

## THE PHONETIC FATE OF FOREIGN WORDS

P. Durand

Institut de Phonétique, URA 261 CNRS, Aix, FRANCE

### ABSTRACT

A set of loanwords from American-English are examined in two languages Polish and French. Assuming that speakers of both communities tend to preserve the communicatively important aspects of speech, even with monolingual listeners, the fitting of borrowed words into their new surroundings seems to be a promising tool for isolating the main phonic aspects of a specific language.

### INTRODUCTION

The increasing number of languages borrowing words from American English [1] allows the parallel study of the phonic fate of foreign words. The phonic adaptation that they undergo is restrained by linguistic factors which have to do with the listeners' perceptual process, which is language-dependant [2]. In order to point out the main aspects of this problem, a classification is proposed [3] which allows further acoustic comparisons.

### THE PROBLEMS

Since the end of the XIXth century [4] the borrowings have attracted the attention of linguists, especially that of structuralists who posed the question of coexisting phonemic systems [5]. Among the various studies on the subject, we give a particular importance to those of M. Cling [6] who gives evidence that borrowings are not, at the present time, the product of monolingual subjects. But all of these works do not attach sufficient importance to the way these exolinguisic elements enter their new surrounding (the process and its result).

### The choice of languages

A-E was chosen as the source language for its importance in current international communication. Target languages ought to be sufficiently distinct to show differences both between them, and between each of them and the source language. They ought to share the same way of adapting the phonic form of foreign words instead of translating its

component lexical morphemes in morphemes of its own. For this purpose, the two selected borrowing languages are French and Polish. At the stress level, as opposed to A.-E., Polish has a fixed lexical accent while French has a syntagmatic accent. At the vocalic level, Polish shows a very simple system and French a more complex one (Fig. 1 and 2). For the consonant system, Polish offers enough consonants to convey nearly all the consonant information of the source, but French does not have this possibility. Finally, if Polish gives foreign words a new spelling with respect to its own system, French keeps them in their original written form.

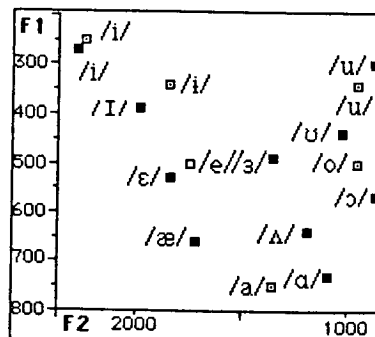


Figure 1: American-English (■) and Polish (□) vowels.

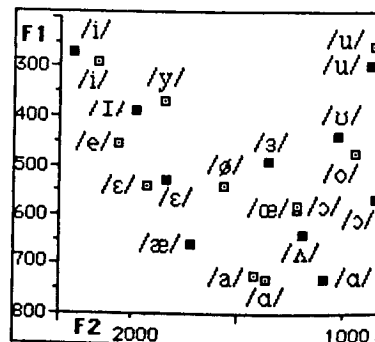


Figure 2: American-English (■) and French (□) vowels.

### The method

A set of words that the two languages borrowed from A.-E. was selected, and rules for their adaptation were looked for. They were recorded in an sound proofed room by French and Polish speakers in order to look at the phonic fate of these exolinguisic elements. As it was not possible to find in both languages speakers with a total ignorance of the source language, it was decided to choose subjects with only an academic knowledge, i.e. nearer to the situation of a large part of the population of both countries. The borrowings were inserted in a carrying sentence with three syllables preceding the word, the word, and three or four syllables following it. The meaning and the grammatical structure of this sentence was identical. This procedure was chosen to integrate the word in its new linguistic surroundings in order to allow a pronunciation matching that of the target language. The sentence form to read were:

"Powiedział ... i poszedł"  
[pɔ'v'ɛdʒ'aw... ipɔ'sɛdɔw] in Polish  
and "Il a dit ... et il est sorti"

[il'a'di... eilɛsɔ'ʁti] in French.  
Further experiment in running speech will be also necessary to collect more useful data. As dictionaries do not mention some of the borrowings, perceptual interpretation and acoustical measurements were made, a part of the interpretation has not yet been achieved.

### THE HYPOTHESIS

On the basis of the data collected a set of hypotheses was made concerning various aspects of the fitting of borrowings to their new linguistic surroundings.

- The first of them is on the stress regulation by the target language of the original one. The former is considered as an emphatic one, intended by the speaker to valorize this new significant unit, for the listener. As a consequence, it will be suppressed and will give place to, in one case the lexical penultimate stress, in the other, to the syntagmatic final accent.

- The second is that low-level rules of production and phonotactical regularization will apply to the new word.

- The third is that the transformation of the original word is largely dependent

on the way - oral or written - in which the word is entering the new language. If the original spelling is kept, the graphotactical rules of the target language in the conversion grapheme-phoneme will apply unless another set of specific rules take precedence.

- The original phonemes will be transformed not only by reference to the acoustic distance from the sound of the other language but also by reference to its distribution

### THE RESULTS

- The hypothesis that the stress pattern of the original word would be replaced by the Polish penultimate lexical accent and the French syntagmatic final accent was confirmed in acoustic data for trisyllabic words. Measurements of intensity, length and  $F_0$  variations were made and show stress changes. The distribution of loanwords shows small number of trisyllabic (< 16%), more monosyllabic (24,5%) and many bisyllabic words (61%). This patterns descriptive findings but not statistical interpretation, because of the small number of subjects in the corpus.

- The hypothesis of the application of low-level rules is confirmed both on the segmental and suprasegmental aspects. As A. Cutler says "listener characteristics can determine aspects of the message form" [7]. Among them, linguistic ones are important and can increase or reduce the use and the acceptance of a word.

- The phonic form of a loanword depends largely on the way a loanword enters its new language. As quoted J.B. Carroll [8], a native American imitating the French phonic word "pain" [pɛ̃] will say [phæn] and reading the same word will say [pejn]. As the lack of isomorphism between the orthographic code and the phonology is well known [9], if in a language the original graphy is kept, the phonic shape of the word will be different from the one of another language which has interpreted the sound sequence with the use of its phonic system and transcribed it on its own.

From the analysis of the corpus, three kinds of borrowings can be identified.

### I - The original written word is kept

In this case, which is frequent in French, the pronunciation of the loanword may follow one of the graphotactic rules of the target language, keeping to the graphic unit one of the values it has in that language. So, for the "er" of "joker, charter" the graphotactic conversion will give [ɛ:ʒ] one of the values of this sequence (fer, cher, hiver). This value will be the same under stress, in unstressed or in reduced syllables. So "a" will be a [a] in all position as in "apache". When the written element does not have the same phonetic value as the "u" of "trolleybus", it will be spoken [y] in French and [u] in Polish. The same letter may correspond to a sound or a zero as the "h", zero in French or [x] in Polish as in "hockey".

### II - Phonic and graphic adaptation

This kind of adaptation is more usual in Polish, where the graphic code is phonologically regular, even if it does not deal with the palatalization oppositions.

In French, if we find "kidnappeur", "fioul", and sometime "ticheurte", this process is not usual.

In Polish, the graphic adaptation will be conditioned by the phonic system of the language. As the vocalic system has six elements (if we do not take into account the nasalised vowels), with only one central vowel [i] acoustically not very distant from [l], the central [ə], the anterior [æ] will be interpreted as /e/ phonetically [ɛ]. The graphic "u" of "business" will be rewritten as "i". The English long vowels and diphthongs that have not counterparts in Polish will be interpreted when possible by two elements a vowel followed by an approximant as "crawl" in "kraul" [krawl], "hokey" in "hokey" [xokɛj]. The graphic adaptation is also systematic with [ʃ, ʒ, ʒ] which are written with their graphic Polish equivalent "cz, dż, sz". For phonotactic rules [10] /d, t, r, ʒ, ʒ/ ought to be followed by [i] that will be noted "y" as in "brydż, szeryf, dżyn" for "bridge, sheriff et gin"

### III - Phony and graphy are kept

In some cases, when the spelling is kept, in the target language a new graphotactic rule may appear. So for "er", or "an" often pronounced as [ɛʒ] or [ã] in French, it is possible to find [œʒ] or [ãn] as in "leader, speaker" or "gentleman", or [ɛn] in Polish as in "big-band". In front of this new rule, may appear alternate pronunciation as in "ketchup" with [œ] ou [ɔ] in French and [a] or [u] in Polish. In this late category, some loanwords do not follow phonotactical rule of the target language as in Polish for the sequence [d, t, r, ʒ, ʒ] + [i] for "sherry, jury, tee-shirt...", and sometime graphy do confirm this change "dżinsy" "jeans" instead of \*"dżynsy" ("dżyn" for "gin"). The English affricates that have no equivalence in French are interpreted as biphonemic elements in a word "budget" [byd+ʒɛ] are simplified as word initial or final elements "jazz" [ʒaz:] get a new alternate pronunciation [ʒa:z]. In this last category, we find phenomena that are missing in the two others. For these words, the linguistic fitting is not yet achieved, and it is possible to say that we see in them the process of borrowing, and in the two others, the result of this process.

### CONCLUSION

From the study of loanwords, we can see firstly that the phonic shape that they adopt is a function of the target language. This divergence, as the acoustic data show, will be largely the result of the phonologic and prosodic systems of the borrowing language but also of the phonotactic rules which apply and may transform the phonic aspect of the word, even if the same phoneme exists in both languages, but not with identical distribution. Acoustic cues of the phoneme in source language are changed for the ones of the new language. Hearers will hear their input according to phonotactic rules of their language and modify both their listening and their reproduction of foreign word to fit the

linguistic surrounding where it takes place.

As loanwords are often written words, it is necessary to know what kind of graphy the source language has and the target language has, and the way in which people adapts foreign words. The level of adaptation will be different, and the role of the phonic input will be more or less important.

From our data, it is possible to classify loanwords in three categories that explain the phonic fate of foreign words.

The first deals with the words for which no graphic adaptation is made. In this case, the grapheme-phoneme rules of the target language apply, when specific new rules do not operate.

The second category unites the words for which a graphic adaptation is made. In this case, the adaptation is near phonic interference, which is frequent in second language learning, with the difference that the new pronunciation is not sanctioned in learning.

The third category is the one in which, with the conserving of the original graphy speakers want to follow the original pronunciation. The study of data shows that the borrowings are recent ones and that for them two or more pronunciations coexist. In this category also, it is possible to find examples that do not follow phonotactical rules of target languages or show consonantic groups which do not exist in the target language. In this case, we have the borrowing process, and not the result of the process, as in the two former categories. Therefore, the replica is not yet assimilated, and still appears as a foreign word to the speaker.

### BIBLIOGRAPHY

- [1] Filipovic, R.(1982), "Phonologization and activation of latent phonemes in linguistic borrowing", *Journal of the I.P.A.*, 12:1, pp.36-47
- [2] Polivanov, E.(1931), "La perception des sons d'une langue étrangère", *T.C.L.P.*, IV, pp.79-96.
- [3] Durand-Deska, A., Durand, P., 1994 *La forme sonore des emprunts : les mots anglais en polonais et en Français*, Travaux du Claix, 12, pp.79-105
- [4] Paul, H.(1886), *Principien der Sprachgeschichte*.
- [5] Fries, Ch., Pike, K., (1949), "Coexistent phonemic Systems", *Language*, 25, pp.29-50.
- [6] Cling, M.(1980), "Aspects méthodologiques d'une expérience sur l'intégration phonématique de l'anglais par l'enfant francophone naïf", *Encrages*, N° spécial Acquisition d'une langue étrangère, Université Paris VIII, pp.41-45.
- [7] Cutler, A.(1987), "Speaking for listening" *Language Perception and Production*, A.Allport, D.Mackay, W.Prinz, and E.Scheerer ed., Cognitive science series n°3, London, Academic Press, pp.23-40.
- [8] Carrol, J.B.(1968), "Contrastive analysis and interference", *19th Round Table Meeting on Linguistics and Language Studies*, J.E.Alatis ed., Georgetown University Press, pp.113-122.
- [9] Kay, J., (1987), "Phonological codes in reading", *Language Perception and Production*, A.Allport, D.Mackay, W.Prinz, and E.Scheerer ed., Cognitive science series n°3, London, Academic Press, pp.181-196.
- [10] Bellot-Deska, A.(1989) *Aspects et temps en polonais: contribution à la traduction des formes aspectuo-temporelles de l'indicatif polonais en français*, Thèse de Doctorat, Aix en Provence