

THE ENGLISH PALATALIZATION RULE IN SECOND LANGUAGE ACQUISITION

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The problem which this article addresses is of a longstanding tradition in the field of L2 acquisition. It was brought to the researchers' attention by a series of articles (cf. Adjemian 1976, Bebee 1974, Dickerson 1977, Bebee 1980, Tarone 1979, Richards 1978) that there is a great deal of variation and style-shifting in interlanguage phonology, which was only to be expected once interlanguage (IL) had been claimed to be a natural language, i.e., variable (Adjemian 1976). Many papers stressing the importance of investigating this neglected area of IL variation in the field of second language acquisition appeared following the influential work of Labov (1968).

This article presents the results of a study of two L1 German children learning English as a L2 in a naturalistic setting during a six-month stay in Trinity Center, California, in 1975. The structural area of the study comprises phonological acquisition and the focus is on Palatalization Rule of English (PR) as a fluency phenomenon and its relation to speech tempo recognition by L2 learners. On the basis of the presented data it is suggested that what looks like a simple increase in the fluency measure of L2 learners can be attributed to an operation of two developmentally conditioned factors (here called "grammatical conditioning" - (g.c.) and "phonetic conditioning" (p.c.)) in learners' IL which work with different force over the examined period.¹

THE SOURCE OF THE DATA AND DATA CHARACTERISTIC

The data for this paper was provided by the rich archives of The Kiel Project on Language Acquisition to which the author had access during his one - year stay

¹ Since the author's attention is focused on the pattern of acquisition of a rule over a specific period resultant variability in learner's performance is seen as a function of (the nature of) the acquisitional process rather than being age-dependent or specific to an individual. By the same token, no interpretation of the data in the light of any of the phonological theories is offered.

in the *Englisches Seminar*, Kiel University in the academic year 1987/88.² The part of the data on which the paper is based were collected in a longitudinal fashion in a naturalistic setting during a six-month stay of four L1 German children aged 4–9 in Trinity Center, California in 1975 (for more details on data collection procedures, types of data, characteristic of the setting and for other information see Wode 1981).

Two L2 learners are considered – H. and L. (aged 8.11 and 6 respectively). The data is taken from two periods: Time I (T:1) 26.05 – 22.06, and Time III (T:III) 09.09. – 21.09, i.e., from the periods around the beginning and the end of the stay. The relevant material recorded on the tapes accompanied by handwritten spontaneous notes and transcribed phonetically with particular reference to the context of PR application constituted the core of the data. Transcription, carried out by one person only (the present author) was repeated several times independent of the previous trials to ensure the maximum of detail and accuracy. Additional information about tempo characteristics of every single transcribed phonetic string was provided as well. Since tempo-judgements of H.'s and L.'s speech are limited to the author's own estimation, there is a danger that they may be heavily influenced by an impressionistic factor. An effort however, was made to eliminate this subjective value, or at least reduce it to a minimum, by trying to relate tempo of each relevant utterance to a relative tempo of a particular speech situation in which the learners' samples were recorded. Other variation-causing factors like, for example, emotional involvement of a speaker or his weariness were also used in describing a speech tempo of a given utterance. This gave in effect a three-way distinction of possible tempi into *lento*, *allegro*, and *presto* arrived at independent of previously established judgements separately for any speech situation.³ In general, sociolinguistic characteristics of the speech situations in which the learners' speech was recorded can be specified as predominantly non-formal and casual (for a detailed description see Wode 1981).

THE RULE

Palatalization Rule in English (PR) is generally described as a rule which palatalizes alveolar segments /t, d, s, z/ to palato-alveolars /tʃ, dʒ, ʃ, ʒ/ when the former are followed by a palatal semivowel /j/. The rule can be observed to palatalize alveolars inside words as in:

² Special gratitude is due to Prof. Henning Wode, whose kind permission to use whatever data of The Kiel Project the author fancied made, among other things, this paper possible.

³ Much has been written by various authors (Dressler 1972, 1973; Rubach 1977, 1981; Zwicky 1972a, 1972b) on fast and/or casual speech phenomena, and while phonostylistics has been used as a testing-ground for many of the ramifications of the mainstream phonological theory its substantial basis was much neglected. That is in none of the works mentioned do we find a satisfactory and uniform account of criteria according to which speech is described as fast or slow. Another area of uncertainty centers around the problem of "gradual" versus "stepwise" increase in tempo which links to the question of how many speech-tempi should be distinguished. Apart from that, in all the so far accessible literature on fast/casual speech divisions into tempi were done on a rather limited corpus (however large it was) of skeletonized utterances (or their parts) i.e., utterances taken out of context of a discourse. Such a procedure of de-contextualization while convenient on practical grounds deprives speech of those factors which do influence speech-tempo and speech style i.e., fatigue and emotions.

In this paper a conscious effort was made to relate the author's tempi-judgements to just those elements of speech which can only be observed in a spontaneous, natural setting in which speech situations occurred.

- a) *expression* /iks'preʃən/, *action* /'ækʃən/, *departure* /dr'pɑ:tʃə/ (alternating with *express act part*)
 b) *sensual* /'senʃʊəl/, *visual* /'vɪʒʊəl/, *gradual* /'grædʒʊəl/ (alternating with *sense, visible, grade*)

or in

- c) *virtue* /'vɜ:tʃʊ/, *immediate* /'ɪmɪ:dʒət/, *educate* /'edʒu:kert/,
Neptune /'neptʃu:n/ (non-alternating);

as well as across word-boundary as in

- d) *...did you.../...dɪdʒu:/, ...told you.../...təʊldʒə.../ , ...as yet.../...əʒet.../ ,
 ...these young.../...ði:zʌŋ.../.*

Leaving aside precise formulation of the PR (for which a reader is referred to Chomsky and Halle (1968:230), and to Rubach (1980:150) for a revision of it) some remarks are in order here as to the rule application in the above mentioned examples. Examples in a) differ from those in b), c) and d) in that the former have to, whereas the latter may be pronounced with palato-alveolar fricative of affricate. Optional alternation of non-palatalized sequences of an alveolar + /j/ with palato-alveolars in words in b) and c) can only partially be traced to the distinction between fast versus slow speech since both forms can be heard in fast as well as in slow speech – the variation being largely non-systematic, i.e., palato-alveolars show only statistical tendency to occur in fast/casual rather than in slow speech. This, however, cannot be said about the examples in d) where the optional process of alveolar palatalization across word boundary shows a high degree of correspondence of its outcome with a stylistic difference in a tempo of a delivery i.e., forms like *...get your.../...getʃə.../* or *...miss you.../...mɪʃə.../* are highly improbable in slow speech but have a high profile in fast/casual speech.

Another observation which has to be made in this connection concerns the position of stress in relation to the palatalizing /j/. The PR as formulated in Chomsky & Halle (1968) requires that the vowel which follows /j/ be unstressed. Whereas this is the case in most of the examples cited there in slow speech, it is not the case in fast/casual speech across word boundaries and even within word boundaries in very rapid, casual styles. As shown by Rubach (1976) and by Gussmann (1978) the rule is observed to apply in an extended fashion in fast speech to those palatal glides which come from words bearing a stress on an initial syllable i.e., *...last year.../...la:stʃə.../* or *...those yesterday.../...ðəʊzəstədeɪ.../*, and can be attested to palatalize alveolar stops in a very rapid/casual style within word boundaries when /j/ is followed by a stressed vowel as in *tune, tumor, duty, during* /'tʃu:n/, /'tʃu:mə/, /'dʒu:tɪ/, /'dʒʊərɪŋ/ (these latter cases are however rare and not all words containing phonetic [tj] and [dj] show the same readiness to palatalize when under stress). In the present paper only this subpart of the rule in relation to tempo distinctions is investigated which palatalizes alveolar segments across word boundaries.

There have been other suggestions as to the nature of PR which point to possible grammatical (syntactic or lexical) limitations to its application and to the considerations of frequency-dependency of PR (these issues are briefly addressed below).

Phonetically PR is to be described as an instance of an assimilatory process, which together with a number of weakening processes and cases of segment loss characterizes "normal", i.e., fluent, casual speech.

In the present paper the following terms are employed in the presentation and discussion of the data used:

- a) possible context – any number of sequences /t+j/, /d+j/, /s+j/, /z+j/ which has been recorded for a particular speaker in a given time across word boundary, where an alveolar and the palatal glide are immediately adjacent
- b) actual occurrence – any number of target-like palatalizations of an alveolar (palato-alveolar segments) recorded for a particular speaker in a given period of time out of "possible context"
- c) approximate occurrence – any number of non-target-like palatalizations (segments with varying degree of palatalization) recorded for a particular speaker in a given period of time out of "possible context"
- d) 0 degree occurrence – any number of non-palatalized sequences: /t+j/, /d+j/, /s+j/, /z+j/ out of "possible context" recorded for a given speaker

In other words, the analysis of transcribed strings containing sequences of an alveolar + palatal glide showed that throughout the two periods examined, learners' attempts at producing target-like palato-alveolars in this context have to be viewed in terms of the continuum (palatalizing continuum – PC) with the following approximations toward the target tabulated below:

TABLE I

I	II	III	IV	V
[t+j]	[tʲ]	[tʲ]	[t]	[tɕ]
[d+j]	[dʲ]	[dʲ]	[dʒ]	[dʒ]
[s+j]	[sʲ]	–	[ʃ]	[ɕ]
[z+j]	[zʲ]	–	[ʒ]	[ʒ]

Column I – 0 degree of palatalizations

Column II – "soft alveolars" i.e., only slightly palatalized alveolars with no audible change in the release phase of an alveolar

Column III – (stops only) a slight modification of the release phase resulting in short voiceless or voiced off-set at the palatal region (transitional palatal fricative)

Column IV – target-like, palato-alveolar segments⁴

⁴ At this point it has to be remarked that the consequences of arranging the segments on PC according to an increasing degree of palatality could mean that learners at their first approximations toward target palato-alveolars "overshot" the desired articulatory positions to alveo-palatals only to later correct themselves to target palato-alveolars. This interpretation and its consequences are not however pursued in this paper.

Column V – alveo-palatal segments i.e., palatalization affected segmental characteristics of an alveolar

The instances of non-target like palatalizations, i.e., approximations from columns II, III and V are considered together unless otherwise specified (sometimes, especially in percentage calculations, they are treated together as points on PC and then this total number of approximations to the target forms a basis for percentage calculations).

RESULTS

In the tables below scores for L. in T:I and L. in T:III are presented together with the percentage score for the segments from PC,

TABLE II

	L. 's T:I			L. 's T:III		
	recorded cases of:	% of palatalized cases from	% of non-palatal. cases from possible context	recorded cases of:	% of palatalized cases from	% of non-palatal. cases from possible context
POSSIBLE CONTEXT	19			41		
overall cases of palatalizations	ACTUAL OCC	6	50%	25	67.5%	
	APPROX. OCC	6	50%	12	32.5%	
NO OCCURRENCE	7		36.8%	4		9.8%

The same data is tabulated below, but this time with segments' distribution from POSSIBLE CONTEXT over two different speech tempi included (allegro and presto are treated as one – see note 5).

TABLE III

	T:I				T:III				
	lento		allegro presto		lento		allegro presto		
overall cases of palatalizations	ACTUAL OCC	9	5	3	1	17	10	20	15
	APPROX. OCC		4		2		7		5
NO OCCURRENCE		3		4		4		0	

DISCUSSION

Looking at the data arranged in Table II, a simple picture seems to suggest itself: L. improves on his score of target-like palatalizations by 17% and drastically

cuts down the percentage of non-palatalized segments in an otherwise appropriate context thus showing that he has identified the regularity involved and is on the way to eliminating non-target palatalized segments (compare APPROXIMATE OCCURRENCE: 50% in T:I – 32.5% in T:III) in favor of target-like palato-alveolars. On such view the four non-palatalized cases (9.8% out of POSSIBLE CONTEXT) from T:III are regarded as cases of learner's non-native variability in PR application at this particular time of L2 learning – cases which, when the regularity is fully realized, are to be eliminated (together with non-target "palatalized" segments) in favor of the target palato-alveolars. When, however, tempi considerations (TABLE III) are plotted against this simple view of fluency-gain, the picture becomes more complicated.

Out of ACTUAL OCCURRENCE of PR in T:I only one is attested in allegro/presto styles compared with five in lento. Two palato-alveolars occur in a very slow, almost "word-by-word" type of pronunciation. On the other hand, four out of seven non-assimilated cases occur in allegro/presto styles and three in lento. Given that PR is a fast-speech process, we would expect just an opposite distribution of the segments from PC over the tempi. All six cases of palato-alveolars (ACTUAL OCCURRENCE) independent of tempo considerations have no /j/ following them, and the assimilated alveolars are stops in one of the following words: *what* and *would* (in *.get you...* and in *...beat you...* pronounced at different tempi no degree of palatalization has been attested). Out of APPROXIMATE OCCURRENCES five cases are "soft" alveolars and only one shows a slight modification under the influence of assimilation-causing /j/, eg, *...put you ...* [put^çju:].

When we now turn to L.'s data from T:III and compare it with that discussed above, certain interesting observations can be made. L.'s scores for T:III with relation to speech-tempi distinction are as follows: out of 25 cases of actual occurrence of PR application stated 15, (that is 60%) are observed in allegro/presto and 9 in lento. All instances of an alveolar segment + palatal glide not affected by any degree of palatalization (i.e., 4 cases from 41 cases of POSSIBLE CONTEXT) are recorded in lento style only. As far as not fully assimilated alveolars go (APPROXIMATE OCCURRENCE) their percentage has dropped down in comparison to T:I (from 50% to 32.5%) but their distribution over the tempo spectrum shows the same insensitivity to speech tempi distinction as for T:I, i.e., they show no preference for either lento or allegro/presto styles. Lexical items in which final alveolars are assimilated rose dramatically from 2 in T:I (*what, would*) to 15 in T:III, and palatalization including /j/ can be observed to come not only from words of "you" class but also from words like: *yet* and *yesterday* as in *...no[tʃ]jet* or *comm[dʒ]esterday*.

DISCUSSION

As has been pointed out above, the figures taken at face value suggest that L. proceeds successively with his fluency score toward target-like palato-alveolars at the expense of an ever-diminishing number of non-palatalized segments and non-target like palatalizations, thus eliminating them from his grammar in the course of

learning (compare TABLE II). This however, does not explain why and how L. internalizes regularities of PR and, what is even more important, does not show what the regularities involved are, or rather, what the learner thinks they are. Specifically what remains unexplained is the existence of non-fully palatalized segments in T:III in view of the fact that, if L. in 67% of the cases appropriately identified the context for PR application, then given a phonetic nature of the rule this 33% of APPROXIMATE OCCURRENCES looks strange.

What these considerations suggest is that what is typically described as a fast speech rule of English has been adopted to L.'s IL in T:I as a frozen structure which subsequently came to be lexically (grammatically) restricted to a limited number of items and applied to them indiscriminate of speech-tempo distinctions. That lexical (grammatical) conditioning is at play in T:I can be seen from a failure of a "rule" to apply to /t,d/ coming from words other than *what, would* as in [gɔt ju:], [brɪt ju:]. What suggests even more that no phonetic conditioning of post-alveolars is at work in T:I in L.'s IL, and consequently, that no rule of palatalization can be identified in L.'s IL is the fact that other alveolars; /s,z/ are immune from this would-be palatalization rule – no rule no extension of the domain. There is still another observation which suggests that all 6 cases of target-like palato-alveolars at T:I cannot be attributed to L.'s PR but that they have been acquired as fixed structures. Namely, the earliest attempt and straightaway target-like was the phrase *what you doing* pronounced by L. as "whache doing" [wətʃ^əduwɪŋ] in lento style with no /j/ following the assimilated alveolar.

However, the existence of some "surface" palatalizations of /t/ and /d/ together with one instance of /t/ palatally released into voiceless palatal fricative [ç] might suggest that L. is on the way to identifying the process as phonetically rather than grammatically conditioned. Seen from this point of view we would expect L.'s data from T:III to show less restrictive application of what is becoming a phonetically motivated process. And this is what the data in T:III reveals. Not only has the number of lexical items with word final alveolars (not only /t/ and /d/) increased, but the learner has also tried to generalize phonetic environment for /j/ to new items like *yet* and *yesterday* (in his own creation: *commed yesterday*) which suggests that he has recognized in his grammar PR as being phonetically motivated and tried to apply the rule to new environment.⁵

HYPOTHESIS

The hypothesis that is adopted here is that there are basically two independent factors at work in learner's developing IL responsible for variable occurrence of segments from PC over a tempo spectrum across word boundary before palatal glide /j/. It is assumed that these two factors, which we will call "grammatical conditioning" (g.c.) and "phonetic conditioning" (p.c.), exist parallel to each other in learner's IL,

⁵The decision to treat allegro and presto styles as one arose out of simple convenience. The author, however, admits that from a theoretical point of view this might be regarded as at least dubious move.

but that their developmental gradients are of a different value, that is, the force with which they condition the occurrence of segments from PC decreases in the case of g.c. throughout the time T:I – T:III, and increases in the case of p.c. throughout the same period. In other words, g.c. is to be seen as predominant during T:I and then slowly receding towards T:III., phonetic conditioning, on the other hand is the “weakest” in T:I, successively gaining ground in T:III. However, as in T:I there are already signs of p.c. to be discerned, so in T:III there is still some effect of g.c. on the occurrence of the segments from PC in force. This can be schematically illustrated by the diagram in Fig. I below:

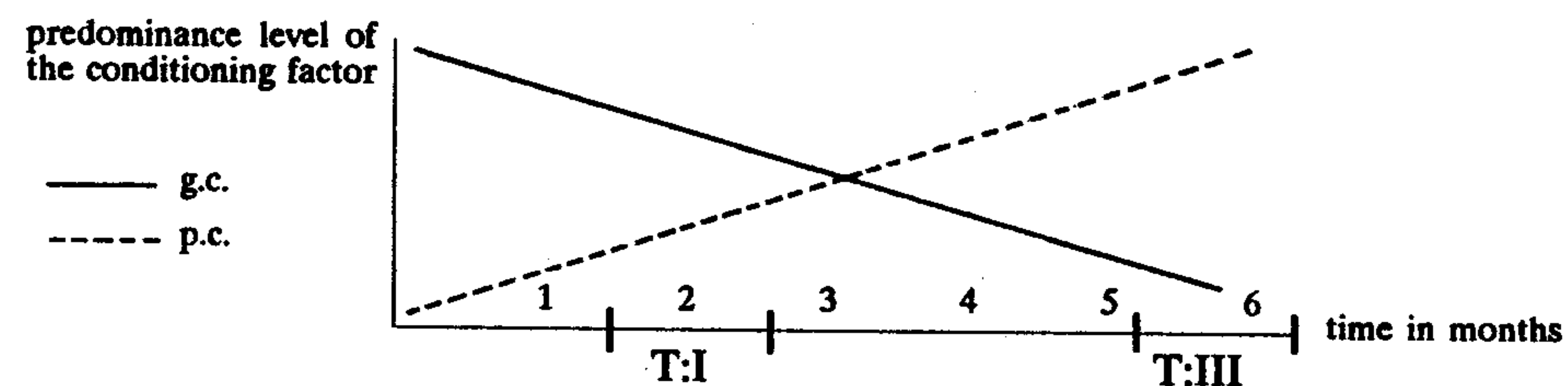


FIG. I

What this means in terms of L.'s data in T:I is that at this time when g.c. is assumed to be the strongest, the instances of no-occurrence are attributed to the fact that all of them do not comply with the rule that L. then seems to have and which says that only /t,d/ from lexically marked items are realized as palato-alveolars. However, the existence of APPROXIMATE OCCURRENCES even at T:I is attributed to the parallelly existing but still weak identification of the environment /t, d, s, z/##/j/ as palatalizing context. Another consequence of this hypothesis would be that grammatically conditioned occurrence of palato-alveolars which is not style and tempo dependent in T:I, shows an increasing sensitivity to tempi distinctions (compare T:III) once g.c. has started to give way to p.c. This would account for the fact that non-palatalized cases of an alveolar + /j/ occur only in lento style and gross of number of palato-alveolars (ACTUAL OCCURRENCES) is attested in allegro/presto styles (compare TABLE II and III). As for the remaining palato-alveolars (10 cases in T:III in TABLE III) their occurrence in lento would be attributed to diminishing influence of g.c. in T:III i.e., to g.c. still lingering behind (or to g.c. gaining ground anew and working together with phonetic factors – more on this below).

SECOND LEARNER

We now turn to H.'s data for the confirmation of the observations made in the previous paragraph. H.'s scores for T:I and T:III together with percentage calculations are given below:

TABLE IV

		H.'s T:I			H.'s T:III		
		recorded cases of:	% of palatalized cases from:	% of non-palatalized cases from possible context	recorded cases of:	% of palatalized cases from:	% of non-palatalized cases from possible context
POSSIBLE CONTEXT		55			59		
overall cases of palatalizations	ACTUAL OCC	25	52%		37	74%	
	APPROX. OCC	23	48%		13	26%	
NO OCCURRENCE		7		12.7%	9		14%

and the same data with speech tempi distinctions included is tabulated in Table V below,

TABLE V

		T:I				T:III			
		lento		allegro presto		lento		allegro presto	
overall cases of palatalizations	ACTUAL OCC	31	14	17	11	24	13	26	24
	APPROX. OCC		17		6		11		2
NO OCCURRENCE		4		3		8		1	

H.'s data from T:I and T:III seems to be in agreement with what we have seen in L.'s case although there are some individual differences. Out of total POSSIBLE CONTEXT of 55 cases in which PR across word boundary could apply 11 cases of palato-alveolars are found in allegro/presto and 14 in lento styles. Out of 7 cases of NO OCCURRENCE (12.7% of all possible context), 3 occur in allegro/presto and 4 in lento. This more or less even score for lento versus allegro/presto styles is ascribed under our hypothesis to H.'s rule which makes no mention in its description of tempo-dependency of PR.; rather it takes PR to be grammatically (lexically) conditioned i.e., dependent on the word-class in which relevant segments appear. This would explain why palato-alveolars show no sensitivity to tempi distinctions in T:I, once we have assumed that it is only after p.c. has become predominant in T:III that tempo recognition shows up in learner's IL.

The cases of non-palatalized sequences (all .../s/##/j/...) confirm the hypothesis even more since if PR were identified as phonetically conditioned at T:I we would expect it to behave as any other phonetically motivated rule i.e., we would expect other alveolars to be subsumed under its application in the 3 cases in which the sequence .../s/##/j/... appears in allegro/presto styles. That it is not the case at T:I for H. means that the occurrence of palato-alveolars is grammatically conditioned and limited to word final alveolar stops only. Consequently, this suggests that in the case of both learners at T:I we cannot place PR among phonological rules in those learners' grammars.

Similarly, the 23 cases of APPROXIMATE OCCURRENCE (48% of all palatalized segments) in H.'s T:I are ascribed to his increasing recognition of the palatalizing context as phonetically conditioned, and the fact that there are more "closer-to-the-target" approximations than in the case of L. in the same period (14 alveo-palatals and 9 "soft" alveolars) shows that individual variation exists in the way the two conditioning factors for PR enter the learners' IIs.

When we now consider H.'s data from T:III, strikingly similar conclusions to those drawn in the case of L. can be reached. Whereas at T:I palato-alveolars occurred 56% of the time in *lento* and 44% of the time in *allegro/presto* (which was attributed to the fact that palatalization had not yet been discovered to be tempo-sensitive) at T:III the score is substantially reversed with 64% of palato-alveolars in *allegro/presto* and 36% in *lento* styles. In terms of our suggestion this is to be interpreted as a modification of a learner's grammar following the recognition of the phonetic nature of PR. As the hypothesis would predict, non-palatalized strings /sj/, /zj/ and /dj/ occur almost exclusively in *lento* style with only one case in *allegro/presto*.

What yet requires an interpretation is the existence of not-fully palatalized segments from columns II, III and V of our PC (to simplify the picture they are all treated "en masse" as approximations toward target segments). At T:I we have the following distribution with reference to tempi distinctions: 6 times in *allegro/presto* and 16 times in *lento* style. In general, disregarding tempi distinctions for the moment, there is a decrease in the percentage of non-target-like palatals of about 22% at T:III (compare 12% decrease in L.'s case). Just as has been claimed in the case of the first learner that the existence of non-fully palatalized variants, i.e., segments from columns II, III and V is ascribed to the fact that the learner only starts to realize phonetic nature of the process which at T:I is predominantly lexically conditioned, so it is claimed to be a viable interpretation in the case of the second learner as well. The existence of tempo-disregarding non-fully palatalized segments in T:I and the polarization of H.'s score toward fully palato-alveolars following the recognition of PR as tempo-dependent would suggest that, as in the case of L., attempts would be made by H. to generalize his findings to relevant segments in words other than those lexically marked at T:I. That this is not the case with H. at T:III (although the data provides at least three examples in which words other than those from the *you* class follow alveolar segments) might be due to individual variation in the way the two conditioning factors (see FIG. I) are related to each other over the two periods.

In the data under consideration there is yet another point of difference between L. and H., namely, in the extent to which at T:I grammatically conditioned occurrences of palato-alveolars in the context before /j/ across word boundary were restricted to lexical items (more in H.'s case, fewer in L.'s case). What this might mean in terms of our discussion is that the developmental sequences of each of the two learners were "caught" in a different state of learning of, what is described in terms of an end-product, a fast speech rule. Similarly, in the case of the lack of palatalization before /j/ coming from words other than the *you* class, it might be claimed that while L. at T:III was trying to extend his generalizations (which he

induced from the input) to other environments, H. proceeded faster, and at the same time T:III avoided to palatalize alveolars before words other than the *you* class, thus reaffirming partially grammatical nature of this, in his IL otherwise phonetically conditioned, tempo-sensitive rule.⁶ Whether it can be justifiably claimed that this L2 data, as fragmentary as it is reflects a parallel process of grammaticalization of a phonetically conditioned PR of English in L1 English speakers' phonologies is not entirely clear.⁷ However the data can be seen to be in agreement with what at least some of the researchers claim the nature of PR in English is:

"I agree that there is some frequency effect (so that, for instance, the frequent adverbs *yet* and *yesterday* are more acceptable as palatalizations triggers than *youthfully* and *usefully*) but the absolute acceptability of palatalization before *you* makes me suspect that this rule is at least in the process of being grammaticalized, with the morpheme *you* (or perhaps the category PRONOUN) being explicitly mentioned in the structural description". (Kaisse, 1985).

SUMMARY AND CONCLUSION

The acquisition of one fluency phenomenon of English by two L1 German children (PR) was studied with respect to tempo distinctions. The nature of the acquisitional process responsible for the developmental change over two periods of time was examined. It was suggested that in the case of the two learners under discussion the regularity expressed by PR is acquired as the result of two, indirectly proportional to each other, conditioning factors, and that the resultant variability in PR's acquisition (its sensitivity to speech-tempi distinction) is directly proportional to the degree in which the rule is identified by the learner as phonetically conditioned.

Finally, it was observed that individual variation in the process of PR acquisition corresponds to the changing degree of influence of the two conditioning factors mentioned as a function of time of the learners' exposure to L2 input.

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⁶ Whether this is to be attributed to differences in the learners' acquisitional processes or to the nature of PR itself will be the subject of a separate paper after more data (coming from an intermediate period T:II and from new subjects) has been investigated.

⁷ The issue of the status of PR in English is separate one and does not fall within the scope of this process-oriented paper.

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