMAN INTONATION*

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1. INTRODUCTION

In comparison with the work done on German and English individually, the literature on the contrastive intonational analysis of the two languages is extremely limited. One of the primary reasons for this has been recognized by Wodarz (1960):

Den Grund für die vergleichsweise geringe Aufmerksamkeit, die man dem Studium der vergleichenden Satzmelodik bisher gewidmet hat, sehen wir nicht in einem Mangel an Material, sondern in der Tatsache, daß es an einheitlichen Gesichtspunkten fehlt, die eine Grundlage für die Entwicklung vergleichender Studien bilden würden.

The research reported here was an attempt to provide some preliminary answers to this lack through the application of a mutually compatible system of voice pitch analysis to American English and German speech (Anderson 1970).

The specific practical focus of the study was the isolation of some major sources of intonational interference for American learners of German as a second language. In view of this pedagogical orientation, the study was limited to those aspects of intonation which appear to hold the most potential for meeting the immediate needs of language teachers.

Of primary importance seems to be the form of pitch transitions at key points in the utterance. These key "information points" (as they are called in Hultzén 1959) are: (1) within and adjacent to syllables of words marked with special importance by sentence accent, and (2) the syllable or string of syllables following the primary accent which forms the terminal contour.

2. A SYSTEM OF PITCH ACCENTS FOR ENGLISH AND GERMAN

A system of pitch transcription was sought which was exact enough to reveal relevant points of contrast between English and German and yet simple enough to be quickly and intuitively grasped. Such a system was found in the work of Bolinger for English

* Read by Rudolf Weiss.

and of Isačenko and Schädlich for German (Bolinger 1958, Isačenko and Schädlich 1966).

For convenience of cross-reference between the two languages, the systems of Bolinger and of Isačenko and Schädlich were conflated into a single system with the following four basic pitch accents:

1. *Accent* 1 — *Falling, Post-Ictic Transition.* — This accent has three sub-types. When an unaccented syllable follows, the transition is between the accented and unaccented syllables:

(1a) (ver) *sá | gen* *gó | ing*

When the stressed syllable is in final position, the transition takes place within the syllable.

(1b) (unter) *ságt* (ar) *ríve*

Another frequent variation of the pattern is the "compound" rise-fall tone.

(1c) (compound) *ver | sá | gen*

2. *Accent* 2 — *Rising, Post-Ictic Transition.* — This accent has parallel subtypes to accent 1:

(2a) (ver) *sá | gen* *gó | ing*

(2b) (unter) *ságt* (ar) *ríve*

(2c) (compound) *ver | sá | gen*

3. *Accent* 3 — *Falling, Pre-Ictic Transition.* —

ver | sá(gen) *ar | ríve*

4. *Accent* 4 — *Rising, Pre-Ictic Transition.* —

ver | sá(gen) *ar | ríve*

3. TERMINAL CONTOURS

Most writers on German and on English intonation recognize the existence of three basic types of terminal intonation contours: the assertive fall [↗], the interrogative rise [↗], and the progredient sustain [→].

4. EXPERIMENTAL DESIGN

A test was prepared in two parallel forms, one in English, one in German. Instructions and drill cues were prerecorded on track one of a two-track tape and played to each

subject through earphones. The subjects' responses were recorded in the pauses, on track two. The subjects were given a test booklet containing the texts of drills, a dialogue and a narrative, and pictures for free response questions and description.

The German test was administered to two groups of subjects: (1) an experimental group consisting of twenty college German students, and (2) a control group of ten native speakers of German. A second control group of ten American English speakers was given the English version of the test.

5. ANALYSIS PROCEDURES

Fundamental voice frequency curves of the subjects' recorded responses were prepared on four-inch paper tape using a Frøkjaer-Jensen Trans-Pitchmeter and a Siemens oscillograph. A second channel of the oscillograph was used to record a simultaneous oscillogram. The segmental features of the responses were transcribed on the paper tape in a broad phonetic transcription, and the prosodic features were transcribed using the system outlined above.

6. CHARACTERISTIC FEATURES OF AMERICAN ENGLISH INTERFERENCE

The major feature of English interference in the use of pitch accent by the students observed in this study was the high frequency of rise-fall secondary accents. Characteristic of native German speech is the practice of maintaining a relatively high pitch until the end of the tone group has been reached. This accounts for the heavy predominance of secondary pre-ictic rise accents. English speech, however, does not have the same 'tension', and the most frequent secondary accent type is the rise-fall. After the fall the voice pitch typically remains at a low monotone to the end of the tone group.

In the use of sustain, rise, and fall terminal contours the groups of subjects were numerically very similar, except in the indication of continuation by sustains and rises at tentative pauses. The native Germans used over four times as many sustains as rises, while the American English speakers used equal numbers of both. The students fell between the control groups with about twice as many sustains as rises.

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DISCUSSION

VANDERSLICE (New York)
Some years ago when Prof. Isačenko visited U.C.L.A. I was priviledged to hear some of the tapes used in the experiment with Schädlich, and the impression I got was that they sounded not like speech, but like chanting or singing on only two different notes. [Prof. Wode here agreed that this was the impression of native German speakers too]. Within this limitation — using forced-choice tests — the study is very interesting, but I think there is much to be said for making synthetic speech stimuli as natural as possible before extrapolating from synthetic to natural language.

ANDERSON
While further experimentation with more natural artificial speech is highly desirable, the results of my study indicate that some extrapolation is possible, even at this crude level. More refined results with artificial speech will make possible a more detailed contrastive analysis of intonation patterns. In the meantime, this preliminary study has provided some basic information on intonational interference in learning a second language.

COLLIER (Michelen, Belgium)
In your description of both German and English intonation you apply the broad approximation proposed by Isačenko and Schädlich, which includes, among other things, a distinction between pre- and postictic pitch movements. What surprises me is that in these presentations pitch movements are never allowed to be ictic. It appears, however, that (prominence leading) switches from high to low pitch or vice versa invariably ARE ictic, as can be seen in F_0 measurements and heard in analytic listening. How can you justify such a distinction then?

ANDERSON
Although it would be correct to say that prominence leading switches are ictic, in one sense, so are prominence following switches. The distinction between leading and following switches is what is intended by pre-ictic versus post-ictic. Although the function of this distinction is not completely clear to me, it appears to be tied in with the use of terminal contours and with attitudinal modification of the intonation contour.