

Linguistics

Contrastive Analysis of Consonant Systems **/On the Material of German, English and Georgian Languages/**

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(Presented by Academy Member Avtandil Arabuli)

ABSTRACT. Representatives of small nations today than ever before are "doomed" to multilingualism. Thus, contrastive studies can largely simplify foreign language learners to overcome those difficulties, that they may face in L_2, L_3, L_x language acquisition process. In multilingual communities it is always important not only to make it easier to a language learner to master one foreign language but also it is necessary to support him/her on the basis of gained experience, to pick up another one in the optimal period of time. Thus, the reality of our country was the main motivational factor to be interested in contrastive analysis of the languages as it is practice-oriented linguistic approach that seeks to describe the differences and similarities between a pair of languages. The contrastive linguistics is understood as a subdiscipline of linguistics that tries to analyze interlingual similarities and differences using different contrastive methods. The subject of this investigation embraces both language resources and speech purposes and cultural aspects of the language as well. The aims of the CL can be both, of internal and external linguistic nature. The latter requires an interdisciplinary collaboration. The comparison of languages on the basis of the contrastive method could be regarded as a branch of both the theoretical and applied linguistics. We tried to describe the peculiarities and differences of the consonant inventories of German, English and typologically different Georgian languages, for which they require a special effort from the language learners. Theoretical and applied CA, as pointed out at the outset, the importance of language comparison goes beyond practical/pedagogical applications and is of great interest in a theoretical as well as in an applied perspective. It reveals what is general, and what is language specific and is therefore important both for the understanding of languages in general and for the study of the particular languages. "Correct" pronunciation is one of the fundamental components in a foreign language acquisition while "Wrong" pronunciation, due to its frequency, is the most ear-catching event. Describing the consonant inventories of compared languages, we show fundamental similarities and differences among them. We try to illustrate those peculiarities that condition phonemic, phonetic, allophonic and distributive/combinational difficulties. We also analyze how firmly the phonemic-phonetic regularities of the long established borrowings in Georgian from the above-mentioned European languages are protected. © 2016 Bull. Georg. Natl. Acad. Sci.

Key words: contrastive analysis, distributive/combinational difficulties, sound contrasts, phonemic-phonetic regularities

Table 1. German and English consonant systems in comparison [1].

	bila- bial	labio- dental	den- tal	alve- olar	postal- veolar	pala- tal	velar	uvular	glottal
plosiv	p b		t d				k g		(ʔ)
nasal	m		n				ŋ		
vibrant								R	
frika- tiv		f v	<u>θ</u> <u>ð</u>	s z	ʃ ʒ	ç	x	χ ʁ	h
Affri- kate	pf			ts	tʃ dʒ				
appro- ximant	<u>W</u> ^s		<u>ɹ</u>			j			
lateral- appr.			l						

Contrastive Analysis (CA) is the systematic comparison of two or more languages, with the focus on the differences, rather than the similarities. CA provides a theoretical as well as an applied perspective for contrastive comparison of languages. As a branch of an applied linguistics CA aims to establish the basis for practical purposes, e.g., in foreign language teaching and translation studies. An example of comparison based on form alone is provided by contrastive analysis in the domain of phonology.

Consonant Systems

Before starting the contrastive comparison of German, English and Georgian consonant phonemes, let us consider the consonant inventories. The diagram presents German and English consonants where the non-existing phonemes in German are put in separate shadowed cells.

As from the CA of these three phonetic inventories can be seen, the phonemes existing in one system (e.g., Georgian) are not observed in the second or third ones.

Thus, the German-speaking English language learner often meet the sounds that are less identical to their native language ones[1]:

o /T/ and /D/: interdental or post-dental (/T/ voiceless, /D/ voiced);

o /tS/ and /dZ/: post-velar affricates;

o /w/: semi-vowel.

o /tS and /dZ/ by German speaking English language learner is not perceived as unfamiliar, because they are met in German too, though these sounds are not considered to be one phoneme. They are mainly observed in phonemic pairs and at the border of the word [2]. As Meinhold and Stock argue unknown consonants are partially correctly pronounced. The reason of this according to Scherer and Wollmann [3] may be that in the pronunciation of [θ] and [ð] "lisp" is understood as an unconscious mistake and that is why these sounds are not pronounced this way. As for Weiher [4], he thinks that substitution of above mentioned sounds by non-modified [s] or [z] occurs very rarely.

Interdental fricatives [θ] and [ð] do not exist in the German and Georgian languages. But these sounds are widely used in English. Their substitution by other sounds in borrowings in case of the Georgian language undergoes rather sequentially. Language learners in case of wrong pronunciation carry out the substitution by several sounds and we come across the highest degree of interference. For example: in case of voiced fricative [θ] in German and Georgian substitution undergoes by word initial [z] or dental [d] and never by an alveolar or post-alveo-

lar [d]. As a result, we get: [zis], [zet],[dis], [det], [zi:s], [zous], [dous] - in the words: *this, that, those*.

In case of interdental fricative [θ] because of the interference, either a hissing [s] or more often dental [tʰ] are used instead. As for the borrowings in Georgian, we have: *thriller* [θrɪlɐ] - *თრილერი* [tʰrɪlɛrɪ], *Thomas* – *თომასი* [tʰomasɪ], though *Galsworthy*, in Georgian version is realized inconsistently like: *გოლსუორსი ან გოლსუორთი* [golsuorsɪ] or [golsuortɪ]. The situation is different while pronouncing: *Thatcher*, where the latter, in standard Georgian, is realized as: *ტეტჩერი* [t'etʰtʃɛrɪ], though the form *თეტჩერი* [tʰ'etʰtʃɛrɪ] would sound more suitable according to the pronunciation rules of source language. As for the Greek borrowings with the <-th-> digraph, which corresponds to English [θ], in German and Georgian is realized as: *Theater* [te'atɐ]-*თეატრო* [tʰeat'ri], *Synthese* [zɪn' te:zɔ]-*სინთეზი* [sɪntʰezi], *Thema* [t'e:ma]-*თემა* [tʰema], etc.

Thus, in Georgian, unlike German, we still do not have clearly defined rules, how to substitute in English borrowings the sounds [θ], [ð]. In German the above mentioned substitution is maintained by [s], [z] accordingly [5, 6]. Therefore, in German, in the borrowed proper names [T] is realized through [t]. The percentage of the pronunciation of [θ] is as follows: correct pronunciation 70,2; [θ] as [s] – 17,5; [θ] as [t] – 10,8 (Abresh, 2007:108)[6]. The examples of substitution of the voiceless fricative are: *thick, thin, thumber, thought* [sik], [sin], [sʌmbɐ], [sɔ:t].

Affricate [tʃ] may appear in the word initial, middle or final positions. In English, graphically it may be realized differently: <-G->, <-J-> initially, <-g->, <-ge->, <-j->, <-dg-> in the middle, but <-ge-> and relatively rare <-dge-> finally. Voiced [dʒ] is marked. To borrow words with this affricate do not create any difficulties, as the combination of plosive and fricative is not marked with high distinctiveness and the acceptable option is created. As for the Georgian language, this phoneme is presented in [tʃ] phonemic inventory. It does not create any difficulties to a Georgian language learner and there is a complete coinci-

dence with the similar Georgian phoneme despite its position in the word: *მენეჯმენტი* [meneʒmentɪ], *დაიჯესტი* [daɪʒestɪ], *პოჯინი* [p'ɔʒɪnɪ], *ჯინი* [ʒɪnɪ], *ჯინი* [ʒɪnsɪ], etc.

Unlike Georgian, the affricate [tʃ] is characterized by a low frequency in German. Without submergence into the different opinions about this affricate, it is worth noting that in German this sound is mainly met in borrowed or onomatopoeic words mostly in word initial and middle positions: *tuschüß, Tschehien, tschilpen, klatschen, Klatsch und Tratsch, watschen, Watsche, latschen*. A special etymology has the word: *deutsch*. In English the given sound is met initially: *chair, chimney, chest, chicken*; in the middle: *mischief, mischievous, Michigan, bachelor* and in the word final positions: *bench, beach, tranche*[7].

In Georgian [tʃ] is of a higher frequency and not only in the word initial or middle positions. It can be met in an unusual distributive combination unlike the European languages but never in the word final position due to structural peculiarities of Georgian language: *ჩანთა* [tʃʰantʰa] – *a bag*, *ჩვენ* [tʃʰvenɪ] – *our*, *ჩნდება* [tʃʰndeba] – *appears* *ჩხრეკა* [tʃʰxrekʰa] – *to search*, *ჩლიყინი* [tʃʰlɪpʰɪnɪ] – *to lisp*, *ჩრდილი* [tʃʰrdɪlɪ] – *shadow*, *ჩრდილი* [atʃʰrdɪlɪ] – *a ghost*. It may also occur in preverbs: *ჩა* [tʃʰa] – *ჩაჩრდილი* [tʃʰatʃʰrdɪlɪ] – *tucked*, *ჩახერგოლი* [tʃʰaxergɪlɪ] – *blocked*, *ჩატეხილი* [tʃʰatexɪlɪ] – *broken down*.

Therefore, it should be noted that much more “complicated” seem to be the cases which Georgian speaking German or English language learners may face. For example: in German voiceless phonemes: /p,t,k/ in certain positions have aspirate and non-aspirate variants: *Masche, Tasche vs stellen, stecken*.

German occlusive /p/ differs from Georgian corresponding /β/-/pʰ/. The Georgian phoneme is sharper. German /p/ phoneme corresponds to Georgian more plosive /q/ -/pʰ/ phoneme. However, German labiodental phoneme /f/ has no Georgian corresponding equivalent. Similarly, the German /t/, /k/ phonemes more clearly differ the Georgian plosive ones: /ტ/-/tʰ/, /კ/-/kʰ/. Thus, the German /t/ more corresponds to

the Georgian /o/ - /tʰ/, though the latter in Georgian sounds more dental unlike the German /t/ phoneme which seems to be more alveolar. The same can not be said about English corresponding sounds. The similar situation is in case of German phoneme /k/, which more corresponds to the Georgian /j/ - /kʰ/ phoneme. The Georgian sharp phoneme /ɟ/ - /kʰ/ has no analogy in German. Confusion of these sounds may cause the errors in Georgian learners as in Georgian these are distinctive phonemes: კარო-ქარო [kʰarɪ - kʰarɪ] – a door-a wind, კანო-ქანო [kʰanɪ - kʰanɪ] – skin-a rock, პურო-ფურო [pʰurɪ - pʰurɪ] – bread- a milking cow.

The situation is dissimilar in case of /r/ phoneme. In Georgian /r/-/r/ is always alveolar vibrant, in German /r/ phoneme has different varieties. It has got allophones: *uvular fricative* and *approximant* also *apical vibrant* and *uvular vibrant* [8]. It is often vocalized with vowels and is realized as /ɐ/ - schwa phoneme.

In the varieties of English this sound is pronounced differently. In British English /r/ is described as an apico-postalveolar approximant, represented phonetically as [ɹ]. For most American varieties it can be characterized as an apico-palatal (or ‘retroflex’) approximant [ɹ̥][9]. German phoneme /r/ in the word initial position and at the beginning of a stressed syllable is pronounced in Standard German as voiced uvular trill/ʀ/ which is more similar to Georgian /ɖ/ - /ɣ/ phoneme: Ring [rɪŋ], Rand [rant]. But /r/ is often devoiced or pronounced as a fricative: Wort [wort], Durst [durst]. /r/ is reduced in unstressed position and sounds like a schwa /ɐ/ phoneme: hier [hi: ɐ], Uhr [u: ɐ]. In some southern varieties /r/ is realized /ɣ/: *Schrift* [ʃχɪft], *krank* [kχŋk]. In contrast to this, in English either fricative or approximant [ɹ] opposes.

Phoneme /l/ in German is constantly realized as clear [l], while in English it has two different allophones: dark and clear ones. In other words, English distinguishes two variants of this lateral sonant known as clear [l] and dark [ɫ]. At the end of a word

and in the syllable final positions we have dark [ɫ], as for the clear variant [l], it occurs at the beginning of a word or initially also before vowels and the sonant /j/: letter [letə], line [lain], lace [leɪs], value [vælju:], million [miljən], schoolyard [sku:ljA:d]; dark [ɫ]: tell [teɫ], smell [smeɫ], bill [bɪɫ].

Similarly, in Georgian, there are two variants of /l/, clear and dark, but their realization is somewhat different. Namely: the clear [l] occurs with front vowels: ლითონი [lɪʰonɪ] – a metal, ეკლესია [ekʰlesɪɑ] – a church, ლებანი [lebanɪ] – a bulb, a clove whereas the dark [ɫ] appears with back ones: საქართველო [sɑkʰɑrtʰvelo] – Georgia, ლოდნი [lodnɪ] – to wait, ლურჯი [lurɟɟɪ] – blue. Difference between these two variants is not distinctive and in German frequently only the clear [l] occurs instead: [cɔ:l]. In Georgian, in case of the incorrect pronunciation a language learner correctly pronounces both variants easily, though in dialectal varieties there are occasions when only clear [l] is heard with both front and back vowels or vice versa the dark [ɫ] may occur instead and this is the typical way of violation of standard language pronunciation.

The next pair in our analysis is: /w/ and /v/. English bilabial sound /w/ always is shifted into a vowel: *warm* [wɔ:m], *work* [wɜ:rk]. This sound together with /j/ represents the group of approximants (Ger. Gleitlaute). Graphemically this phoneme like many other English sounds may be represented differently, e.g. in lexemes: *language*, *quarter* etc. different graphemes in different positions and surroundings serve to represent one and the same phoneme. We can illustrate a lot of examples where the phoneme /w/ is realized through <-w-> grapheme. It should also be noted that it may occur either at the beginning or in the middle of the morpheme. Phonotactically the sound /w/ may occur in word initial position. As the grapheme <-w-> after a vowel has no sound value, it may not occur at the end of a word in the form of /w/: *strow* [strəw], *flow* [fləw], *new* [nju:].

Approximant /w/, which is pronounced word initially and in the middle positions after a vowel, in

German and Georgian is completely substituted by /v/ consonant phoneme, e.g. *quiz*[kvis] instead of [kwiz]. As for Georgian, here, the realization of borrowings is inconsistent, in the sense that in some cases bilabial [w] is realized by labiodental [v] while in the others it is represented by two vowel sounds [უო] – [უი] უიკენდი [uik'endi] – a weekend, though in contrast to it there may be observed: ვებსაიტი [vebsait'i] – a website, ვორკშოპი/ვორკშოფი [vork'shop'i/vork'shop'i] – a workshop. The word: *walkman* in Georgian is represented as უოკმენი [uok'meni], rather rarely, ვოკმენი [vok'meni]. The similar situation is in the word middle position: ჰოლივუდი [holivudi]- Hollywood, კვიზი/კვიზი [k'vizi/k'vizi] - a quiz, სენდვიჩი [sendvit'i] - a sandwich, ტვიტერი [t'viteri] - a twitter, ტვისტი [t'vist'i] - a twist, სვინგი [svingi] - swing, ვისტი [vist'i] - a whist, ვისკი - a whisky [visk'i], ტვიდი [t'vidi] - tweed, ვაშინგტონი [vaʃmgt'oni] - Washington, “ვესტსაიდური ამბავი” [versaduriantavi] – “West Side Story”, though the surname in: Oscar Wilde, in Georgian pronunciation is: უაილდი [uaidli] and not ვაილდი [vaildi].

A vowel phoneme /ʊ/ similar to approximant /w/ belongs to sonorants. That is why, because of its articulatory features, the phoneme /ʊ/ with great probability may reveal the coincidence with /w/. This vowel will never create the substitute similar to English approximant in German, because the vowel /ʊ/ is syllabic whereas the phoneme /w/ lacks this property. Fricative, labiodental /v/ which is voiced, continuous and labial may largely reveal the coincidence with this phoneme of the source language and thus may occur as the suitable substitute for [w] independently of the position of the approximant phoneme [w] within a word. So, in many cases the substitution of [w] by [v] is solid [9].

The velar, nasal /ŋ/ in the basic word stock of the German language isosyllabically proceeds a consonant, if only it does not appear at the end of a word: Angst [ʔ aŋst], längst [ʔ lɛŋst], Hengst [ʔ hɛŋst] andeng [ʔ ɛŋ], jung [ʔ juŋ], Klang, [ʔ klanŋ], lang [ʔ

lanŋ]. If /ŋ/ occurs at the border of a syllable, then the phoneme proceeds the reduced vowel sound Mangel[ʔ maŋ], Dengel[dɛŋ], Angel [ʔ aŋ]. In the German word stock, within a morpheme, the combination of velar nasal and voiced velar plosives /ŋg/ is marked. Such a sequence in German may only exist beyond the morpheme border, e.g.: Fänger [ʔ fɛŋɐ], fangen [ʔ faŋən], Finger[ʔ fiŋɐ], unlike un+getüm [ʔ unɡətʏ:m], un+geahnt[ʔ unɡa:nt], un+glück [ʔ unɡlyk], where we have the negative prefix un- [ʊn] with the derivatives.

In German borrowings the homorganic phonemic sequence may also be met within a morpheme: *Mango* [ʔ maŋgo], *Gringo*[ʔ ɡriŋgo], *Tango* [ʔ taŋgo]. As for English, /ŋg/ not only in borrowings but even in basic word stock may occur within a morpheme too: *finger*[ʔ fiŋɡɚ]; *fishmonger* [fiʃmʌŋɡɚ]; *mingle* [miŋɡl]; *single* [siŋɡl]. The homophone and the homograph of the word: *finger* in German is: *Finger* [ʔ fiŋɐ]. In the borrowed lexemes, where in the source language the combination /ŋg/ occurs, in German, the narrowing falls exactly on /ŋg/ if we want to transfer the unmarked monomorphemic structure: *Single* [ʔ siŋl], [ʔ ziŋl]; in German, this word reveals the tendency to integration and that is why the phoneme /g/ disappears, but in the word: *Bungalow*, the combination /ɪŋg/ unlike *Single* [ʔ siŋl], [ʔ ziŋl] does not occur in the position characteristic of the German language. It is followed by a full vowel and the phoneme /g/ does not disappear. < - g -> preserves the sound value and is pronounced in a German borrowed word as: *Bungalow*/buŋɡalo/.

From the above viewpoint, the situation differs in Georgian where we do not have the phoneme /ŋ/, though the nasal /n/ and voiced plosive velar /g/ may easily co-exist even in word initially position /ng/: ნგრევა [ngreva] - (to destroy). Though, the presented case is rare for the Georgian language. Mainly, in Georgian, this sound combination is met in the middle of a word and the syllable border lies within this combination: ბან-გი [ban-gi] – (dope); ხან-გი [tʰan-gi] – (a musical string instrument); ხან-გალო

[tʰan-galɪ] – (a fork); ლან-გარი [lan-garɪ] – (a dish). This combination can also be met in proper names and in Toponymy: მან-გლისი [man-ɡlɪsɪ], შენგელია [ʃen-ɡɛliɑ]. That is why, in standard Georgian, the similar words like previously mentioned ones are realized in both cases by means of these two phonemes: მანგო [man-go], ტანგო [tan-go], გრინგო [ɡrɪn-go], სინგლი [sɪn-ɡlɪ], ბუნგალო [bun-galo]. Thus, different cases of realization between English and German for Georgian language learners require additional special efforts.

As for the phoneme /ʃ/, this sound in Georgian is more fronted than in German. Georgian /ʃ/ is pronounced like German /ʃ/ in the word: *Schlake* [10]. Difference between Georgian and German phonemes is easily observable, if Georgian and German opposite pairs are compared. Below, we illustrate Georgian and German proper names where the difference in the pronunciation is clearly vivid:

Schlegel [ʃlɛ:ɡɪ] შლეგელი [ʃlegɛli] Schuhmann [ʃu:man] შუმანი [ʃumanɪ].

German has the palatal and velar fricatives [ç], [x], [χ]. According to König/Gast [11] these fricatives exist only in their voiceless variants, and are in complementary distribution, i.e. they are allophones of a single phoneme. This consonant phoneme is realized

i) after front vowels as [ç] (e.g. Licht→[liçt], ii) after back vowels as [x] suchenà [zu:xɔn], iii) after central /a/ as /χ/ Dach→ [daχ]. If to a German language learner for whom Georgian is a mother tongue /χ/ is more or less familiar, in case of mastering the pronunciation of /ç/ quite a great deal of hard work is to be overcome.

Summing up all the above discussed, we should single out and differ several groups in the system of consonant phonemes:

1. Sounds that have more similar features than different ones: /b/, /g/, /s/, /n/, /m/, /z/.
2. Sounds that exist in German and have no equivalents in Georgian, e.g.: /f/, /ŋ/, /ç/, Sounds that exist in German and have no equivalents in English, e.g.: /x/, /ç/, or exist in English and have no equivalents in Georgian and German, e.g.: /θ/, /ð/, /w/.
3. Sounds that exist in Georgian and have no equivalents in English and German: /β/-/pʰ/, /ɣ/-/qʰ/, /ʋ/-/tsʰ/, /ʒ/-/tʃʰ/.

The results of our comparison across languages can contribute to a better description of each individual language. Thus, we can observe characteristics of each language more clearly and this information could be used to improve the language teaching process.

*ენათმეცნიერება***თანხმოვანთა სისტემების კონტრასტული ანალიზი
/გერმანული, ინგლისური და ქართული ენების მასალაზე /****ნ. კაპანაძე, გ. ყუფარაძე**

ფანე ჯაფახიშვილის სახელობის თბილისის სახელმწიფო უნივერსიტეტი, კომპიუტარულ მეცნიერებათა ფაკულტეტი

(წარმოდგენილია აკადემიის წევრის ა. არაბულის მიერ)

წინამდებარე სტატია ეძღვნება გერმანული, ინგლისური და მათგან ტიპოლოგიურად განსხვავებული ქართული ენის თანხმოვანთა სისტემების კონტრასტულ შედარებას. დღეს, ისე როგორც არასდროს, მრავალენოვნებამ საგანგებო მნიშვნელობა შეიძინა, მით უფრო მცირერიცხოვანი ენების წარმომადგენელთათვის. ამდენად, კონტრასტულ კვლევებს შეუძლიათ მნიშვნელოვანი წილად გაუიოლონ უცხოური ენის შემსწავლელთ იმ პრობლემების დაძლევა, რომლებიც L_1 , L_2 , L_3 , L_6 ენის შესწავლისას იჩენენ თავს. ამჯერად შემოვიფარგლეთ ფოლონოგიის დონეზე წარმოქმნილი ვარიანტულობით, რაც ფონემურ, ფონეტიკურ, ალოფონურ, დისტრიბუციულ/კომბინაციურ სირთულეებსაც უკავშირდება. თუმცა ვარიანტულობას ასევე განვიხილავთ ინტერნაციონალიზმებისა და, ზოგადად, გლობალიზებული დისკურსის ფონზე.

აღნიშნულ საკითხებზე მუშაობისას ჩვენი მიზანი იყო წარმოგვეჩინა ის ფაქტორები, რომლებიც განაპირობებენ სხვა ენების ზეგავლენას ფოლონოგიურ დონეზე. ჩვენ აღვწერეთ სამივე ენაში თანხმოვანთა სისტემებისათვის დამახასიათებელი თავისებურებები და განსხვავებები, რის გამოც ისინი საგანგებო ძალისხმევას მოითხოვენ ენის შემსწავლელისაგან, გამომდინარე ამ მეთოდის არსიდან, მისი გამოყენება მოზრდილ ენის შემსწავლელებთან განსაკუთრებით წარმატებით შეიძლება, მით უფრო თუ ენის შემსწავლელი ერთ უცხოურ ენას უკვე ფლობს.

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Received April, 2016