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Borrowing adaptation routines in Oran Arabic

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Abstract: *Different processes take place to help speakers accommodate the alien items to their system. This research aims to explain the different conversion rules underlying the transfer of French linguistic materials to the dialect of Oran. It is more precisely a question of describing the productive processes in the speaking of Oran (OrA) as it is practiced by students at the University of Oran. In addition, the analysis focuses mainly on the transfer of two categories (nouns and verbs) which are likely to be adapted to the speaking system of Oran. The analysis is also based on spontaneous conversations between students recorded in various communication situations. The major findings inform us that adaptation strategies are not sporadic dia-systemic rules but rather regular analogical conventions. Adaptation is used consciously and unconsciously to fulfil some communicative functions.*
Keywords: *Borrowing adaptation routines, dia-systemic conversion rules, Oran Spoken Arabic (OrA), French (Fr), assimilation, truncation, simplification.*
Résumé : *Cette recherche vise à expliquer les différentes règles de conversion sous-jacentes au transfert de matériaux linguistiques Français vers le parler d'Oran. Il s'agit plus précisément de décrire les processus productifs dans le parler d'Oran (OrA) tel qu'il est pratiqué par des étudiants à l'Université d'Oran. Outre, l'analyse focalise principalement sur le transfert de deux catégories (les noms et les verbes) qui sont susceptibles d'être adaptées au système du parler d'Oran. L'analyse s'appuie également sur des conversations spontanées entre étudiants enregistrées dans diverses situations de communication.*
Mots clés : *Routines d'adaptation d'emprunts, les règles de conversion dia-systémique, le parler d'Oran (OrA), Français (Fr), assimilation, troncation, simplification.*

1. Introduction

Adaptation is one of the relevant processes of lexical borrowing. Bilingual speakers do not solely resort to adaptation but rather make use of varying processes to accommodate the alien items to their system. This is known as "adaptation routines" or "conversion rules" in the literature. By adaptation routines, Heath (1989) means the most productive processes by which individual speakers transfer linguistic materials from the other language into the guest language. This concept is used in the same way as Haugen's diaphonic rules with slight differences.

The analysis of transfer in the OrA nominal and verbal morphology will proceed as follows: identifying first the different variants of a particular adapted word and then selecting the model or the pattern through which adaptation occurs, then linguistic routines will be established for French noun and verb borrowings.

The assimilatory process of French borrowings is even more complex. There are certain linguistic items which can receive a complete integration, some can only be partially incorporated and others resist to dia-systemic conversion rules. This

inter-lingual variability reveals the problematic issues at work when the grammars of two typologically different languages are in contact, namely OrA and Fr. Accordingly, we try at this level to provide some generalizations with regard to the productive assimilatory processes at the phonological and morphological levels when French verbs and nouns penetrate OrA system.

2. Assimilatory processes in French borrowings

2.1. Phonological assimilation

Before dealing with the different vocalic and consonantal conversion rules of French borrowings operating in OrA system, it seems appropriate to give some general remarks about a language-specific feature that distinguishes OrA from Fr at the phonological level, namely emphasis. Indeed, emphasis receives a multitude of appellations which reveal controversial interpretations regarding its definition and its status. It is commonly known as "mufaχχama", "velarization" or "pharyngelization". It is not our intention here to give here historical background about this language property, we shall rather use emphasis and pharyngelization interchangeably in this work.

OrA possesses a number of pharyngealized coronal consonants /ṭ ṣ ḍ/ which are characterized with a secondary articulation added to a dental primary articulation. Furthermore, pharyngealization affects preceding and following vowels, and exerts then a co-articulatory effect on the adjacent segments. That process is manifested in the lowering of the vowels /i u/ to [e o] and the backing of the front vowel /a/ to surface [ɑ]. The latter is a surface realization of both vowels /a/ and /æ/ since OrA like some other varieties of Algerian Arabic displays four vowels system as opposed to CA which is distinguished by a triangular vocalic system.

The French system lacks pharyngealized consonants and therefore a problem will be raised with regard to French borrowings comprising coronals. Likewise, the French phonemic system consists of vowel oppositions which may solve the problem linked to the absence of pharyngealized sounds in its consonantal system. Let us first look at few examples to see how conversion rules will operate at the vowel and consonant levels, following Heath's (1989) steps.

2.1.1. Vocalic conversions between oral vowels and nasalized vowels

The French vowels /i e ɛ/ are generally realized as [i] in French loan words penetrating OrA system. This surface realization does not appear in the context of pharyngealized sounds. Instances of this phonetic treatment are [difonsaraːt] "defenders", [difonda] "he defended", and [kaɾi] "squarish" from the French adjective "carré". Yet, most of the time our informants retain the French pronunciation of such vowels and therefore they can add these elements to their phonetic inventory as allophones of the phoneme /i/. The French vowel /a/ is mostly

realized as OrA [a]or[æ] but the realization in [a] is the most attested one in our corpus. Another reflection is the emphaticized [ɑ] which occurs mainly in a pharyngealized environment. Few examples of these allophonic variations concern the verb[ga:ra] "he parked", [npartisipʊ] "we participated" and the noun[ʈɑ:bla] "table". In some other French loan words, the back vowel [o]occurs though no adjacent pharyngealized consonant appears as [organiza] "he organized".

French vowels /œ/ and /y/ do not have similar equivalents in OrA system. The participants tend to use the vowel [æ] and retain[y] in some cases or replace it by [i], as in [fʊta:j]for "fauteuil" (armchair), [bys] for "bus" (bus) and [biru] for "bureau" (office).

There is one possible case where the French vowel /œ/ is realized as[i]in our corpus, namely[firu:ʒ]. The motivation behind this loan is to create humour since the context determines such an internal motive. The speaker can produce the French pronunciation [fœRu:ʒ] "stoplight" and therefore this use has an aesthetic effect, as to function as a humour device.

The French vowel /y/ exhibits some irregularities. It is treated as [u] in certain contexts and [w]in a restricted number of adapted French items. Illustrative examples are[su:ra] and[wzi:n] from French "assurer" (to insure) and "usine" (factory) in which the initial vowels are syncopized.

As far as the schwa is concerned, the French vowel /ə/[1] is generally reflected as an [u] in OrA system, as in [rupu] "repos" (a rest-time). In other cases, it is realized as [o]in a pharyngealized context[rɔʈɑ:r] "en retard" (late) or retained as in [tuʁnəvis] "tournevise" (screw-driver).

Another possible realization of the French /ə/ is the vowel [i] like the loan[sima:na] "a week", a variant of "semaine"[səmɜn]. The nasalized French vowels do not have equivalents in OrA, namely /C/, /B/, and /I/.

When borrowing these types of vowels, the bilingual speakers use different strategies, they either retain the same pattern of the source language or convert the nasalized sound into a cluster of a vowel and a nasal consonant. The French /B/ has different variants in OrA, it is either reflected as [on], [an]or [am] while /I / can have [Un] as an allophone. For the French /F/, the borrowed outcome is pronounced

[1] The silent orthographic e in French (le e-muet) in final position is not taken here into consideration since normally it is silent and thus cannot have phonetic realisations when French words containing this (e) are borrowed into OrA system.

as[è]. There are also other cases with {-ment} ending which undergo a denasalization process by which the nasalized vowel /B/ becomes a back vowel[a].

2.1.2. Other phonological processes in borrowing: truncation and simplification

After listing the various phonetic variations of French vowels when borrowing takes place, we shall discuss some of the productive phonological processes operating when French loan words are simplified and reduced to fit into the requirement of OrA rules. These internal modifications are mostly motivated by the canonical-shape norms as noted by Heath (1989).

We have observed a tendency among our informants to use a set of phonological processes such as truncation, consonant-cluster simplification and disyllabification. Some examples appear to involve vowel centralization like in[sərtafi:ka] (certificate) for the French item "certificat", and [paʀɑʂju:n] for the French item "opération" (surgical operation). Individual speakers use these linguistic items in particular contexts when discussing particular topics. This loss concerns truncation when a segment or a syllable is lopped off from the whole word. Illustrative examples may be [fərmli] for "infirmier" (male nurse), and [trisinti] for "éléctricité" (electricity).

In general, consonant clusters do not receive intensive variation because OrA syllable structure is different from that of CA which is based principally on CV recurrent structure. Nonetheless, some reductions take place, mainly in stem-final position. For example, the French word "arbitre" (refree) involves a consonant loss and therefore realized as[ʔarbit] or [larbit]. In-depth analyses are needed to depict all the phonological processes relevant to borrowing like epenthesis and metathesis, but it is not our concern here to discuss these issues. Our objective is simply to have a look on some of the frequently attested processes when borrowing takes place in OrA system.

2.1.3. Morphological adaptation of French verbs

In an attempt to identify the regular Fr to MA dia-systemic segmental conversions, Heath (1989) searches for the verbal paradigms that should be taken as the prototype for French verb borrowings. The observations of the morphological behaviour of the basic inflected forms of the conjugations {–er}, {-ir} and {–re} have led him to choose the participle as a prototype form. For instance, the French borrowings /diklara/, /rijja:ʒa/ and /kuvra/ produce varying morphological patterns and therefore raise classificatory problems.

Like MSA, OrA has a non-concatenative morphology structure and hence the formation of verbal and nominal constructions does not follow the linear French patterns. Put otherwise, OrA morphology is insertional in which vocalic patterns are inserted among radicals. Conversely, French morphology depends mainly on the

addition of affixes to the stem and therefore different variants form the various categories in French. So, the selected forms {diklar-}, {dikuvr-} and {swiv-} receive phonological and morphological incorporations relevant to OrA structure and will be treated as part of the receipt language's lexis. Furthermore, the morphosyntactic integration of these verb loans occur via the insertion of the cyclic affixes corresponding to different morphological markers, mainly gender, number, tense and aspect. Table (1) illustrates the integrations of French verbs (1st, 2nd and 3rd groups) into OrA systems:

	French verbs	**AA loan words**		**Significance**
		perfective	**imperfective**	
1st group	Abonner Arranger Bricoler Briller Bronzer Déclarer Déranger Foncer	[ʔabon-a] [ʔaonʒ-a] [bloka] [brijja] [təbronza] [diklar-a] [dironʒ-a] [fons-a]	[jʔ-abon-i] [j-ʔaronʒ-i] [ja-blok-i] [jabrijj-i] [jatəbronza] [j-diklar-i] [j-dironʒ-i] [j-fons-i]	'he subscribe-s/d' 'he sort-s/ed out' 'he block-s/ed' 'it shines/shone' 'get/got sun-tan' 'he annoys/ed' 'he charge-s/d at'
2nd group	Choisir Découvrir Élargir Épanouir Envahir Fournir Servir	[ʃwaz-a] [dikuvr-a] [ʔilarʒ-a] [ʔipanuw-a] [ʔonvaj-a] [fuːrn-a] [sərb-a]	[j-aʃwaz-i] [j-dikuvr-i] [j-ʔilarʒ-i] [j-ʔipanuww-i] [j-ʔonvaj-i] [j-furːn-i] [j-sərb-i]	'he selects/ed' 'he discovers/ed' 'he extends/ed' 'it flourishe-s/d' 'he invade-s/d' 'he provide-s/d' 'he serve-s/d'
3rd group	Éteindre Joindre Peindre Reprendre Recevoir Rendre Suivre	[ʔitanj-a] [ʒwanj-a] [bəntar] [rəprən-a] [rəsəv-a] [rond-a] [swiːv-a]	[j-ʔitinj-i] [ja-ʒwanj-i] [j-bantər] [j-rəprən-i] [j-rəsəv-i] [j-rond-i] [j-swiːv-i]	'he switches/d off' 'he joins/ed' 'he paint-s/ed' 'he takes/ took back' 'he serve-s/d' 'he favour-s/ed' 'he follow-s/ed'

Table 1. Morphological integration of borrowed French Verbs

2.1.4. Morphological adaptation of French nouns

Adapted French nouns are constructed via a combination of a nominal stem and affixes marking gender and number. In OrA nouns, gender depends largely on the presence or the absence of a final {-a} in nouns. The same pattern is applied on French borrowings: those items showing a final {-a} are feminine and those lacking this morphological marker are masculine. However, gender is not predictable all the time in French words. Some cases show several fluctuations and many irregularities, certain masculine words in French become feminine words in OrA. Thus, these linguistic items follow the OrA regular segmental conversion rules and subsequently a categorization ambiguity is generated. The example[tɑ:bla] "table" for French (table) illustrates this regular conversion rule.

OrA expresses the relationship of possession on the basis of pronominal affixes attached to the noun like {ʂɑ:ɲba} "a friend" → {ʂɑɲbətti} "my friend". French borrowed possessive constructions are produced following the same pattern in some cases, as in {loʈo-ti} "my car", {famil-ti} "my family" and {valiz-ti} "my suit-case". Nonetheless, French substantives inserted in synthetic constructions like {binôm-i} are very restricted.

Nominal French borrowings are produced in accordance with morphological regular patterns in OrA. Both regular and irregular plurals (suffixal and ablaut plural in Heath's terminology) are widely attested in OrA, they either receive the suffix {-aat} or OrA internal change. Illustrative cases are: {kamju}→ {kamjonaat} (a lorry→lorries) from the Fr "camion" -PL- "camions", and {loʈo}→{lwɑʈɑ} (a car→cars) for "l'auto-pl-autos" in Fr (automobiles). The plural suffix {-aat} may be realized {-waat} and/or {-jaat} according to the final vowel of the noun. They generally occur in words which end in /-u/ and are morpho-phonemically motivated, as in[triku]→[trikuwwa:t] (sweater, sweaters) for French (tricot, tricots), and[ka:ji]→[kajijja:t] (copybook, copybooks) for French (cahier, cahiers).

Another less productive pattern is the suffix {-a}which occurs mainly in cases of the plural of agentive /CVCCaC/ and /CVCCi/, as in: [ʈɑllɑ:b]→ [ʈɑllɑ:ba] for the French items "mendiant → mendiants" to signify (beggar → beggars in English). Similarly, the same morphological scheme is followed in the formation of the plural of the word[bəzna:si]→[bəzna:sa] for the English equivalents "businessman/ businessmen". Moreover, there are instances of nominal stems formed on the basis of a historical linguistic form[2]. The initial borrowing in

[2] There are loans which are constructed via a process of back formation. According to Heath a back formation is a historical process by which certain forms are morphologically derived from initial borrowing. That is, once back formation occurs, the original form functions as a marked form.

these cases is the plural form of an item while the loan word is constructed by analogy. The masculine noun[zufri] "a worker" is formed on the basis of the French plural noun "les ouvriers". A similar case is that of [zɑlɑmeṭ] "match" which is based on the French plural "les alumettes".

The instances of French loan words listed in this section are not necessarily occurring in our corpus. Some instances are drawn from OrA speakers in order to exemplify some of the relevant phonological and morphological processes which occur when Fr loans enter the OrA lexicon. Besides, these mechanisms will help to clarify the distinction between CS, B and nonce-borrowing. Contrary to the distinction between CS and CM, the difference between these processes appears to be decisive in the analysis of our corpus. In fact, the analysis of mixed-codes depends fundamentally on the identification of the real switches in the mixed constructions.

3. Psycholinguistic conversion rules in borrowing

The bilingual speakers resort to different communicative strategies to accomplish certain conversational tasks; they refer either to borrowing or Code-Switching. What is important to know is that when borrowing is involved, not only the abstract structures of the donor language are compared with the recipient language's morphosyntactic frames but a non-conscious socio-pragmatic scheme will be at work. Bilingual speakers are aware not only of the dia-systemic rules but also the socio-psycholinguistic associations connected to the selected linguistic items. Under such circumstances, the individual speakers follow the same regular patterns upon which there has been an agreement in the speech community.

At this level, we are concerned with the mechanisms that the bilingual speaker undertakes when borrowing, Code-Switching and other types of language change are involved in discourse despite of the difficulties to treat the psycho-linguistic aspects of language-contact outcomes. Haugen (1953:383) points out this fact, he states that: *"unfortunately, we are unable to watch the mental processes directly, and can only guess at them by observing their results and comparing those results with what the speakers themselves report about their own mental experiences".*

One way of approaching the psycholinguistic aspect of borrowing is Myers-Scotton's model (2002). The assumption that underlies this model is that: "all lemmas in the mental lexicon include three levels of abstract lexical structure, namely Lexical-conceptual structure, Predicate-argument structure, Morphological realisation pattern" (Myers-Scotton ibid: 194). What is interesting in this model is the distinction that Myers-Scotton has made between the processes involved in Code-Switching and borrowing. She treats both phenomena as processes and outcomes.

This approach can explain the different mechanisms relevant to adaptation in borrowing. In lexical borrowing, a new phonological element is introduced into the receipt language with its semantic pattern. These lexical items mostly keep their structural properties and hence illustrate cases of borrowing and single inserted words in classic Code-Switching.

Lexical borrowings often introduce lexical entries[3] with new phonological shapes and sometimes with a rough change in their semantic content. In cognitive terms, what happens in borrowing is that part of the abstract lexical structure mainly the morphological properties derive from the host language and the other part preserves the formal structure of the donor language. For instance, the adapted verb /jat?anflijansa/ *"he is influenced"* preserves the formal properties of the stem "influenç-(er)" and imports the phonological representations. These outlines about Myers-Scotton's model of bilingual language processing will be used to unravel the main psychological procedures explained in other approaches. Some concepts associated with Myers-Scotton's theories of information processing and markedness principles will be exploited to revise Croft's scheme to interpret some of contact-induced phenomena.

Croft's scheme (2000) treats contact-induced changes insisting presumably on some aspects of borrowing and Code-Switching in connection to the formation of new linguistic entities. At the beginning, the individual speaker wants to use a concept. He has various options, either he chooses an already-existing word and patterns for that concept **(normal replication)**, uses a word and a pattern which did not exist before **(altered replication)** or opts for a new form rather than an old pattern **(propagation)**. Croft signals that the two processes (innovation and propagation) are similar to Weinreich's (1968) dichotomy "Actuation vs. Transition".

A change takes place when speakers introduce elements to their primary language, it begins as an innovation. The items that catch on will be propagated in the whole speech community. Once a new item penetrates to the host language, a competition between old and new forms operates. The individual speaker has to select among competing items the appropriate form suitable to the context of situation. In case the new form is selected, the propagation process starts.

A set of possible causes which lead to propagation, creativity and analogy are the most recurrent. Code-Switching illustrates this competing process of selection. At the conceptual level and more specifically at the mental lexicon level, lemmas from ML and EL find themselves in on-going competition.

Croft considers CS as a possible cause of innovation and propagation, he insists on what he has termed "causes and mechanisms" of change. He distinguishes between the various causal mechanisms on the basis of their outcomes (stability,

[3] A lexical entry consists of a lexical item and its morphological properties. These morphological shapes are associated to lemmas in the mental lexicon. Lemmas comprise then all the morphosyntactic and semantic properties associated to a word form. In monolingual mode, once lemmas are accessed at the formulator level, they activate the corresponding morphosyntactic information (number, gender, tense …) connected to such items. In bilingual language processing, however; lemmas associate two different abstract lexical structures belonging to two languages. The resulted lexical entry depends on the degree of adaptation of the source language item. It depends on whether phonological representations are mixed solely, whether stems are partially integrated or singly occurring donor language items are adopted.

innovation or propagation) and the way they are achieved intentionally or non-intentionally. This distinction may be operating in differentiating Code-Switching from borrowing.

For "normal replication" (the maintenance of the uniform structure of the system), the **intentional** mechanism is to conform to the conventions or the set of rights and obligations established for the whole speech community. Croft calls this non-intentional mechanism "entrenchment"[4].

The example that illustrates the distinction between the intentional wish to conform to the conventions and the non-intentional selection of what is most entrenched is the use of core and cultural borrowings. The words /du:χa/ and /zaff/ are OrA on-the spot items to refer to some symptoms of a particular illness. This use is *entrenched* in the grammar of the individual speaker. Here, the selection process is non-intentional since the use of the above elements is random. Under other circumstances the bilingual speaker uses rather words like *"vertige"* (dizziness) and *"bourdonnements d'oreille"* (buzzing) to express a certain degree of proficiency in French (university students). These innovations may be intentional or non-intentional. But, what is certain is that the causal mechanisms that trigger off such a use are likely to be intentional. The bilingual speaker feels that these are the appropriate items to be used in a medical surgery.

The same mechanisms operate at the lexical-conceptual structure in Myers-Scotton's model; the selected items appear in a way to correspond to the speakers' intentions. Thus, the frequency of occurrence of the OrA items increases their degree of entrenchment and hence achieves normal replication. In the same way, the recurrence of French equivalents achieves the propagation of the innovation. The motivation for borrowing these new categories is generally explained through the notion of "lexical gaps".

The intentional vs. non-intentional distinction seems to adequately explain loan translations or calques. Most of structural borrowings may start as non-intentional innovations. The influence exerted on the recipient language leads speakers to imitate unconsciously the structural patterns of the prestigious language (the case of OrA and Fr). These borrowed grammatical patterns will acquire a stable status and establish themselves as an integral part of the receipt language. Other works adopt a functional explanation. The explanations of these types of borrowing are referred to as functional motivations.

Borrowing occurs because of "systemic gaps", i.e., because a language possesses a function expressed through a particular form that the other language lacks. These cases are considered as *"replacements"* or *"morphological renewal"* as observed in Weinreich (1953). For instance, the expression #jɦawwus ʕla

[4] Entrenchment in cognitive theories and frameworks refers to the degree of the speaker's knowledge about an element, be it a single item, a whole construction or a syntactic frame.

bra f ku:ma tæːʕ qaʃʃ # is based on a French pattern "chercher une aiguille dans une botte de foin" (look for a needle in a haystack/haymow) but this does not mean that it occurs to fill systemic gap but rather because of a structural compatibility (Heath, 1978) between OrA and Fr. It seems that Croft's intentional causal mechanisms for selection and innovation explains better the occurrence of lexical and structural borrowings.

Croft's approach also adopts a functional or communicative explanation of Code-Switching. CS serves several motivations such as accommodation, identity construction and expressiveness. Bilingual speakers may resort to CS in order to identify themselves with a certain group (the case of Berber speakers in an AA context). What about the distinction between borrowing and Code-Switching? Does the model offer any insight?

The difference between Code-Switching and borrowing is related to the word's degree of entrenchment and its intentionality. In fact, Croft proposes two dimensions in his suggestion, diachronic and synchronic. He does not question the how and why of the occurrence of loans and real switches but focuses mainly on the previous dimensions. According to Croft, a **conventionalised foreign** word is a borrowing whatever the motivation behind its use and **an intentionally** used foreign word is a codeswitch no matter the degree of its conventionalization. If the process of selection is intentional, the causal mechanism will be the motivation for lexical choice. Bilingual speakers may choose a particular item because of its appropriateness to fit the desired meaning or because of the indexical value loading that item.

The analysis of contact-induced changes reveals several remarks, both on the theoretical and empirical sides. Our aim is two-fold: we have tried to discuss some ambiguous theoretical findings and test their empirical validity on our data.

4. Conclusion

The analysis of the linguistic variables observed among university students lead us to conclude that adaptation strategies are not sporadic dia-systemic rules but rather regular analogical conversions. The respondents' linguistic behaviour has shown regular patterns of imported French words and larger constructions. They adhere to variable routines when adapting French nominal and verbal stems. These adaptation routines disclose certain asymmetries and hierarchies, nouns are more borrowed followed by verbs and then come the other categories which range on a continuum. A predominance of the morphological adaptation in verbs has likewise been observed. The same remark holds true cross-linguistically. Haugen (1953: 536) explains this tendency on functional grounds by stating that: *"the centrality of the verb in the sentence supplements the fact that tense is an obligatory category in (at least) the Indo-European languages"*.

The linguistic behaviour of the respondents varies from a context to another. For instance, they produce more adoption in certain contexts when discussing specific topics. In fact, adoption is used when treating topics related to studies and university problems. Adaptation is, however, used consciously or unconsciously to

fulfil certain communicative functions such as, humour and emphasis (the case of the word that denotes "light stop" and most of the repetitions noted in the corpus). The degree of adaptation varies considerably from one speaker to another.

Several layers of French loans display the degrees of adaptation. Our informants sometimes resort to full integrations, partial and intact French items in other cases. It seems that the degree of adaptation is determined by the speaker's degree of proficiency. Proficient speakers in French (mainly girls) use French because of prestigious connotations. Hence, attitudes and beliefs play a role in shaping speech patterns. Bauman (1998) points out that there is a correlation between the degree of integration and the degree of bilingualism. This joins Al Khatib's (2003) reflective approach of CS typologies.

We claim that the degree of adaptation is determined by the speaker's degree of proficiency. Proficient speakers in French (mainly girls) use French because of its prestigious connotation. So, attitudes and beliefs play a certain role in shaping speech patterns.

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