

French-Borrowed Lexemes in Persian: A Study on General Tendencies of Sound Change

Abstract

French, the main language of France, is a Romance language of Indo-European family. It developed from spoken Latin of northern Gaul, whereas Persian is a modern Iranian language which developed from Old Iranian. Persian is mainly spoken in Iran, Tajikistan and Afghanistan. French and Persian both belong to the Indo-European Language family. Persian language has been influenced from French since the beginning of 20th century. This influence has been continued till this age of technology, modernization and globalization, in which Persian has multiplied the lexical copying of French words. These words are being spoken and written in modern Persian language which are estimated in thousands. In this qualitative study, we are going to investigate the effects of these borrowings, with a special focus on the analysis of sound change among French-borrowed lexemes. The causes and the root of borrowings will also be discussed. The made the categories of these pronunciation differences in order to investigate how the Persian pronunciation of these French-origin words differs from standard French spoken in France. This study will help people to understand the cultural and linguistic relations between French and Persian speaking communities of the world. It will also help us to understand the change in modern Persian language.

Keywords: French; Persian; Pronunciation; Vowels; Consonants.

1. Introduction

Persian language possesses a large number of French words being used in this language since nineteenth century. Our study investigates the sound change among the pronunciation of these French-origin words in Persian language. Let us, first, have an overview on the history and development of French and Persian languages, separately.

French is a Romance language which is part of the Indo-European languages (Smith 427). Other languages of Romance include: Italian, Sardinian, Spanish, Portuguese, Galician, Catalan, French, Occitan and Romanian (Ponchon 517; Wright 896). It is developed from Old French, whose birth is traditionally linked to the document named as Oaths of Strasbourg (842 AD), a document containing oaths by the troops of two grandsons of Charlemagne concerning the partition of his empire. The Old French refers to all the dialects of northern and central France spoken between 9th and 14th century. The term is most commonly identified, especially in the last step, with Francien, the discourse of the Île-de-France region around Paris (Walker 780).

The French language can be found back to a variety of Latin spoken in northern Gaul, this variety got changed by contact with the language of Celtic people who used to live in this area before the arrival of Romans and secondly, after the decline of the Roman Empire the language of the Germanic people influenced the language of this area (Smith 427).

The French is spoken in France as a native language. The Article 2 of the 1958 constitution of France defines it as the language of the republic. It is important to mention that French is spoken with several dialect varieties in France, especially in the south of France (Durand & Eychenne 34). In 2014, 97% of the population of France (mainland) could speak French (Wolff 19).

The French is also spoken in some departments and regions which are geographically very far from France as well as from each other, such as Martinique and Guadeloupe which is located in the Caribbean Sea, Guyana is found in South America, and Réunion and Mayotte are located in the Indian Ocean. These departments and regions form the DROMs (Overseas Departments and Regions) of France. French is the important language in these departments and regions of France which are very far from France (Pustka & Ledegen 69). In these departments and regions, French coexists with more than fifty languages of France out of the

seventy-five officially listed. In 2014, 83% of the population of Overseas France could speak French (Wolff 19).

In Europe, it is spoken in France, Belgium, Luxembourg, Switzerland and in a small region in northern Italy called as the Valle d'Aosta. French has the status of official language in Canada with English. French is equally the official language of some of the French territories which are found overseas and very far from the Metropolitan France situated in Europe. The majority of these territories are found in the Pacific Ocean, Indian Ocean and in the Caribbean. All French ex-colonies situated in African continent have maintained French as their official language. It is important to note that French is also being used as the language of diplomacy and international communication. In the formation and working of the European Union, French has also played an important role (Smith 427).

Now, let us have an overview on Persian language. Persian is the official language of Iran. It's one variety known as Dari is the official language of Afghanistan with Pashto and another variety called as Tajiki is the main language of Tajikistan (Windfuhr & Perry 416-7). The Persian of Afghanistan is generally referred to as *Farsi* by Tajiks, *Parsi* by Pashto speakers, and *Dari* by the Government of Afghanistan (Kieffer 501-516). The standard written Persian has been officially called *Dari* since 1964 (Farhadi & Perry 276-280). It is known as 'Farsi' by its native speakers, which originated from the region of 'Fars' in southwestern Iran (Zanjani 356). After the Arab invasion in the 6th century, the term 'Pars' was used as 'Fars' in official documents written in Arabic as the /p/ sound does not exist in Arabic language. 'Farsi' is now the term used for the official language (Karimi 324). Persian, an Indo-European language, is the language of Iranian group, which belongs to the Indo-Iranian branch (Windfuhr 1; Karimi 324).

The rise of Persian started with the rule of Persian speaking dynasties (Karimi 324), firstly by the Achaemenids (c.558-330 BC), then by the Sassanids (224 BC - 65 AD) (Windfuhr

& Perry 416). Persian has undergone only minor morphological, phonological and syntactic changes over the last 11 centuries. The lexicon of Farsi has been highly influenced by borrowings from Arabic. It has been estimated that 65% of the vocabulary used in modern novels and short stories is of Arabic origin (Karimi 325).

2. Review of Literature

It has been studied that due to language contact, a great majority of languages of the world have got the tendency to take the words and terms from other languages. In modern times this tendency has been multiplied due to advancement in the fields of science and technology. The study of influences of other languages on Persian reveals that it has also been influenced by other languages. The Arabic has been the most influential language on Persian. The others include Mongolian, Turkish, English, Russian and French (Razi 478).

The French is considered as a rich source of academic, scientific, technical terms in Iran. The elements of French grammar have also been borrowed in Persian. The influx of French language in Persian includes the words related to medicine, construction, cosmetics, agriculture, military, aviation, furniture, transportation and automobiles. In modern times, most of the borrowed vocabulary belongs to French language (Razi 478). What is the reason behind this French linguistic influence? We tried to find out the answer to this question in the following lines.

The main causes of the influence of French language in Iran include the establishment of French schools in Iran, the coming of French teachers and trainers in Iran and the establishment of *Dar ul-Funun* (Behrami & Bare Nia 31). Its history goes back to the commencement of the relations with France which initiated under the rule of Fatah Ali Shah from Qajar dynasty (1797-1834). This period is known as the period of political instability which resulted in the increase of foreign influences in Iran (Razi 478), including political,

social and financial influences. In this era the relations between England and France were not good. Russians had advanced towards Iran. The relations between Iran and Ottoman rulers were also unfavorable. At that time Napoleon was ruling over France, Alexander over Russia, and East India Company over India. So, Iran became a land to be used for political war of the countries like Russia, England, France. Russia and France both powers wanted the diminution of the power of England over India. Iran, having its strategic position, could be proved a helping land for this purpose (Mehr 5).

In 1801, Alexander of Russia attacked Georgia and Cocos in order to reach India. For this purpose, Napoleon wanted friendship with Fatah Ali Shah of Iran so that he could attack India by passing through Iran and could overturn the rule of England in India. But in order to counter the project of Napoleon and Alexander and to make good relations England signed a treaty with Iran. Tehran received British diplomates for this purpose and in the reply Iranian diplomates went to Europe (Mehr 5). On the other hand, in 1807, Fatah Ali Shah and Napoleon signed the first treaty known as the 'Treaty of Finckensein'. In this treaty France promised to help Iran to send back the Russian forces from area and that France would give training to Iranian Army on European standards. Due to these global issues, Iran became a partner of international politics (Mehr 5).

Thus, close relations among Iran and France developed very quickly. Iranians got education and trainings from France. French schools were opened in Iran. So, the history of French language learning in Iran is very old. During Qajar period, French became the first foreign language to be taught in Iranian educational institutions (Behrami & Bare Nia 29). The relations between Europe and Iran developed much better during Qajar period and European literature including prose, verse, short story and novel became popular in Iran. It resulted in the beginning of translations of foreign works into Persian. So, a large number of new words

entered into Persian. Even some Iranian writers started writing Persian in European style. These Persian writings appeared so different from original Persian style (Shafaq 379).

Among the other reasons of increasing influence of French language in Iran include the establishment of *Dar ul-Funun* (meaning Polytechnic). It was established in 1851 at Teheran and was the premier leading Iranian institution of higher education (Ekhtiar). Iranians were facing a big problem in finding latest text books in Persian language for the fulfilment of national needs. So, the project of the translation of books was given to the foreigner teachers of *Dar ul-Funun*. These books included the books on armed forces (especially armory, map reading etc.), the books on science (like Medicines, Chemistry and Mechanics etc.). These foreigner teachers among the Iranians who had good command over French language translated these text books into Persian language. This also had an impact over Persian language (Areympur 259).

First, the French teachers started teaching French language in schools but later, with the establishment of this institution, they joined it and did translation works. In 1857, another institute of this kind was formed in Tabriz. The focus of this institute was on military and scientific education. After it, different institutes were opened in other cities of Iran like, Humayun School of Isfahan, Saint Louis School, Saint Jaroff School, Jean Duc School etc. In these schools, most of the teachers were French. Persian and French languages were being taught officially in these school until 1926 (Behrami & Bare Nia 31).

Then during the rule of Raza Khan Pehlvi in 1941, the Iranian students got chance to go to France for higher studies. This became a turning point on the influences of French language in Iran. Even French language became a need among literate and elite class of Iran. In order to learn French language and culture, the children form rich families used to get privates classes and tuitions as well (Behrami & Bare Nia 29). After second world war English

language gained importance in Iran and became second language leaving French as third. Even then, the number of French language learners is very high in Iran (31).

On this topic, the researchers have found the related literature in Persian and English. First, we will describe what we found in Persian. The work of (Razi) entitled *Tarekhe kamile Iran aztaseese Maad ta inqeraze Qajarieh*, describes the history of French language in Iran. An Iranian researcher (Shafaq) in the book titled *Tarekhe Adabiat Iran* has given the history of French teaching and learning in Iran. (Areynpur) another Iranina author in his book named *Az saba ta Nima* gives the details of French language teaching in this land. (Mehr) a Pakistani author in his book *Fikere Azadi* has also discussed the history of French influence in Iran. (Behrami& Bare Nia) has produced an article with the title *Zabane Faranseh dar Iran*. This article, published in Persian research journal *Rushd e Zabane Amozeshe Zabanhaye Khariji*, the history of teaching and learning of Foreign languages in Iran. Another article written by (Soltanian) entitled *Chegonag in afooz o gustarishe zabane faranseh dar Iran, batakieh bar naqshe madaris: Az aghaze doraye Qajar ta Jange jahaniyikum*, published in the journal named 'Historical Science Studies' gives a complete overview of the commencement of French language in Iran.

Among the literature found in English, the researchers studied the works of (Ekhtiar). She has studied on the history of Darl al-Funin. Her Ph.D dissertation titled presents in detail the role of this institution in the enhancement of modern knowledge in Iran. In 2001 this author wrote an article on the historical evolution of this institution. Another article written in English by (Moghaddam & Moghaddam) studies the semantic change among the French loanwords in Persian.

Here, we would like to present the comprehensive literature on phonology of French and Persian languages. As reported by (Detey & Lyche 23-25), the pronunciation of French is not homogeneous, in Europe, America and Africa in particular. According to (Boula De

Mareüil 31) the pronunciation of standard French corresponds to a certain Parisian pronunciation, today conveyed by radio and television and most of the mainstream media being based in Paris. Thus, in the phonemic inventory of standard French, we found 36 phonemes in total, which include 16 vowels, 17 consonants and 3 semi-vowels (Argod-Dutard 41).

As for as French vocalic system is concerned, it has a system of 16 vowels (12 oral and 4 nasalized) (41). The oral vowels include: /i y u e ø o ε œ ɔ ə a α/ and the nasalized vowels: /ẽ ã õ ã ã/. French vowels are all monophthongs, which have three values (front, center, back) for backness and four values for height. In French, there are sets of rounded and unrounded front vowels whereas all back vowels are rounded (Fougeron & Smith 73). According to (Abry et Abry 27), there are four articulatory features that allow the French vowels to be opposed: the place of articulation, the aperture, the rounding of the lips or the retraction and nasality.

For (Handke, 2012) French is the only Romance language which has the following vowels which are rounded and front: /ø œ y/. Thus, in French, there is a double series of front vowels: one with the lips apart not rounded, another with the lips rounded. According to (Abry et Abry 27) lips play a big role in French. They are not only rounded but often pushed forward.

Among all these vowels, the /ə/, is called as *schwa*, has a special place in French. It is a central vowel, which is produced without special articulatory effort. This vowel is found in several languages of the world. For (Durand & Eychenne 15-16), great care must be taken to distinguish this phonetic schwa (which is a true central vowel in the sense of the API), from the French phonological schwa (also known as *e muet*, *e caducou e instable*), that we meet in words like *semaine*, *petit*, *je*, *te*, etc. The French schwa represents a phonological behavior rather than a phonetic reality: although it is often transcribed /ə/ for convenience, in most native French varieties it is in fact an elidable vowel whose timbre can range from [ø] to [œ] (*petit* [pøti]~[pti]).

For (Detey & Lyche 26-27), schwa /ə/ is a complex point as well as an essential part of the phonology of French. They explain that concerning the schwa, it should be understood that it is about the alternation between presence and absence of a vowel (normally transcribed <ə> without accent, *petit*: /pəti/ vs /pti/) whose timbre most often varies between [ø] and [œ] ([pøti]/[pœti]). According to (Léon et al. 10), there was a historical distinction between the front open vowel /a/ and the back open vowel /ɑ/ as in words: mal [mal] vs. mâle [ma:l], but the back vowel /ɑ/ disappears in the modern pronunciation of standard French.

Vowels			
	Front Unrounded	Front Rounded	Back
Close	i	y	u
Mid-Close	e	ø	o
Mid-Open	ɛ̃	œ	ɔ̃
Open	a		ã

Table 1: Vocalic inventory of French [borrowed from (Detey&Lyche25)]

As stated by Majidi & Ternes (2007), Persian has six vowel system /i u e o æ ʊ/. Three vowels /e o æ/ are short whereas the other three /i u ʊ/ are long. There are three articulatory features: height, backness and roundedness. All front vowels /i e æ/ are unrounded whereas all back vowels /u o ʊ/ are rounded.

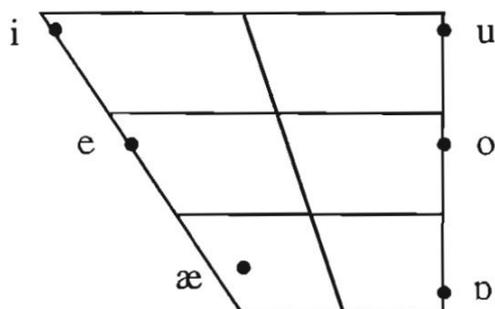


Figure 1: Persian Vowels [borrowed from (Majidi & Ternes, 2007)]

The French vowels which are absent in Persian vocalic system include: /a ɑ ɛ ø œ ɔ y ə/ and the nasalized vowels: /ɛ̃ ɔ̃ œ̃ ɑ̃/. We have tried to find out the French-borrowed Persian lexemes having these vowels in original French lexemes in order to study the tendency of sound change.

3. Significance of the study

This study is significant in that it touches upon an important area of linguistics: phonetics and phonology. Previous work has only focused on the historical and political events that resulted with the emergence of the Franco-Persia relations. We have not found any document studying the sound change among the French-borrowed lexemes of Persian language. So, we can say that this article will be the first one of this kind. The main objective of this study is to identify and describe the sound change of the borrowing words from French into Persian. We hope that our research will be valuable for the researchers working on the sound systems of language of the world. It will also help us to understand the evolution in modern Persian language.

4. Research questions

The following are the main questions to be answered by this study:

1. What are the general tendencies of sound change in French-borrowed Persian words?
2. To what extent the pronunciation of borrowed words is different from the standard French?
3. What is the pronunciation of silent letters of French?

5. Delimitation

The research work is delimited to the sound changes of those French-borrowed words which are being used commonly in Persian language. In this study our focus is only on those lexical items which have undergone change in sound.

6. Method

This research is a descriptive qualitative research. Our analysis of pronunciation is based on an articulatory approach, which will allow us to detect general tendencies of pronunciation of French-origin words among the Persian speakers. The corpus contains lists of French-origin words written in Standard orthography in *Naskh* style as it is commonly used in Persian. The word lists are made keeping in mind the words having the following oral vowels /y œ ø ε ə a/, nasal vowels /ɔ̃ ã ě/ and consonants /ʁ ɲ w ʔ/ found in original French words, as these phonemes are absent in the phonemic inventory of Modern Standard Persian. The researchers recorded and transcribed, in International Phonetic Alphabet, a list of these most common French loanwords articulated by 42-years-old male native Persian speaker originally from Tehran, Iran residing in Islamabad, Pakistan. We are aware that our research may have some limitations which underline the unavailability of native Persian speakers in Pakistan. This is the reason that we found only one participant for our study.

The recordings were made in a quiet room with a sound recorder. The words were presented, one by one, with PowerPoint software in the conventional form of *Naskh* writing, on an HP branded laptop screen. We prepared lists of these words in the following order: (1). French-origin Persian lexemes having those vowels which are absent in the phonemic inventory of Persian, (2). French-origin Persian lexemes having those consonants which are not found in Persian sound system. The authors made the work of Majidi & Ternes as the reference for the phonemes of Persian language and for French the reference was the document produced by Fougeron & Smith.

The phonetic transcriptions in French are based on the pronunciations given in Larousse dictionary online (<https://www.larousse.fr/dictionnaires/francais-anglais>) using IPA symbols.

7. Results and Discussion

In this section, we are going to present the findings of our study. The obtained data was analyzed descriptively using the works of Fougeron & Smith (1993) for French and Majidi & Ternes (2007) for Persian. In the following lines, we will discuss different categories of phonemes, separately. We have not found the examples covering all the phonemes, but we have tried to cover most of the phonemes in order to see the sound change that occurred in Persian pronunciation of French-borrowed lexemes. In each category, the French-borrowed Persian word has been written in Persian script which is followed by French orthography, then the French pronunciation has been given which is followed by an arrow and in the last the Persian pronunciation of the same word is given.

7.1. Vowels

The pronunciation of the following oral vowels /y œ ø ε ə a/ was investigated in the Persian pronunciation. The Persian lacks the series of front rounded vowels /y œ ø/ of French. So, these vowels are pronounced differently in French-borrowed lexemes used in Persian. The front close rounded vowel /y/, is pronounced as the back rounded close vowel /u/ by Persian speaker. In this way, the following sound change has been observed in the following words: اورژانس ‘urgence’ /yʁʒɑ̃s/ → /urdʒɑ̃ns/, اونيفورم ‘uniforme’ /ynifɔʁm/ → /uniform/, سوژه ‘sujet’ /syʒɛ/ → /suʒe/, اتوبوس ‘autobus’ /otɔbys/ → /otobus/, پاندول ‘pendule’ /pɑ̃dyl/ → /pɒndul/.

The front mid-open rounded vowel /œ/ is simply replaced by the back mid-close rounded vowel /o/ in Persian. We noted it in the following words: اندیکاتور ‘indicateur’ /ɛ̃dikɑtœʁ/ → /indikɒtor/, آسانسور ‘ascenseur’ /asɑ̃sœʁ/ → /ɒsɒnsɒr/, موتور ‘moteur’ /mɔtœʁ/ → /motor/, ترور ‘terreur’ /tœʁœʁ/ → /teror/, مبل ‘meuble’ /mœbl/ → /mɒbl/.

The Persian sound system lacks the open-mid front unrounded vowel /ɛ/, so this vowel is pronounced as the close-mid front unrounded vowel /e/ by Persian speaker. In this way, the following sound change has been observed: اتمسفر ‘*atmosphère*’ /atmɔsfɛʁ/ → /tɒtmosfer/, اسپانیول ‘*espagnol*’ /ɛspɑɲɔl/ → /espɔɲjɔl/, اکسیژن ‘*oxygène*’ /ɔksizɛn/ → /oksiʒen/, املت ‘*omelette*’ /ɔmlɛt/ → /omlet/, پرائنز ‘*parenthèse*’ /pɑʁɑ̃tɛz/ → /pɔrɔntɛz/.

The mid central vowel /ə/ of French is replaced by the backclose-mid rounded vowel /o/ in Persian pronunciation, as: شومینه ‘*cheminée*’ /ʃəmine/ → /ʃomine/. In some other words, it is replaced by the close-mid front unrounded vowel /e/ as, ژله ‘*gelée*’ /ʒəle/ → /ʒele/, رتوش ‘*retouche*’ /ʁətuf/ → /retuf/.

In Persian we found the open back rounded vowel /ɒ/ instead of the open front unrounded vowel /a/. Thus /a/ changes to /ɒ/ in the following words: سینما ‘*cinéma*’ /sinema/ → /sinɛmɒ/, بنان ‘*banane*’ /banan/ → /bɔnɔn/, سالاد ‘*salade*’ /salad/ → /sɔlɔd/, آرتیکل ‘*article*’ /ɑʁtikl/ → /ɔrtikl/, آسید ‘*acide*’ /asid/ → /ɔsid/.

The Persian lacks the world initial consonant clusters starting with ‘s’. So, the front unrounded close vowel /i/ is added as an epenthetic vowel to break the cluster. The researchers noted it in the following words: استراتژی ‘*stratégie*’ /stʁateʒi/ → /istrɔteʒi/, استاسیون ‘*station*’ /stasjɔ̃/ → /istɔsjɔn/, استاندارد ‘*standard*’ /stɑ̃dɑʁd/ → /istɔndɔrd/, اسکی ‘*ski*’ /ski/ → /iski/, اسپسیال ‘*spécial*’ /spesjal/ → /ispesjɔl/.

Three most common nasalized vowels of French are /ɔ̃ ã ẽ/. In Persian pronunciation of French-borrowed words, these nasalized vowels are denasalized with the addition of voiced dental nasal consonant /n/ after the vowel. Here are the examples:

The open-mid back rounded nasal vowel /ɔ̃/ is simply replaced by the /on/ sequence in Persian. We noted it in the following words: شامپیون ‘*champion*’ /ʃɑ̃pjɔ̃/ → /ʃɔmpjɔn/, دکوراسیون

'*décoration*' /dekɔʁasjɔ̃/ → /dekorɔʁsjon/, کارتن '*carton*' /kartɔ̃/ → /kɔʁton/, قولون '*colon*' /kɔlɔ̃/ → /kolon/, کامیون '*camion*' /kamjɔ̃/ → /kɔmjon/.

The the open back unrounded nasal vowel /ɑ̃/ is simply replaced by the /ɔn/ sequence in Persian. We noted it in the following words: اکران '*écran*' /ekʁɑ̃/ → /ekrɔn/, مامان '*maman*' /mamɑ̃/ → /mɔmɔn/, آژان '*agent*' /aʒɑ̃/ → /ɔʒɔn/, آبونمان '*abonnement*' /abɔnmɑ̃/ → /ɔbɔnmɔn/.

The open-mid front unrounded nasal vowel /ɛ̃/ is replaced by the sequence /en/, for example: انستیتو '*institut*' /ɛ̃stity/ → /enstitu/, ساتن '*satin*' /satɛ̃/ → /sɔten/, انژکسیون '*injection*' /ɛ̃ʒɛksjɔ̃/ → /enzɛksjon/, مانکن '*mannequin*' /mankɛ̃/ → /mɔnken/, آنتن '*antenne*' /antɛn / → /ɔnten/.

In French words where the word-final 'e' is silent, in Persian it is pronounced in some words, as: روسیه '*Russie*' /ʁysɪ/ → /rusije/.

7.2. Consonants

In this part we are going to present our findings about the Persian pronunciation of the French words having different types of consonants. We are going to present the consonants, separately, according to their mode of articulation. French phonemic inventory includes the following consonants: /p b t d k g f v s z ʒ l ʁ m n ɲ w j ɥ/. Among these consonants the following four are absent in Persian sound system: /ʁ ɲ w ɥ/. But our study reveals that the other consonants have undergone sound change. Let us start with plosives.

7.2.1. Plosives

The French language has six plosives in its phonemic inventory: /p b t d k g/ (Fougeron & Smith 73), whereas the Persian possess the following seven plosives: /p b t d k ʔ/ as stated by Majidi & Ternes. The unvoiced plosives /p, t, k/ in Persian, are strongly aspirated in word-initial position, whereas in other positions these plosive consonants are slightly aspirated. So,

these aspirated plosives are also present in the French borrowed words especially at word initial positions.

In Persian the dental unvoiced plosive consonant /t/ is pronounced in some words where in French it is silent at word-final position. For example: شکلات 'paquet' /pake/ → /pøkət/, پاستور 'chocolat' /ʃəkɔla/ → /ʃokolɒt/, پاسپورت 'passeport' /paspɔʁ/ → /pɒspɔrt/, سکرت 'secret' /səkʁɛ/ → /sekret/, بلیت 'billet' /bijɛ/ → /belit/.

In Persian the dental voiced plosive consonant /d/ is pronounced in some words where in French it is silent at word-final position. For example: استاندارد 'standard' /stɑ̃daʁ/ → /istɒndɔrd/, میلیارد 'milliard' /miljɑʁ/ → /miljɔrd/.

In Persian the voiceless velar plosive consonant /k/ is pronounced in some words having the letter 'c' at word final position whereas in French it is silent. For example: تاباک 'tabac' /taba/ → /tɒbɒk/.

The voiced velar plosive consonant /g/ is pronounced as voiced velar fricative /ɣ/ in some words. For example: مغازه 'magasin' /magazɛ̃/ → /mɒɣɔze/.

7.2.2. Fricatives

The French has 6 fricatives /f v s z ʃ ʒ/, whereas the Persian has nine fricatives: /f v s z ʃ ʒ x ɣ h/. All French fricatives are present in Persian sound system. We have found the following sound change among the fricatives:

In Persian pronunciation the word-final 'f' is pronounced as the voiced labiodental /v/ in the wordslike: ابرکتیو 'objectif' /ɔbʒɛktif/ → /ɔbzɛktiv/, روتاتیو 'rotatif' /ʁɔtatif/ → /rotɒtiv/, سوبژکتیو 'subjectif' /sybzɛktif/ → /subzɛktiv/, اکتیو 'actif' /aktif/ → /ɒktiv/, آلترناتیو 'alternatif' /altɛnatif/ → /ɒlternɒtiv/.

In French the letter ‘g’ is pronounced as /ʒ/ when it comes before the letters ‘i’, ‘e’ and ‘y’, in Persian it is sometimes pronounced as the voiced postalveolar affricates /dʒ/, as like: بودجه ‘budget’ /bydʒɛ/ → /buddʒe/.

In French the glottal consonant /h/ is silent but in Persian it is pronounced. So, its pronunciation has been observed in the following words: هکتار ‘hectare’ /ɛktaʁ/ → /hektɔr/, هتل ‘hôtel’ /otɛl/ → /hotel/, هلی کوپتر ‘hélicoptère’ /elikɔptɛʁ/ → /helikoptɛr/, هروئین ‘héroïne’ /heroin/ → /ɛʁoin/.

In some Persian words the letter ‘x’ is realized as /kz/ instead of /ks/, as like: ماکزیموم ‘maximum’ /maksimɔm/ → /mɔkzimom/.

7.2.3. Affricates

The French language does not possess the affricates whereas the Persian has two postalveolar affricates /tʃ, dʒ/ unvoiced and voiced. It has been observed that /ʃ/ in French borrowed words is pronounced as /tʃ/ in some words like: چک ‘chèque’ /ʃɛk/ → /tʃɛk/.

7.2.4. Nasals

There are three nasal consonants in French phonemic inventory /m n ɲ/: voiced bilabial /m/, voiced dental /n/ and voiced palatal /ɲ/. The Persian has only two nasals /m, n/. So, the French-borrowed words having voiced palatal nasal /ɲ/ are pronounced differently in Persian pronunciation. In French orthography, ‘gn’ represents the voiced palatal nasal consonant /ɲ/. It has been observed that there are different pronunciations for the ‘gn’ in different situations, like: ماگنولیا ‘magnolia’ /maɲɔlja/ → /mɔɲɔljɔ/, شامپانی ‘champagne’ /ʃɑpaɲ/ → /ʃɔmpɔni/, آلمان ‘Allemagne’ /almɑɲ/ → /ɔlmɔn/.

7.2.5. Trill

In French phonemic inventory the alveolar trill /r/ does not exist. The letter ‘r’ gives the sound of voiced uvular fricative consonant [ʁ]. So, the French loanwords containing the letter ‘r’ are always pronounced in Persian as alveolar trill /r/. Here are some examples: رژ ‘rouge’ /ʁuʒ/ → /ruʒ/, رادیو ‘radio’ /ʁadjo/ → /rɔdjo/, تیراژ ‘tirage’ /tiraʒ/ → /tirɔʒ/, سوپر ‘super’ /syʁɛʁ/ → /super/, شارژ ‘charge’ /ʃaʁʒ/ → /ʃɔrʒ/.

7.2.6. Approximant

The French has one palatal approximant consonant /j/. In French orthography the double ‘l’ gives palatal consonant sound /j/. In Persian it is pronounced simply as single dental lateral approximant consonant /l/. So, its pronunciation has been observed in the following words: گوریل ‘gorille’ /gɔʁij/ → /gɔril/, مدال ‘médaille’ /medaj/ → /medɔl/, میلیارد ‘milliard’ /miljar/ → /miljɔr/, بلیط ‘billet’ /bijɛ/ → /bilit/, فامیل ‘famille’ /famij/ → /fɔmil/.

In some French-borrowed Persian words this double ‘l’ is not pronounced. So, its pronunciation is absent in the following words: گیومه ‘guillemet’ /gijmɛ/ → /gijome/, گیوتین ‘guillotine’ /gijɔtin/ → /gijotin/.

8. Conclusion

In this study, the researchers have tried to present the general tendencies of the pronunciation of some modern Persian words of French-origin articulated by a native speaker of Persian language. We found a large difference between two pronunciations especially in vocalic category. We made the categories of these pronunciation differences in order to understand how the Persian pronunciation of French words differs from modern standard Persian spoken in Iran. The French vowels which are not found in Persian vocalic system include: /a α ε ø œ ɔ y ə/ and the nasalized vowels: /ẽ ã õ ã/. Among the consonants the following four are absent in Persian sound system: /ʁ ɲ w ʁ/.

The French language possesses a series of front rounded vowels /y œ ø/ which are totally absent in the Persian pronunciation. The close front rounded vowel /y/ is pronounced as close back rounded vowel /u/ in Persian pronunciation. The open-mid front rounded vowel /œ/, the close-mid front rounded vowel /ø/ and the open-mid back rounded vowel /ɔ/, these three vowels are pronounced as the close-mid back rounded vowel /o/. The mid central vowel or schwa /ə/ as the /o/ and in some words as front close-mid rounded /e/. The front open-mid unrounded /ɛ/ as front close-mid rounded /e/. The front open unrounded /a/ as back open rounded /ɒ/.

In Persian pronunciation of nasalized vowels /õ ã ã̃/ in French-borrowed words are denasalized with the addition of voiced dental nasal consonant /n/ after the vowel. The voiced uvular fricative /ʁ/ becomes voiced alveolar trill /r/ in Persian words of French-origin. Certain French letters are silent especially at word-final position, but in Persian pronunciation, we noted that they are pronounced thus giving the consonants like /t d k h/.

So, in this way, we found a lot of sound change among the French-borrowed Persian words. This pronunciation differs largely from the pronunciation of Modern Standard French as spoken in France.

Works Cited

- Abry, Dominique & Abry, Julie Veldeman. *La Phonétique : Audition, Prononciation, Correction*, CLE International, 2007.
- Areynpur, Yahya. *Az saba ta Nima*, Inteshar Zawar, (1372) 2003.
- Argod-Dutard, Françoise. *Éléments de Phonétique Appliquée*, Armand Colin, 1996.
- Behrami, Nekukhawah & Bare Nia, Huda. “ZabaneFaransehdariran”. *Rushd e Zabane Amozeshe Zabanhayeh Khariji*, Autumn 1390, vol. 100, 2011, pp.27-32.

- Boula De Mareüil, Philippe. “Les accents et la variation”. *La prononciation du français dans le monde, du natif à l’apprenant*, CLE International, 2017, pp. 30-33.
- Detey, Sylvain & Lyche, Chantal. “Le français de référence et la norme”. *La prononciation du français dans le monde, du natif à l’apprenant*, CLE International, 2017, pp. 23-29.
- Durand, Jacques & Eychenne, Julien. “Élément de linguistique générale”. *La prononciation du français dans le monde, du natif à l’apprenant*, CLE International, 2017, pp. 12-22.
- Durand, Jacques & Eychenne, Julien. “Le français méridional”. *La prononciation du français dans le monde, du natif à l’apprenant*, CLE International, 2017a, pp. 34-38.
- Ekhtiar, Maryam. *The Dar al-Funun: Educational reform and cultural development in Qajar Iran*, Ph.D Dissertation, New York University, 1994.
- Ekhtiar, Maryam. “Nasir al-Din Shah and the Dar al-Funun: The Evolution of an institution”. *Iranian Studies*, Vol. 34, 2001, pp. 1-4.
- Farhadi, Rawan & Perry, J. R. “Kāboli”. *Encyclopaedia Iranica*, Vol. XV, Fasc. 3, 2009, pp. 276-280.
- Fougeron, Cécile & Smith, Caroline L. “French”. *Journal of the International Phonetic Association*. vol. 23, no. 2, 1993, pp. 73–76.
- Handke, Jürgen. “Comparative Phonology”. *The Virtual Linguistics Campus*, 2012, (URL: <https://www.youtube.com/watch?v=dHL1gglwVZ4>)
- Karimi, Simin. “Farsi”. *Encyclopedia of Linguistics*, vol. 1, Fitzroy Dearborn, 2005, pp.324-327.
- Kieffer, Ch. M. “Afghanistan v. Languages”. *Encyclopaedia Iranica*, Vol. I, Fasc. 5, 1983, pp. 501-516.

- Léon, Pierre et al. *Phonétique du FLE, Prononciation : de la lettre au son*, Armand Colin, 2009.
- Majidi, Mohammad-Reza & Ternes, Elmar. "Persian (Farsi)". *Handbook of the International Phonetic Association: A Guide to the use of International Phonetic Alphabet*, 8th edition, Cambridge University Press, 2007, pp.124-125.
- Mehr, Noor Muhammad Khan. *Fikere Azadi*, Iran-Pak Institute of Persian Studies, 2004.
- Moghaddam, Azadeh Sharifi & Moghaddam, Farimah Farrahi. "A Semantic Change Model for French Loanwords in Persian". *Acta Linguistica Asiatica*, 3(2),2013, pp. 71-86.
- Ponchon, Thierry. "Indo-European 4: Romance". *Encyclopedia of Linguistics*, vol. 1, Fitzroy Dearborn, 2005, pp.517-521.
- Pustka, Elissa & Ledegen, Gudrun. "Le français dans les DROM". *La prononciation du français dans le monde, du natif à l'apprenant*, CLE International, 2017, pp. 69-72.
- Razi, Abdullah. *Tarekhe kamile Iran aztaseese Maad ta inqeraze Qajarieh*, Kazim Zadeh (ed.), Inteshar Iqbal, (1363)1984.
- Shafaq, Razazadeh. *Tarekhe Adabiat Iran*, Tehran: Inteshar Ahang, (1369) 1990.
- Smith, J. J. "English, Middle English". *Concise Encyclopedia of Languages of the World*, Elsevier, 2009, pp. 351-356.
- Soltanian, Dr. Abu Talib. "Chegonaginafooz o gustarishé zabane faranseh dar Iran, batakieh bar naqshe madaris: Az aghaze doraye Qjar ta Jange jahaniyikum". *Historical Science Studies*, vol. 4, no. 1, University of Tehran, 2012, pp.111-131.
- Walker, Douglas C. "Old French". *Encyclopedia of Linguistics*, vol. 2, Fitzroy Dearborn, 2005, pp. 780-782.

Windfuhr, Gernot & Perry, John R. "Persian and Tajik". *The Iranian Languages*,
Routledge, 2009, pp.416-544.

Windfuhr, Gernot. "Introduction to the Iranian Languages". *The Iranian Languages*,
Routledge, 2009, pp.1-4.

Wolff, Alexandre. (Coord.) *La langue française dans le monde*, Nathan, 2014.

Wright, R. "Romance Languages". *Concise Encyclopedia of Languages of the World*, Elsevier,
2009, pp. 896-897.

Zanjani, Habib. "Fārs vi. Population". *Encyclopaedia Iranica*, vol. IX, Fasc. 4, 1999, pp. 356-
360.