

An Environmental Understanding of Culture and Speaking: The case of prosody

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Abstract: *This research tries to investigate the link between cultural constraints and the difficulties faced by EFL users when speaking. The main objectives are: first, to find a theoretical grounding with which the link of the socio-cultural environment to language can be explained and second, to find an effective method of investigation that proves the existence of a socio-cultural influence on EFL users rendering and specially speaking. Finally, the research will show that the four socio-cultural dimensions (environment, language, gender and age) have an important effect on EFL learners' oral-expressive rendering (speaking).*

Key Words: *Sociocultural, Understanding, Age, Gender Speaking, Environment.*

Résumé : *À travers recherche, nous avons essayé d'étudier le lien entre les contraintes socio-culturelles et les difficultés rencontrées par les étudiants EFL en termes de parler. Nos principaux objectifs sont les suivants : d'abord, nous tenterons d'identifier une base théorique susceptible d'expliquer le lien entre l'environnement socio-culturel et la langue. Ensuite, nous essayerons de trouver une méthode efficace d'enquête qui prouve l'existence d'une influence socio-culturelle sur les rendements des étudiants de EFL et plus spécialement en terme de parler. Enfin, l'enquête a montré que les quatre dimensions socio-culturelles (environnement, langue, sexe et âge) ont un effet important sur les rendements oraux-expressifs des étudiants.*

Mots clés : *socioculturel, compréhension, âge, le parler sexué, environnement.*

1. Introduction

Historically, geographical expansion that provided different environmental conditions remains the only logical and accepted explanation to linguistic variety within a linguistic super family (SWADESH, M, et al, 2006: 40). New languages began to emerge with new forms and sounds, as users of the proto-languages moved toward new areas. It does not exclude culture from the context, quite the contrary, since the process of culture implies the adaptation of people to nature in a social way. It is believed that the process of cultural development was occurring simultaneously with linguistic development (DOLGOPOLSKY, A, 1998). This links back to the question of the cultural and linguistic

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correlation not as assertion but as an allusion to the fact that the two developed under the same conditions.

2. Speaking and Culture

The most addressed part in language, either as a study or a process is speaking (OTTENHEIMER, H, 2007: 258). This is due to its important function as the daily means of communication. It is used by most of the human beings. Communication, if considered as the process of conveying relevant meanings, is affected by many constraints that are related to specific contexts (i.e. one's culture). These constraints often come in the form of norms, moral values or standards of evaluation.

Logically, in order to make a successful communication, speaking has to be the fit representative of these constraints. Therefore, from a structuralist view, the paradigmatic axis in a human's mind (axis of words' coherent selection) would undergo other levels of meaning selections than just the grammatical one (SAUSSURE, F, 1983: 121) - e.g.: the following set of words: {the, dog, is, singing} are words that underwent correct grammatical selections to form the sentence "the dog is singing", but they have not undergone an accurate meaning selection because it is a scientific fact that dogs cannot sing. This would put the speaker in an obligation to adjust his choice to a more meaningful selection such as selecting other words in his mind that fit a convenient meaning such as: replacing the verb singing with barking or replacing the noun dog with man, which would put the sentence "the dog is barking" and "the man is singing" in a more meaningful position.

While communication implies more adaptations of speech to context, speakers are going to move deeply toward other levels of meaning selection e.g.: the following selection of words: {am, eating, dog-meat, dish} would form the sentence "I Am eating a dog-meat dish" as a meaningful selection for some dog-meat eating cultures such as South Korean or some Chinese societies, but not in our society because eating dog's meat is something that may appear unacceptable for the majority of us. Objectively speaking, it can be said that because eating dog's meat is unusual to happen in our society. Thus, the selection that is best fit in our context is to select another word in order to adjust the meaning to our culture e.g. saying: "I am eating cow-meat dish". This would be more accurate in our context not for the reason that the first sentence is impossible to say or to happen, but that the second is part of our habits and norms and it might be produced spontaneously without any fear of judgments since there is a unanimity that makes this sentence part of our habits. It is thought that the same could happen when using different registers or language styles in irrelevant situations as for example using boyish register with girls as a further case: the word "dear" in the English environment is an adjective that can be used either in an intimate or a friendly way between the two genders but in our context this word which means: " 'Azizi" or " 'Azizati" is not broadly used in a friendly way between a boy and a girl because it is a special word that often indicate intimate feelings. Corson (CORSON, D, 1991: 31) believes that word meanings are the crystallization of the perpetuating social values.

It is believed that the constraints alluded to in the above would put the EFL speaker who is aware of the meaning of that word hesitating about uttering such a word in an English conversation with the opposite gender. Supposedly, this hesitation would manifest

itself in some stuttering forms such as blocks and prolongation of sounds (WORLD HEALTH ORGANIZATION, 2010: Stuttering). It is thought that the cause of this form of hesitation is rarely explained by teachers maybe for the deep analysis it requires or the confusing nature it has, since hesitation can be provoked by many different causes than the one already mentioned. Logically, many elements such as culture, gender, age would intervene on the paradigmatic axis but varying in manner from a language to another. This stresses the importance of habits in the selection of accurate word combinations while performing the speaking action which makes any alien entity that is not included in daily life habits in need to time and context to integrate our habitual behavior.

These concepts are believed to be part in the components of thought. Consequently, they are very important tools of the mind with which mental processes such as categorization, influence, memory, learning and decision making are executed. This represents a universally accepted truth. Though, the nature of concepts and what are the constraints that act and govern on a set of concepts is a controversial matter caused by the opposition of some approaches in their analysis of the mind, language, culture. This was the core struggle about relativism whether or not our habits are honed by the surrounding environment which makes adapting other views or habits in order to proceed with things quite difficult (CHOMSKY, N, 1975: 3 FF & PINKER, S, 1994: 57-60).

In this regard, It is important to note that the formation of habit is relative to the environment, thus habits formed in some environments may go in conflict with habits that have been shaped in other environments i.e. in 1999 five American people who were celebrating the Texas Longhorns Team victory, were arrested in front of the Vatican after showing publicly the "longhorn" gesture. This gesture in the American society is a greeting called "Hook 'em up" and it is inspired from the longhorn cow that is bred exclusively in Texas. In the Italian society the same form is known as "Corna" which means conjugal infidelity or satanic fidelity (PEASE, A, & B, 2004: 125) and maybe this was inspired from the permanent link between the concepts of "Evil" and "Satan" under the influence of the catholic beliefs.

However, in order to escape this controversy about differences in culture and thoughts, and base the claim of this research on a more reliable fact concerning the issue of speaking difficulties, it was necessary to leave the controversial matter of how languages affected the mind for its complexity. This is why it limited in the second half to: the relativity of specific forms of sound production to specific languages and how it can be difficult for speakers to adapt to foreign sound forms. and their influence on foreign language learning. This is strongly involved with the automaticity of the mind (BARGH, J, 1994:1ff). Once again, it is logical to think that mind's automaticity patterns are relative to the habitual activities performed by the individual, thus, expecting from students to perform automatic-like or fluent speech in foreign languages would be quite difficult for someone who had been exposed to a different pattern of automaticity.

3. Speaking and Prosody

As a whole, spoken language carries two aspects, linguistic form and meaning. Logically, the most prominent and distinct element that is discernible between languages, is their sound or their spoken form simply because it is the most sensitive part to linguistic variation (IVERSONN P, et al., 2003: 49) and mainly to the sense of hearing. As part of

speaking, this research is interested in prosody as a concept that encompasses all sound phenomenon to explain how speaking can be relative to the typology of a given language. Again, this part comes as a completion to the previous one. It aims at introducing speaking from a partial linguistic view. This means that less interest will be given to grammatical or semantic dimension of the languages, but will try to focus on prosody as an intermediary concept between speaking and habits (TROUVAIN, J, & GUT, U, 2007: 53).

In linguistic literature, definitions of the term "prosody" cover many facts where the field of application goes beyond the phoneme, to treat elements such as: syllable, accent, rhythm, tone, intonation, flow speed and pauses. In other contexts, the term of prosody is relative to the field it is used in. In poetry for example it is defined as being the set of rules governing the verses. In music, prosody means the study of concordance between the text and the music within a song (ibid.: 13). The fact that prosody has earned a specific definition to each field cited above is the proof of its prominence and sensitivity in speech. Certainly, each field has a common concern which is language and mainly the spoken form.

Just as grammar, there are many definitions of prosody according to the field it is treated in (Ibid.). In linguistics, prosody is defined by David Crystal as: "The linguistic use of pitch, loudness, tempo, and rhythm." (CRYSTAL, D, 1987, ed 2010: 268). In another context he follows:

Prosody is the variations in pitch, loudness, speed, rhythm, and pause combine to provide the spoken equivalent of the visual organization and contrastivity of a written text. Question-answer sequences, parenthetic utterances, rhetorical climaxes, and many other features of speech which involve a sequence of sentences are usually signaled through the use of prosodic effects. Several spoken genres, such as radio news bulletins and sports commentaries, are also notable for the way they use prosody to demarcate topics and types of activity. (CRYSTAL, D, 1995, ed 2003: 232)

The given definition is intended for common knowledge (ibid.). A more technical definition is provided by Akhmanova who states: "By 'prosody' we mean the distinctive alterations of pitch, force, intensity, duration, tempo, etc. which together form intonation contours" (AKHMANOVA, O, 1973:11). She follows with a clarification of the term which is often confused with the study of prosody: "The study of these phenomena of sound is called prosodics and is accordingly subdivided into melodics, dynamics, pausation, the study of semiologically relevant changes of tempo, etc."(ibid.). The interest goes to the description of prosody as a phenomenon and not as a field of study.

It has been proved that prosody is a rhythmic function in the brain and this is through the diagnosis of prosodic pathologies. The observation of these pathologies allowed discovering the areas responsible of prosodic production and recognition in the brain. This could be done either by relating some prosodic dysfunctions to the physically damaged areas on the brain or through magnetic-resonance imaging. However, prosodic dysfunctions that come in a form of traumatic related pathologies can also be observed, according to Williamson (WILLIAMSON, J, et al. 2003), in healthy individuals with nearly the same signs of dysfunctions. The following elements are thought to be factors that can affect prosodic elements, mainly pitch and rhythm.

4. Environment (nature)

Environment is axial in relation to the other variables because it is pervasive. In other words, nature has obvious effects on language, gender, and age conditions. It is meant by environment: the natural surroundings in which individuals are consciously or subconsciously affected (BARNETT, E, & CASPER, M, 2001: 465) & (ERRUPTINGMIND: 2015). These settings might be related to prosodic variation because:

First, climatic conditions can have an effect on voice performance reminding that any organism is sensitive to heat and cold, thus the same for body organs. The different geographical zones on which Algeria and English speaking countries are situated and their different climatic natures may affect the vocal performance of their inhabitants. An example can be found in the difference between American and British English. It is often said that: "someone has an American voice or a British voice" (ANTIMOON: 2015). This is justified by the fact that there are not only differences in grammar or pronunciation between the two dialects, but there are also voice conditions that have led to American pronunciation (DAVIES, C, and 2005:73). On this it is thought that voice types may vary depending on climatic conditions.

Second, nutrition plays a major role in body condition; vocal cords being made of mucous membranes of lamina propria (see '4. Age' below) are highly affected by the former. Mucus secretion can vary according to the nutrients the human body receives, and thus affects voice condition. Some nutrients have also an effect on vocal cords flexibility such as beetroot that is said to temporarily paralyze vocal cords and permanently cause them to be tense adding to a rough tongue condition (HEALTH-CARE ORGANIZATION, 2015). It is important to point that beetroot is cultivated and consumed mainly in north Europe and United States. Furthermore, tobacco and alcohol consumption which also puts speech organs in a rough condition considering that the United States, United Kingdom and Algeria were ranked by the World's Health Organization, respectively, 39 and 65 and 75 out of 121 countries in tobacco consumption in year 2011, And ranked 43 and 18 and 179 out of 191 countries in alcohol consumption in year 2004 (WORLD HEALTH ORGANIZATION: 2011).

Speaking about vocal cords natural flexibility, scientists are unable to synthesize efficient supplements for Elastin however some nutriments may have an effect on it. It is also believed that zinc and keratin would affect or support elastin in (see age below) the human body. Furthermore, the consumption of magnesium present in some dietary supplements such as banana, spinach, cacao, carob and fish has countless effects on the human body but mainly in nerve relaxation and memory loss prevention. It is believed that a deficiency of magnesium might cause nervous tension in body organs and provokes nervous behavior to the individual (LIDE, D, 2006: 10-202). Generally, all these elements are thought to have serious effects that may differentiate between societies' linguistics conditions because their degree of availability differs between geographical areas.

5. Language (region)

Language is the most important variable in this part because it directly affects prosody. Departing from the principle that prosody is a production of sequences of sounds and supra-segmental elements following a specific order present in a spoken language. It

would be possible to believe that language falls in the most influencing position since it represents the prosodic essence or core. Languages being different from one another influence all the prosodic elements, pitch and rhythm and stress. This can be explained through the following points.

First, phonotactics is a field of phonetics that studies the possibilities and restrictions of sounds' arrangement within a language. Its existence is the evidence on how structural varieties are deep between languages. Students being faced to speak their native language as a daily habit will find it difficult to adapt themselves to new sound combinations, for example: syllabic consonant.

A study carried out by Kenneth De-Jong and Zawaydeh (DE-JONG, K, & ZAWAYDEH, B, 1998:19) where students were asked to repeat a set of declarative and interrogative sentences showed that even if English and Arabic are situated in the same rhythmic typology as stress-timed languages their stress do not fall on the same syllable in words of the same syllabic complexity. Another point that should be mentioned here is the quality of emotional prosody in each language (Arabic and English). The way affirmations, exclamations and interrogations also seriousness, happiness and hilarity are expressed in each language is obvious in matter of distinction, because they are not produced with the same intonational manner or modulation (*ibid.*).

Second, morphosyntactic structures do not exist in the same form in all languages, the case of Arabic and English is more than obvious. The difference begins from the morphological level where in Arabic many transformations (infixes) occur inside the word for inflectional or derivational purposes reaching the syntactic structure where the word order is different and so the branching of the morphosyntactic elements. This would create different patterns of speech rhythm if the structural cuts inside words and sentences that will be produced later in a form of stops are considered (*ibid.*, 1998: 4).

6. Gender

From an anthropological view, talking about gender means the social difference not the biological one that is labeled by "sex". Nevertheless, considering the situation in our country, the two labels sex and gender are of equal values. This variable concerns mainly the element of pitch, even if studies have shown evidence about differences in the cognitive perception and conception of rhythm for males and females (HOMMA, M, et al., 2004: 113 & TIME MAGAZINE, 1992: 38). A study was conducted by Sluijtera and Heuvenb (SLUIJTERA, A, HEUVENB, V, 1996) also showed the difference in stress and focus production between males and females.

The effect of gender on prosody is primarily physical since men and women do have different sizes of vocal cords. Women do range from 12.5mm to 17.5 mm and men having from 17.5mm to 25mm (TITZE, I, 1994). This anatomical difference in vocal cords gives male and female different pitch ranges. A study was conducted by Fitzsimons (FITZSIMONS, M, ET AL., 2001) on which they tested 10 short sentences pronounced twice by 10 adult males and 10 adult females. First they were asked to speak it in a declarative form then in an interrogative form. The results showed the presence of that physical difference in normal speech. In this regard and according to Fitzsimons (*ibid.*), the emotional speech being more spontaneous makes the variety of pitch wide. Considering this fact, and the phonotactic difference between languages, foreign

languages would present more different pitch ranges for each gender than in their original language. This may provide either restrictions or extra effort that can be handled only by the most developed and flexible vocal organs, if not, this would present a speech disorder (HOMMA, M, et al., 2004).

Another effect, a social one, is caused by gender differences and can affect prosody in a foreign language which is the interference between sexist and neutral languages. Native speakers of the so called "sexist languages" would find it difficult to adapt themselves to a neutral language that would erase part of their social identity or mix it with another one. This would happen at an advanced stage of awareness in language learning, in fact, this could have been more suitable to foreign language speakers if neutrality would be real because taking the example of the word "human", the only gender that is neutralized here is the feminine which raises considerations about this imbalance (HBU.EDU: 2015) and many similar cases that would affect foreign language users' motivation to speak.

In a practical case, students are not in an authentic English environment so the sources they are going to perceive English from may not fit the perception they have about themselves. This may cause a kind of hesitation because the English they produce do not seem fitting with the sources they are used to hear from. This may develop later as an autistic habit that will surely hinder students' performance (WIRE, V, 2005: 2). Probably, teaching materials and sources (teachers) are limited and cannot fit all the voice ranges of foreign language learners. An example of that is a male student who perceives English from a female teacher, when being asked to repeat the teachers' speech. During the administration of selection questionnaire to the students, they were asked whether requesting them to repeat information during the course would matter if the teacher was of the opposite gender, 75% of the students answered that they would feel a little embarrassed. This is maybe due to the unfitting: one, register (content) used by the teacher or two, by the suprasegmental capacity difference in speech performance.

7. Age

The factor of age also presents a changing position of voice perception and production. First, while aging, voice constantly changes till the old age (VOICEMEDICINE: 2015). Vocal cords are composed of mucous membranes of lamina propria that gains flexibility from a protein called elastin (SHIELDS, G, 2004: 3). This protein is synthesized in the human body; it is first released in gradual increasing amounts till it reaches the maximum amount by the end of the growth stage or early adulthood (from 35 to 39 years) and then starts to decrease as the human grows older. This can be explained through aging effects on the body such as wrinkles and flexibility loss. Elastin plays on vocal cords' tension and flexibility it also allows the latter to get back the normal natural form after making any effort. The variation in amounts of elastin causes various states to the individual's voice.

Nevertheless, age represents the degree of awareness. The more students are experienced in language learning the more they will know how to deal with their deficiencies (ROSS, C, & MIROWSKY, J, 2008:1). Aging has also a link to emotional control which is an important feature of emotional speech. It is supposed that the more foreign language speakers grow older the more they will be able to control their verbal flow. (HUANG, B, & JUN, S, 2011: 6)

8. Conclusion

In the second half of this work the interest was limited to the superficial level of speech as an attempt to avoid the vagueness and debates involved with the first section. Interest was set on what is believed to be evident facts of linguistic relativism. This was done by linking between the typological differences of languages and the variation of sound structures and thus to speaking through the concept of prosody.

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