

The Structure of the Consonant Patterns in the Spanish Speech Sound Chain as a Clue of Typological Closeness

Yuri Tambovtsev.

Novosibirsk Ped. University, Novosibirsk

yutamb@hotmail.com

Spanish is said to belong to the group of Romanic languages of Indo-European family. Besides Spanish, Romanic group includes Portuguese, French, Italian, Rumanian, Moldavian and some other minor Romanic languages.

Spanish, as any other human language, has a specific structure of the speech sound chain. It can be distinguished by its structure from any other language. Every language has a unique structure of distributions of speech sounds in its phonemic chain. The distribution of Spanish vowels will not be considered till the second stage of the investigation. Let's point out that consonants bear the semantic load in the word, not vowels. Therefore, it is more possible to understand the meaning of the message by consonants, rather by vowels. However, if we fail to recognise and distinguish two languages, then we resort to the structure of occurrence of vowels in the speech sound chain. While comparing languages, it is necessary to keep to the principle of commensurability. Having it in mind, it is not possible to compare languages on the basis of the frequency of occurrence of separate phonemes, because the sets of phonemes in languages are usually different. The articulatory features may serve as the basic features in phono-typological reasoning. First of all, it is the classification of consonants according to the work of the active organ of speech or place of articulation (4 features: labial, front, palatal, and velar). Secondly, it is the classification from the point of view of the manner of articulation or the type of the obstruction (3 features: sonorant, occlusive and fricative). Thirdly, it is the classification according to the work of the vocal cords (1 feature: voiced). In this way, 8 basic features are obtained: 1) labial; 2) front; 3) mediolingual or palatal; 4) back or velar; 5) sonorant; 6) occlusive; 7) fricative; and 8) voiced consonants. One should take the values of the frequency of occurrence of these 8 features in the speech chain of Spanish and compare them to those of the other Romanic languages. On the basis of the "chi-square" test and Euclidean distance, we have developed our own method of measuring the phono-typological distances between languages (Tambovtsev, 1994-a; 1994-b). It takes into account the frequency of occurrence of the 8 consonantal groups mentioned above to measure the overwhelming mosaic of the language sound picture. Having compared Spanish to some languages, we received the following phono-typological distances:

Spanish – Esperanto	6.15
Spanish – Portuguese	7.91
Spanish – Latin	7.98
Spanish – Italian	8.35
Spanish – Rumanian	9.26
Spanish – French	13.39

As a conclusion, we can state that speech sound picture of Spanish is the most similar to Esperanto. One can explain it by the fact that Esperanto uses many Latin roots in the same way Spanish does. It is not a surprise that Spanish is close to the sound pattern of Portuguese or Latin. Actually, Latin is the parent language of all Romanic languages, thus Spanish uses many of its roots. Spanish is rather far away from the language which is geographically close, i.e. French, which undergone so many phonetic changes. It is logical that Spanish and French are distant from each other by the phonostatistical point of view. In fact, sound pattern of French is more different to that of Spanish, than Spanish to the rest of the Romanic languages. Our data state that the speech sound pattern of Spanish more or less resembles that of the other Romanic languages. Latin, the parent language for all the Romanic languages, gave all Romanic languages but French its sound system. We must point out, therefore, that it is not a coincidence that Portuguese, Italian and Romanian are more similar to Spanish than French. It was no surprise for us that Spanish consonants are distributed more similar to Portuguese, than Italian or Rumanian, because they were in the closest contact for many years.

References:

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