Atatürk and the Turkish Terminology Reform: The (Re-)turkification of Geography Terms*

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Abstract
This article deals with the investigation of terms in Turkish geography textbooks. A statistical analysis shows that before the terminology reform in 1937, the terminology in geography texts scanned consisted of up to 94% of Arabic terms, with the remaining terms being either Turkish (3%), or terms derived from Western languages, such as French, Greek and/or Latin (3%). However, just after the terminology reform in 1937, Arabic terms accounted for only 53% of the terminology, 33% were Turkish, 7% were from Western languages and 7% were hybrids. The desired effect of the efforts of the Turkish Linguistic Society were felt as recently as 1985 when Arabic terms were found to have fallen to 10%, while Turkish terms increased to 70%. However, it is interesting to observe that Western language and hybrid terms also increased to 10% over the same period.

Keywords
Terminology, the Turkish Terminology Reform, terminology reconstruction, terminology policies, Turkish Linguistic Society, Turkish geography terms, Language and identity

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1. Introduction

The question of the Turkish terminology reform, as part of the Turkish language reform, was addressed soon after, and as a corollary of, the adoption of the Latin alphabet in 1928. Under the guidance of Mustafa Kemal Atatürk, the founder of the Republic of Turkey, terminology reform became a national movement and was entrusted into the hands of the Turkish Linguistic Society specially founded for this purpose. The aim of the Turkish Linguistic Society, founded by Atatürk in 1932, was to ‘cleanse’ the Turkish language from foreign language elements, in particular those of Arabic and Persian origin, by simplification, purification and (re-)turkification. It was not until immediately after the Third Linguistic Congress in 1936 that the Turkish Linguistic Society was entrusted with the task of purifying and simplifying the language of textbooks in order to make texts understandable. Thus, terminology in textbooks was soon removed from the influence of Arabic and Persian languages, the characteristics of which were incompatible with the Turkish language.

The aim of this article is to observe the several evolutionary stages of the Turkish terminology reform with particular reference to geography terminology based on Turkish geography textbooks published between the years 1929 and 2008. In doing so, general issues such as language and identity, language planning and terminology planning (as part of language planning) will be touched upon, by drawing attention to the necessity and the objectives of language planning. Relevance is established by giving brief information on the history and characteristics of the Turkish language, calling for a language reform which chronologically consists of alphabet reform, the (re-)turkification of the language for general purposes (LGP), and the (re-)turkification of the language for specific purposes (LSP) resulting in various scientific fields for the foreign language elements. A statistical analysis of geography texts published between the years 1929 to 2008 will provide information on the dynamic evolution geography terms went through.

2. Language and Identity

The language we use forms an important part of our sense of who we are – of our identity. That is, identity comes to be created through language. Identity, whether at individual, social or institutional level, is something which we are constantly building and negotiating all our lives through our interaction with others. Language can give a strong sense of belonging or being excluded. This assertion challenges the common understanding of language as a mirror reflecting one’s culture and identity. The following
working definition of identity captures these key insights: “identity: an outcome of cultural semiotics that is accomplished through the production of contextually relevant sociopolitical relations of similarity and difference, authenticity and inauthenticity, and legitimacy and illegitimacy” (Bucholtz & Hall 2004: 382). Semiotic processes reveal the extent to which identity is not simply the source of culture, but the outcome of culture: in other words, it is a cultural effect. And language, as a fundamental resource for cultural production, is hence also a fundamental resource for identity production.

Spolsky implies that language is a means to presenting our own notion of who we are, stating: “Language is a central feature of human identity. When we hear someone speak, we immediately make guesses about gender, education level, age, profession, and place of origin. Beyond this individual matter, a language is a powerful symbol of national and ethnic identity” (Spolsky 1999: 181).

There is a close ideological connection between language and identity. Identity is rooted not in genetics but in heritable cultural forms, especially language, which symbolise and, in more extreme essentialist modes, iconically embody a group’s distinctive cultural identity. Language contributes to nationalist identity formation by providing a sense of cohesion and unity for its speakers. Once the identity of a language and its speakers becomes authenticated through nationalistic rhetoric, the language variety itself comes to index particular ways of affiliation to and belonging to the nation-state. Everyday conversation then becomes the vehicle for authentication practices, as speakers are able to index various ethnic and nationalist stances through language choice (Bucholtz & Hall 2004: 385).

The disempowerment of the Turkish language constituted the root cause of communication problems amongst Turks in Turkey at the beginning of the 20th century. Hence, promoting Turkish language has been one of the main components of the Turkish official language policy in order to eradicate separatist feelings and establishing unity in language and communication. Thus, the disempowerment of the Turkish language, led to the potential for miscommunication and therefore a feeling of disunity among Turks. This in turn motivated Atatürk and his nation to save the Turkish language, which led to the protection and the preservation of the identity of Turks, and the preservation of unity in language and communication. This was achieved by generating a public opinion consensus. Thus, it would be legitimate to claim that the linguistic (re-)turkification both in
LGP (Language for General Purposes) and LSP (Language for Special Purposes) has been part of a deliberate effort in nation-building.

3. An Overview of Language Planning and Terminology Planning

We speak of language planning if there is an intervention of the natural development of a language. Cooper (1989: 29) gives a fairly broad definition for language planning: “Language planning refers to deliberate efforts to influence the behavior of others with respect to the acquisition, structure, or functional allocation of their language codes”.

It was Haugen who, in 1959, first used the term “language planning” to describe the efforts made towards modernization, development and maturity of the Norwegian national language (Karam 1974: 104, Daoust 1997: 438ff., cf. also İmer 1998: 8). Language planning has variously been associated with society, population and education. Jernudd and Das Gupta (1971: 195-196) see language as a natural resource which should be treated as an integral element in the social, economic and cultural development plan of a country. Rubin and Jernudd (1971) consider language planning as deliberate efforts made towards the modification of language codes and discourse patterns. Fishman (1971), on the other hand, sees language planning as an organised movement dealing with the national language problems. Gorman (1973) considers language planning as shifting a language’s orthographic, grammatic, lexical and semantic characteristics to a broader level by taking measures intended for its development in order to disseminate the idea of it being a device which members of a society share. In more recent times, Haugen has viewed language cultivation, language reform and language standardization as essential parts of language planning (as cited in Karam 1974: 104-105).

3.1. The Need for Language Planning

The need for language planning may arise for a number of reasons, of these, nationalism can be considered an important one. An example of this is the Icelandic language planning policy, aiming to harness “both the media and the national consciousness, alerting people to the dangers of excessive indiscriminate borrowing and the risk of contamination through contact with larger language communities” (Picht & Draskau 1985: 18) by the intensification of official efforts.

A further reason for the need for language planning may be due to social, cultural, scientific and technical developments. Certain languages (especially English, French, Greek, Latin, Arabic, Hebrew etc.) exert influence through language contact as a result of inventions, discoveries, and inno-
vations, thus making the import of new concepts and/or vocabularies inevitable. This is considered a threat not only by authorities (concerned with the unity of a language) and scientists (concerned with precise communication), but also by speakers of a language themselves (who may feel disturbed and distressed by foreign linguistic elements, seen as causing disunity within a language and, thus, creating an obstacle in communication). So, for instance, the German movement aiming for “Spracheinigung” (=unity in language), the Hungarian and the Norwegian language planning (in particular with regards to unity in “det norske Folkesprog” as proposed by I. Aasen at the end of the 19th century) can all be seen as setting examples for movements towards purifying language from foreign language elements (cf. İmer 1976: 31ff.). Hence, it is felt that in such cases language planning is desirable and, indeed, necessary.

3.2. Objectives of Language Planning

According to UNESCO Guidelines for Terminology Policies (cf. Info-Term 2005: 7-8) some of the most important objectives and goals of language planning include education in the mother-tongue, and the teaching of sciences in the language the learner understands, leading to an improvement in the qualification of officials, employees, scientists, researchers, teachers and even skilled workers, providing members of the language community with lexicons, manuals, works of creative art, school books, newspapers etc. in their primary language, for reasons of improving communication.

Rabin (1971: 277-279) classifies the objectives of language planning according to linguistic, semi-linguistic and extra-linguistic aims. Linguistic aims require the co-operation of linguists with authors. Here, the lexicon of a language (standardisation of language, and changes involving the socio-semantics of the language) together with its structure (phonology, morphology, and syntax) and style are subjected to change. Semi-linguistic aims include changes in the orthography (e.g. a change from logography to the Latin alphabet), spelling, and pronunciation of a language. Politicians and sociologists are mainly concerned with the extra-linguistic aims of language planning which, for instance, involves education planning. Certain countries may opt to intervene in the natural development of a language mainly to solve problems related to education. This may be regarded as one of the most important issues concerning the objectives for extra-linguistic aims of language planning, since the native language has a vital role as a device for instruction.
İmer (1998: 20) classifies the *extra-linguistic aims* of language planning as *horizontal*, *vertical* and *chronological*. *Horizontal extra-linguistic aims* are concerned with changes in geography and society. *Vertical extra-linguistic aims* concern changes in a language as a result of shifts in society (shifts in social levels, or between classes living in urban and rural areas, etc.). *Chronological extra-linguistic aims* are directed towards the revitalization of a dead language, the application of written language in spoken language and vice versa, the creation of new language units, allowing an existing natural language to die out, or the active hastening of the extinction of a natural language.

Nahir (1984: 299-319) identifies eleven objectives for language planning: (1) language purification, (2) language revival, (3) language reform, (4) language standardization, (5) language spread, (6) lexical modernization, (7) terminology unification, (8) stylistic simplification, (9) interlingual communication, (10) language maintenance, and (11) auxiliary-code standardization. *Language purification* (1), consists of external and internal purification. The former aims for the purity of language by preventing foreign language elements entering the language, the latter concerns the maintenance and protection of well-established linguistic elements. The objectives of language planning may also include the revitalization of a dead language or a lesser-spoken language. In this case we speak of *language revival* (2). A *language reform* (3) involves changes in the alphabet, orthography, lexicon and/or in the grammar of a language. Language reform and language planning can be seen as synonyms. However, in contrast to purification and revitalization, facilitation of language use is at the centre of language reform (e.g. language purification is part of the language planning policy of China, Germany, Hungary, Iceland, India, Ireland, Israel, Norway, Poland, and Russia). According to Nahir (1984: 299ff.), the language reform Mustafa Kemal Atatürk realized with regards to orthography and lexicon in the Turkish language can be deemed extremely successful in terms of its social impacts. In Nahir’s terms, *language standardization* (4) involves the acceptance and recognition of a language spoken in a political area. *Language spread* (5) concerns an enhancement in the number of people who speak a particular language compared to those who do not, for political reasons, seen, in particular, in countries where the population is bilingual or multilingual. Furthermore, there is a correlation between language standardization and language spread. *Lexical modernization* (6) has the objective of coining neologisms for borrowings in a well-established language. The objective of *terminology unification* (7) is to define monosemous and mononymous terms in order to reduce ambiguity.
in specialised communication. So as to achieve consistency in communication, terms are created context-free with clear borders of definition, containing nothing else but referential meaning. *Stylistic simplification* (8) aims at reducing ambiguity in communication by simplifying the lexicon and style of the language. *Interlingual communication* (9) is defined as the simplification of communication amongst speakers of different communities. This can be achieved by enhancing the use of a lingua franca, such as English, or an artificial language, such as Esperanto. *Language maintenance* (10) can be achieved by protecting the use of the native language of a community as their primary or, in fact, secondary language. Finally, *auxiliary-code standardisation* (11) involves making minor adjustments in order to reduce ambiguity, enhance communication and allow for the development of languages (e.g. sign language).

Hornberger includes *officialisation*, *nationalisation*, *status standardisation*, *vernacularisation*, and *graphisation* to Nahir’s list of objectives for language planning (as cited in Doğançay-Aktuna 1995: 81). For reasons of space and relevance, we will not discuss these concepts in this paper. Naturally, language planning does not have to involve all the objectives mentioned above; such can be determined depending on the nature of the problems in communication.

### 3.3. Terminology Planning

Language planning occurs both in the Language for General Purposes (LGP) as well as in the Language for Specific Purposes (LSP). Terminology planning, seen as part of language planning, is mainly concerned with the development of terminologies which do not currently exist in the language so as primarily to enable communication amongst experts, as well as expert to layman and layman to layman, in their native language within a specialist field of knowledge. Hence, terminology planning relies on the existence of linguistic norms and a certain grammatical and orthographical stability in the written language. On this basis, conscious and systematic terminology planning enables the development of a special language according to the needs and requirements of domain communication, where a vast number of new technical terms are created every day (InfoTerm 2005: 8).

“The health and survival of a language depends on its being appropriate for all contexts of communication identified by a society. A language reduced to informal usage only begins to lose its prestige and in the end disappears. In this sense special languages are key parts of the real capabilities of survival of a language” (Cabré 1999: 48).
A terminology planning policy can be regarded as successful where the condition of a language can be said to have improved. Of course, the success of a terminology plan depends on its acceptance by the users of the language. For this reason, products (such as dictionaries, glossaries, lexicons, etc.) should be disseminated to encourage and enhance usage.

With the growth of human knowledge, and thus scientific discovery and innovation, new concepts emerge which require naming. Since terminology planning is concerned, among many other issues, with the enabling of communication about concepts which have as yet received no linguistic label in the native language certain naming methods, in other words term formation methods, need to be applied, either intra-lingually or inter-lingually; the former is referred to as primary term formation, and the latter as secondary term formation (cf. Sager 1990: 80ff.).

As the formation of terms is a conscious activity, a number of methods of term coining have been suggested by different authors. Intra-lingual term formation methods include, for instance, (1) the use of existing resources (i.e. re-semanticisation), (2) the modification of existing resources, and (3) the creation of new forms (neologism) (for further reading cf. Cabré 1999: 94, Cotsworth 1990: 3ff, Picht & Draskau 1985: 106ff, Rogers 1997: 10/3-10/5 Part II, Sager 1990: 71ff, Suonuuti 1997: 25). Inter-lingual term formation methods, on the other hand, include somewhat different variations of these approaches: (1) paraphrase or explanation (a pre-term phase), (2) translingual borrowing (i.e. the creation of a new term by borrowing, e.g. loan word), and (3) neologism (i.e. the creation of a new term in order to replace a loan word) (for further reading cf. Cabré 1999: 94, Cotsworth 1990: 3ff, Picht & Draskau 1985: 106ff, Rogers 1997: 10/3-10/5 Part II, Sager 1990: 71ff, Suonuuti 1997: 25). These methods focus on the systematic nature of terminologies with their underlying conceptual networks, including the cognitive dimension, aspects of knowledge representation, etc. The following factors play crucial role in term formation:

3. consistency
4. appropriateness
5. conciseness (i.e. brevity to ensure linguistic economy) (cf. Sager 1990: 89)
6. derivability (derivative form capability, i.e. terms should allow for derivations)
7. preference for native language (except in domains or languages where other traditions exist, for instance the use of Latin or Greek forms in some disciplines)

8. systematicity (terms should be systematic in relation to other terms and should fit into the system of terms in order to create parallel forms of designation in related terms) (cf. Sager 1990: 57)

9. a term should be well-motivated (it should fit in with the system of terms, especially if standardisation is the goal)

10. competing terms (i.e. synonyms should be avoided) (cf. Sager 1990: 89)

11. compliance with the rules of the language (i.e. linguistic correctness) (cf. Picht & Draskau 1985: 115 and Sager 1990: 89)

Preference for native language and compliance with its rules are the main concerns of the Turkish terminology reform, since achieving transparency by conserving the national language (as in Iceland and Finland) is an important issue. Appropriateness, derivability, systematicity, consistency, and well-motivatedness of terms are thus the desired aims of the Turkish language policy including the elimination of competing terms (i.e. synonyms). A less important factor in the term formation process may be considered conciseness.

4. Reconstructing a Language

4.1. Characteristics of the Turkish Language

When Turks came into contact with Islam at the end of the 9th century A.D., Arabic as the language of the Koran and of Islamic studies, and Persian as the elaborate literary language of the Middle East were taken as standards (i.e. as the official language), whilst Turkish proper was confined to popular literature and colloquial speech (Özdemir 1969: 46). As a result, Turkish proper was eclipsed and many of its elements fell into disuse. In the meantime, this enabled the free functioning of two language elements which had entered the Turkish language, Arabic and Persian; the former a Semitic and the latter an Indo-European language. Thus, a composite language was born, which consisted of Turkish, Arabic and Persian elements, referred to as Ottoman Turkish, i.e. “High Turkish”. This strange language, consisting not only of foreign lexical elements but also of foreign grammatical rules, was originally used solely for scientific and literary works by the intellectual class, but later also came to influence their spoken language. However, as it sounded so unhomely and uncongenial to the Turkish ear, it was generally criticised and disapproved of by the public at large (Dilâçar 1969: 23).
The modernisation movement under the guidance of Mustafa Kemal Atatürk, the founder of the Turkish Republic, began early in the nineteenth century and introduced rationalism and the spirit of democracy. People began to realise the artificiality of High Turkish, and to feel a dislike for its baroque ornamentation. This feeling was deepened by the gradual growth of national self-consciousness which valued all that had originated from Altaic sources over that from the Arabic and Persian cultures (ibid). This called not only for a language reform but also for a terminology reform as part of a language reform.

4.2. The Turkish Language Reform

The need for a language reform had been felt long before the Turkish Republic was founded. Even in an age when High Turkish was undoubtedly supreme, there were signs of discontent among intellectuals, who, finding the language unintelligible to the public at large, pleaded for a more unaffected, i.e. pure and simplified, Turkish. Although these complaints became more openly manifested in the Tanzimat period, no organised movement resulted at this time (Dilâçar 1969: 24, İzbırak 1949: 31, cf. Levend 1972: 68ff, 102ff., 354ff., Özdemir 1969: 37ff., 41ff., 46ff., Özdemir 1980: 12ff.).

The elimination of Arabic and Persian elements, i.e. the linguistic (re-)turkification, began in Atatürk’s day, because mere “simplification” or “purification”, used in the sense of eliminating Arabic and/or Persian synonyms only in cases where a Turkish word/term already existed, and the preservation of the language in its then current state, were not in themselves considered sufficient. What was aimed at was not mere “simplification”² (= sadeleştirme) or “purification”³ (= özleş(tir)me) but “(re-)turkification”⁴ (cf. İmer 1998: 21 & 45 & 125-154 & 207-208). The aim of the Turkish Linguistic Society was to purify the Turkish language to such an extent that it could be considered essentially (re-)turkified, and also in order to raise it to the status of a language of science (Dilâçar 1969: 26). In order to achieve a language reform in Turkey, three separate complimentary reforms were realised. These consist of the following:

1. The Alphabet Reform on 9th August 1928
2. The (Re-)turkification of the Language for General Purposes (LGP) as of 12th July 1932
3. The (Re-)turkification of the Language for Specific Purposes (LSP) as of 1937/38

The following will describe each stage of the Turkish language reform briefly.
4.2.1. The Alphabet Reform (9th August 1928)

Without doubt, one of the important reforms which Atatürk undertook was the Turkish language reform. Atatürk’s aim was to create a reasonably homogeneous language, free from the hegemony of both Eastern and Western languages, sufficiently free for the independent development within its own principles and elements.

Understanding that in order to realise a language reform, initially it was necessary to change in the alphabet. Atatürk declared the new Latin based Turkish alphabet in Sarayburnu Park (İstanbul) on 9th August 1928 (cf. Aksoy 1975: 29; Hatiboğlu 1981: 25, Özdemir 1980: 41, TDK 1962: 16ff.). The Arabic script was considered ill-suited for the Turkish language (Özdemir 1980: 40) as the phonetic structure of the language could not be expressed by the then current orthographic system (Demir 2010: 8). However, this script made it easy for Arabic and Persian words/terms to enter the Turkish language. Atatürk believed that the Latin script would create a buffer zone which would hinder Arabic and Persian words/terms entering the Turkish language (Özdemir 1980: 41). Although it was emphasised by many that the alphabet reform was not a movement against the holiness of the Quoran and religion, and thus islam, it faced strong resistance by several opponents who attached religious connotations to the Arabic alphabet and the Arabic script (Demir 2010: 8ff.). Eventually, it was decided that making alterations on the current orthographic system in order to suit the phonetic system of the Turkish language was an effort made in vain; thus, it was considered inevitable to make a complete shift to the Latin alphabet which provided conformity with the phonetic system of the Turkish language (Demir 2010: 8). After the alphabet reform, Atatürk decided to embark on a further, more wide-ranging reform concerning the language.

4.2.2. The (Re-)turkification of the Language for General Purposes (LGP)

Indeed, after the alphabet reform was successfully implemented (cf. Özdemir 1969: 52ff), Atatürk founded the Turkish Linguistic Society (initially called “Türk Dili Tetkik Cemiyeti”) on 12th July 1932 (cf. Aksoy 1975: 31, Özdemir 1980: 43, TDK 1962: 22, TDK 1981: 8 & 11) and ordered for the First Linguistic Congress to be held in Dolmabahçe Palace (İstanbul) on 26th September 1932 (Özdemir 1969: 54). This event received much attention not only from linguists but also by literary personalities, and experts in different fields, including scientists, and even ordinary people. A festive event as it was, it expressed the patriotic feelings of
many, who felt the need to liberate Turkish from foreign language elements, creating a truly independent language. In fact, during the First Linguistic Congress, Atatürk stated that “the Turkish nation, which wants to protect its country and independence, should also rescue its language from being under the siege of foreign languages” (TDK 1988: 196). In 1933, just after the First Linguistic Congress, a unit called the “Lexicography-Terminology Unit” (“Lugat-Istılah Kolu”) within the Turkish Linguistic Society was established. This unit was given the responsibility of compiling terms under sixteen different domains (TDK 1988: 198). Thus, further important move was made following the alphabet reform which would result in the unity of the Turkish language.

Between the 18th and 24th August 1934, during the Second Linguistic Congress, (cf. Özdemir 1980: 51, TDK 1962: 25) it was decided that the Lexicography -Terminology Unit should be separated into two units, the “Lexicography Unit” and the “Terminology Unit”, due to the vast number of terms which had to be dealt with. Feedback was sought on terms which had to be (re-)turkified from teachers, experts and scientists (Özdemir 1980: 51). Moreover, a decision was made as to the (re-)turkification of terminology in both textbooks for schools and universities; the former was a much more urgent matter than the latter (Zülfikar 1991: 8). Also, the Turkish Language Research Institute, operating under the name “Türk Dili Tetkik Cemiyeti”, took on the (re-)turkified name “Türk Dili Araştırma Kurumu”.

The reason for (re-)turkifying terminology in primary and secondary school textbooks was to help pupils gain an understanding of topics covered in these sources through the use of their native language, i.e. the use of Turkish terms. After the Third Linguistic Congress, held between the 24th and 31st August 1936, (cf. Özdemir 1980: 52, TDK 1962: 32) two principles were established within the Turkish language reform. The first principle states that universal terms such as elektrik (electricity (eng)), dinamo (dynamo (eng)), metre (metre (eng)), and gram (gramme (eng)) can be used as borrowings. The second principle follows from this and states that all terms apart from these borrowings should be (re-)turkified by using Turkish roots, and by derivation (ibid). This meant that using existing resources, modifying existing resources and creating new lexical entities, i.e. neologisms, (cf. Sager 1990: 71ff.) based on Turkish roots was the desired aim. Also, many of the papers submitted and presented at the congress dealt with the issue of Turkish having an effect on other languages of the world. During the discussion held after the congress it was
decided that the *Turkish Language Research Institute* (Türk Dili Araştırma Kurumu) should become the *Turkish Linguistic Society* (“Türk Dil Kurumu”) (TDK 1962: 33).

Atatürk was present as an observer at all three linguistic congresses held before his death, and meeting with and working closely with linguists. He entrusted the Turkish Linguistic Society with two important tasks: purification (be it at the lexical or terminological level), and the enrichment and development of the Turkish language, i.e. (re-)turkification of the language. In order to fulfill these tasks, two approaches were needed: the combination of revolutionary ideas and thought together with scientific methods (Aksoy 1975: 32), not to mention the will-power of a nation.

In order to coin, develop and maintain (re-)turkified words, certain methods needed to be applied (cf. Aksoy 1975: 75ff., TDK 1981: 20ff., Özdemir 1980: 66ff). These will be discussed below:

1. **Popular Discourse and Colloquialisms:** Before the language reform, the written Turkish language in particular was under the influence of Arabic and Persian as the intellectual class preferred to produce literary and scientific works with borrowings from these two languages. In comparison, spoken language was purer, i.e. consisted mainly from Turkish linguistic elements and contained hardly any foreign language elements. As a result, there was a gap between the written and the spoken language. In order to fill this gap, words were transferred from popular discourse, and colloquialisms found their way into the written language. A collection was compiled and later published by the Turkish Linguistic Society to be used as a reference source by many intellectuals for the written language. In this way, the written language was (re-)turkified effectively (TDK 1981: 20, Özdemir 1980: 66).

2. **Turkish Dialects:** Dialects such as Uzbek, Kyrgyz, Turkmen and Azerbaijani were used in order to create new terms (Zülfikar 1991: 181ff).

3. **Archaic Texts:** Many genuine Turkish words had become obsolete over time. These fell into disuse as the intellectual class showed a preference for their Arabic and Persian equivalents. Hence, many archaic texts were manually scanned for the extraction and compilation of Turkish words. The intellectual class was now using words from the popular discourse, colloquialisms and also from archaic texts (TDK 1981: 21, Özdemir 1980: 66).

4. **Re-semantisation:** LGP words came to be used as LSP terms, that is, words in the general language became terms (e.g. *çap* (diametre (eng), math), *doğru* (straight (eng), math) (İmer 1976: 108, Zülfikar 1991: 173ff.).
5. **Affixation/Derivation:** Another method applied in order to purify the Turkish language from foreign language elements was to add suffixes to existing Turkish roots. By attaching certain suffixes to roots it was possible to derive new words. Affixation was used mainly when the first two sources of (re-)turkification were exhausted, i.e., when sources of popular discourse, colloquialisms, and archaic texts offered no suitable words (TDK 1981: 21, Özdemir 1980: 66). Dilâçar (1969: 26-27) reports that during the language reform it was necessary to mainly rely on the functional value of the Turkish suffixes. Living suffixes were used freely; frozen and archaic ones were resurrected. (Re-)turkification through affixation therefore succeeded for in two different realms: words and terms (TDK 1981: 21-22). General language and special language dictionaries were compiled for this reason.

6. **Compounding:** New coinings, such as atardamar (artery (eng)), toplardamar (vein (eng)), ālywar (erythrocyte (eng)), ākywar (lymphocyte (eng)), içgüdü (instinct (eng)), katsayi (exponent (eng)) etc., were introduced into the Turkish language by fusing two Turkish words together. (TDK 1981: 22, Özdemir 1980: 67).

7. **Conversion:** The part of speech of a term was changed so as to create a neologism (Zülfikar 1991: 171). In order to change word class, a suffix was attached either to the root, or the entire morphology of a term.

8. **Elimination of Synonyms:** A crucial change in the language was realised through the elimination of synonyms which required the abandonment of Arabic and Persian words equivalent to the Turkish word. (TDK 1981: 22).

9. **Literal Translation:** Terms in Arabic and/or Persian were translated into Turkish word-for-word (İmer 1976: 107).

10. **Consciousness and the Dissemination of Knowledge:** It was considered that a movement could only be initiated through raising awareness and that it could only succeed through endurance. Hence, the necessity for (re-)turkification was emphasised through the publication of the *Journal of the Turkish Language* (*Türk Dili Dergisi*), through discussions, radio and television programmes, and through the publication of pocket guides dealing with the issue (TDK 1981: 23-24).

The first two methods, popular discourse and colloquialisms, and archaic texts were used in order to revive what had been long forgotten and had fallen into disuse. Affixation and compounding were applied to coin new words/terms. Those terms highlighted as being unsuitable were left untouched until a suitable native element, i.e. an equivalent, could be found.
The roots selected for newly coined words were subjected to an order of preference in which Modern Turkish occupied the first position. Standard Turkish words were preferred to colloquial ones. However, it was possible to use colloquial Turkish words if there were no standard Turkish words to replace a term. When this resource was exhausted and no suitable root was found, it was permissible to fall back on archaic, obsolete and dialectic words. When this search was also in vain, reference could be made to ancient and literary Turkic dialects, and if not to these, then to distant and non-literary dialects in existence today. In technical terms, if the search for a Turkish equivalent was without success, foreign roots were tolerated. When coining new lexical items, most importantly, the systematicity of the Turkish language and the type of Turkic word derivation was taken into account. It was also possible to rely on the functional value of the Turkish suffixes. It was crucial to avoid borrowings, i.e. loan words at all costs (Dilâçar 1969: 27). The above rules which were established in the early days of the terminology reform still apply today.

4.2.3. The (Re-)turkification of the Language for Specific Purposes (LSP)

Borrowings which had entered the Turkish language from Arabic and Persian from 10th century A.D. onwards and from French from 18th century A.D. became fixed, and the language was unable to create and develop its own terminology. Hence, Atatürk ordered the Turkish Linguistic Society with the (re-)turkification of terms, initially in primary and secondary, and later in higher education textbooks, since he believed that language is not merely a device for conveying messages but also reflects the inner world of an individual, expressed by signs which should ideally come from collective language resources, comprehensible to each native speaker of the language (Hatiboğlu 1981: 61ff., cf. Demir 2010: 4ff.). Therefore, the (re-)turkification of the Turkish language for specific purposes (LSP) became an inevitable process, the main objectives of which can said to be the establishment of transparency, systematicity and consistency. Atatürk, whose major interest was mathematics, gave the initial impulse towards the (re-)turkification of terms in the domain of geometry. Thus, he coined the following terms to replace Arabic and Persian terms: kenar (side (eng)) for ‘dılî’, üçgen (triangle (eng)) for müselles, eşkenar üçgen (equilateral triangle (eng)) for müselles-i mütesaviy-ül-adlâ, and açı (angle (eng)) for zaviye (cf. TDK 1963: 180&348, 308&370, 111, 1 respectively; and TDK 2000: 20, 20, 20, 9 respectively). In his famous book “Geometri” (TDK 2000), he established and applied the following (re-)turkification rules:
1. **Affixation/Derivation:** a significant number of terms were (re-)turkified based on affixation (e.g. üç-gen (triangle (eng)), dört-gen (square (eng)), aç-ı (angle (eng)), dik-ey (orthogonal (eng)), uz-ay (space (eng)), ort-ay (bisector (eng)), düz-ey (level (eng)), düş-ey (vertical (eng)), yat-ay (horizontal (eng)), etc.)

2. **Re-semanticisation:** some of the terms came from the LGP (Language for General Purposes) (e.g. eğik (oblique (eng)), eğri (curve (eng)), doğru (straight (eng)), çizgi (line (eng)), çap (diameter (eng)), alan (area (eng)), ortak (common (eng)), iç (interior (eng)), dış (exterior (eng)), yamuk (trapezoid (eng)), etc.)

3. **Internationalism:** As no Turkish equivalent could be produced for certain terms, some borrowings from Ottoman Turkish and Western languages became inevitable; in particular, for those terms which were considered internationalisms. Thus, these terms remained as borrowings (e.g. dayire (circle (eng)), nokta (point (eng)), hacim (volume (eng)), cisim (field (eng)), saniye (second (eng)), derece (degree (eng)), poligon (polygon (eng)), paralel (parallel (eng)), koni (cone (eng)), aksiyom (axiom (eng)), piramit (pyramid (eng)), silindir (cylinder (eng)) etc.) allowing them to be transparent cross-linguistically.

The first rule ensures that no acceptable term already exists (to ensure avoidance of synonyms) and that the proposed term is not already in a different related sense (to ensure avoidance of homonyms and polysemes). In contrast, the second rule allows for the proliferation of synonymous, homonymous and polysemous expressions, since reference is made to words from the LGP. As attempts to change common and well-established usage may have met with strong resistance, the third rule allowed for the internationalism of certain terms. Hence, internationalisms were used where translation of certain Arabic and Persian, as well as Western language terms would almost undoubtedly have failed.

In order to make written Turkish conform to the spoken language, Atatürk ordered the (re-)turkification of primary and secondary school textbook terms. Therefore, between 1937 and 1938, textbooks on geography, cosmography, history, ethnography, philosophy, psychology, literature and law were (re-)turkified. This removed the burden of having to memorise foreign terms such as aded-i silsile-i ale-l-vilâ, aded-i gayri muntak, adele-i murabba-i münharife, adele-i tev’emiye-i sakiye, cereyan-i galvani, esmak-i azmiye (Hatiboğlu 1981: 67).

(Re-)turkification rules after Atatürk’s time (e.g. affixation/derivation, re-semanticisation, and internationalisms) have been expanded and updated
by the Turkish Linguistic Society, thus several procedures were added to
the aforementioned three (re-)turkification rules (cf. Section 6).

5. A Statistical Analysis of the Turkish Geography Terminology

“Lâhkî sahillerde körfezler buhayrelere, adalar yarımadalara inklâp eder”,
“Muavveç bir vadide mukaar sahillar aşınmış, muhaddep kıyılar lahiklerle
imlâ edilmiş bulunur”, etc. (cf. İzbırak 1949: 7). These are some quo-
tations extracted from geography textbooks published in 1924 before the
Turkish language reform. If each geography term was (re-)turkified and
translated into Modern Turkish these quotations would read as follows:
“Liğlarla (aluvyonlarla) dolan kıyılar körfezler denizkulakları, adalar,
yarımadalar biçimine girer”, “Bükümlü bir vadide içbükey kıyılar (çarpak
yerleri) aşınmış, dışbükey kıyılar (yüşnak yerleri) Liğlarla (aluvyonlarla)
dolmuş bulunur” (cf. İzbırak 1949:7-8; cf. Table 1).

Table 1. The (Re-)turkification of the Turkish Geography Terminology

<table>
<thead>
<tr>
<th>1924 Text A</th>
<th>After the Terminology Reform</th>
<th>Arabic Term</th>
<th>Turkish Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lâhkî sahillerde körfezler buhayrelere, adalar yarımadalara inklâp eder</td>
<td>Liğlarla (aluvyonlarla) dolan kıyılar körfezler denizkulakları, adalar, yarımadalar biçimine girer</td>
<td>lokale buhayre</td>
<td>Liğ</td>
</tr>
<tr>
<td>Muavveç bir vadide mukaar sahillar aşınmış, muhaddep kıyılar lahiklerle imlâ edilmiş bulunur</td>
<td>Bükümlü bir vadide içbükey kıyılar (çarpak yerleri) aşınmış, dışbükey kıyılar (yüşnak yerleri) Liğlarla (aluvyonlarla) dolmuş bulunur</td>
<td>mukaar sahill muhaddep lahik</td>
<td>Liğ</td>
</tr>
<tr>
<td>Şebekei miyahiyanın kat'ı bir şekli yoktur; irmakların müsaderesiyle hatti taksimi miyah daima hali tebeddiyedid</td>
<td>Akarsu ağının kesin bir şekli yoktur; irmakların kapmasıyle subölümü çizgisi durmadan değişır</td>
<td>sebekei miyahiye müsadare hatti taksimi miyah</td>
<td>akarsu ağı kapma subölüm çizgisi</td>
</tr>
</tbody>
</table>
1. **Popular discourse and colloquialisms:** terms were coined from popular discourse (e.g. düden (doline (eng), geo), doruk (summit (eng), geo), dölek (level (eng), geo), seki (terrace (eng), geo), yavlan (ford (eng), geo), büngüldek (gushing spring (eng), geo), dulda (leewand side (eng), geo), gedene (field terrace (eng), geo), etc.) (cf. İmer 1976: 108, İzbırak 1949: 13ff & Zülfikar 1991: 175ff.).

2. **Archaic texts:** if a term could not be produced from popular discourse, reference was made to archaic texts (cf. İzbırak 1949: 15ff. & Zülfikar 1991: 178ff.).

3. **Re-semanticisation:** LGP words have been used as LSP terms, that is, words in the general language became terms (e.g. çap (diametre (eng), math), doğru (straight (eng), math) (İmer 1976: 108 & Zülfikar 1991: 173ff.).

4. **Affixation/Derivation:** Turkish roots were affixed and compounded for transparency reasons and in order to produce the effect of systematicity (e.g. yontukduüz (peneplain (eng), geo), yontukdağ (hull mountains (eng), geo), yontukova (peneplain (eng), geo), yontukyöre (hull landscape (eng), geo), yontuklaşıma (peneplaination (eng), geo), önyontuk (primary peneplain (eng), geo), sonyontuk (peneplain (eng), geo), yontuk basamağı (down-stepping surface (eng), geo), etc.) (cf. İzbırak 1949: 27ff.&31 & Özdemir, 1978: 645ff. & Zülfikar 1991: 162).

5. **Compounding:** a term was created by means of fusing two words into one term (cf. İzbırak 1949: 18ff. & Zülfikar 1991: 165).

6. **Analogism:** creating an analogy is achieved by coining a new term based on the morphological characteristics of an existing term (İzbırak 1949: 159ff.). So, for instance, the geography term kuzey (north (eng)) morphologically resembles the geography term güney (south (eng)), in that the root kuz (shadow side (eng)) is combined with the suffix –ey, as with the combination of the root gün (sunny side (eng)) and the suffix –ey. Analogism is employed mainly to establish systems of terms (cf. also Özdemir 1978: 645ff.).

7. **Literal translation:** terms in Arabic and/or Persian were translated into Turkish word-for-word (İmer 1976: 107).

8. **Internationalism:** terms in international use were used as borrowings until they could be turkified (cf. İzbırak 1949: 32). However, certain terms remained internationalisms, e.g. metre, litre, etc.

9. **Systematicity of (Re-)turkified Terms:** terms were coined reflecting the systems of concepts they belong to (cf. İzbırak 1949: 21ff.).
10. **Consistency**: after a term was coined, previously used equivalents were eliminated (cf. İzbırak 1949: 31). This resulted in terms becoming mononymous.

11. **Connotations**: a term should not have a connotative meaning, i.e. it should have precise meaning and be context-free (İzbırak 1949: 31). This implies that terms should be mononymous and monosemous at the same time.

12. **Economy**: in order for a term to have the chance to mature, it should be short and easy to memorise, i.e. avoiding paraphrases and long compounds (cf. İzbırak 1949: 8 & 31).

The above procedures were taken into account when (re-)turkifying geography terminology (cf. Demir 2010: 5) through which transparency has been increased.

### 5.1. Methodological Considerations

Between the years of 1937 and 1938 primary and secondary school textbooks on geography, cosmography, history, ethnography, philosophy, psychology, literature and law were (re-)turkified. Due to the availability of sources, it was decided to scrutinise contiguous texts of secondary school geography textbooks dealing with the same and/or similar topics as it was expected that these would contain examples of both Arabic and/or Persian terms and their corresponding concepts in Turkish, i.e. equivalent Turkish terms.

The study involves the historical development of geography terms in relation to their (re-)turkification process. In this study, terms in the domain of geography were manually extracted at random from a textbook published in the year 1929, and a raw list of candidate terms potentially suitable for statistical analysis was produced as a result. The final selection of terms from this randomly extracted group consisted of only those whose corresponding forms could be found in all texts of the textbooks available for research (published in Maarif Vekilliği 1929, Nafiz 1934, Duran 1935/1936, 1937, 1940, 1943, 1944, Baymur 1945, İzbırak 1985, Şahin 2006, Oruç et. al. 2008, Gültepe et. al. 2008a, and Gültepe et. al. 2008b), and which represent corresponding (i.e. overlapping) concepts in each contiguous text (cf. Table 5).

A four stage analysis system was used. In the initial stage of the analysis (1) a term, e.g. the Arabic *arazi* (terrain (eng)), was selected from the textbook published in 1929, after the 1928 alphabet reform but before the 1937/38 terminology reform. In the second stage of the analysis (2), this term was
then compared with corresponding post-terminology reform concepts in
textbooks published in 1940, 1943, 1944 and 1945. It was discovered that
the term remained untouched, i.e. it had not been (re-)turbanified at this
stage. The third stage of the analysis (3) clearly indicates that the Arabic
term arazi (terrain (eng)) was replaced with the Turkish equivalent yeryüzü
şekilleri (lit. landscape forms, i.e. terrain (eng)) in the 1985 geography
textbook. That these two forms represent the same concept is clearly shown
by the Dictionary of Geography Terms – with German, French, English
Equivalents and Corresponding Archaic and New Forms (Coğrafya Terimleri
Sözlüğü – Almanca, Fransızca, İngilizce Karşılıkları Eski ve Yeni Şekilleriyle
by İzbirak, 1975). In the final stage of the analysis (4), it could be ob-
served that in textbooks from 2006, 2008a and 2008b, both forms arazi
(terrain (eng)) and yeryüzü şekilleri (terrain (eng)) are in use; in fact the
form yeryüzü şekilleri (terrain (eng)) is also represented in alternate forms
yerekçileri (lit. landforms), yer şekilleri (lit. land forms), and yüzey şekilleri
(lit. surface forms). These synonymous terms were used interchangeably in
these more recent texts to refer to the same concept (cf. Table 5).

Table 2. An Overview of the Study

<table>
<thead>
<tr>
<th>Stages of Analysis</th>
<th>Year of Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial stage (1)</td>
<td>1929, 1934, 1935, 1936, and 1937</td>
</tr>
<tr>
<td>Second stage (2)</td>
<td>1940, 1943, 1944, and 1945</td>
</tr>
<tr>
<td>Third stage (3)</td>
<td>1985</td>
</tr>
<tr>
<td>Final stage (4)</td>
<td>2006, 2008a and 2008b</td>
</tr>
</tbody>
</table>

In contrast, some terms were rejected. In the initial stage of the analysis
(1) e.g. the term indifaî sahre (volcanic soil (eng)) was extracted from the
 textbook published in 1929. Later, in the 1985 text, the term, volkanik
toprak (tr) was detected; this involved the second stage of the analysis (2).
However, since neither of the forms indifaî sahre (volcanic soil (eng)) or
volkanik toprak (tr) (volcanic soil (eng)) could be found in editions other
than in 1929 and 1985, the term indifaî sahre (volcanic soil (eng)) was
eliminated in the third stage of the analysis (3) from the list of potentially
suitable terms for the study.

The same methodological approach was then applied to all other ran-
domly extracted terms from Turkish geography textbooks, resulting in, a
total of 30 terms suitable for the Study. That is, each of the 30 terms represented concepts present in each textbook consulted in order to allow the observation and assessment of their evolutionary process, i.e. the dynamics of the Turkish geography terminology.

This methodology was applied in order to assess the dynamics of the Turkish geography terminology; it was crucial not only to observe differences between the labels applied to geography concepts at points of time before the Turkish terminology reform in 1937/38 and in 2008, but also to consider the possibility of the continual variation in labels attached to each concept throughout the time-period of 1929 to 2008. Thus, Turkish geography textbooks published before the terminology reform in 1937/38 were thoroughly scanned for candidate terms which showed variations in terminology in textbooks published at any time after the terminology reform in 1937/38 up until 2008. Thus, the exploitable resources for the study consisted of pre-terminology reform Turkish geography textbooks, published in 1929, 1934, 1935, 1936, and 1937, in comparison with the post-terminology reform Turkish geography textbooks published in 1940, 1943, 1944, 1945, 1985, 2006, 2008a and 2008b.

5.2. The (Re-)turkification Process of Geography Terms

In Table 5, the font colours blue, red and green indicate the language which each term belongs to. Thus, blue represents Arabic; red, Turkish; and green, Western languages such as Greek, Latin or French. For reasons of space, we will discuss only some of the most important aspects of the dynamic evolution of the 30 geography terms. So, for instance, the Arabic term *arazi* (terrain (eng)) is the plural of the Arabic lexeme *arz* (place, land (eng)) and is associated with the concepts *yerler* (pieces of land (eng)) and *topraklar* (lands (eng)) to refer to the concept of *terrain* in geography. The synonymous terms for *arazi* (terrain (eng)), which are *yer şekilleri* (terrain (eng)), *yer şekilleri* (terrain (eng)) and *yeryüzü şekilleri* (terrain (eng)), are systematic in relation to other terms, i.e. they are well-motivated (e.g. *yeryüzü şekilleri* with *yeryüzü suları*, etc. and *yer şekilleri* with *yer şekli*, *yer şekli çözümlemesi*, *yer şekli terselmesi*, etc.) since in the system of terms parallel forms of designation are in relation to these terms. Furthermore, the synonymous terms *yer şekilleri* (terrain (eng)), *yer şekilleri* (terrain (eng)) and *yeryüzü şekli* (terrain (eng)) are derived from the term *yer* (area, surface, land, location, place (eng)) which can be said to be terminologically productive as it allows for derivations: *yerel* (local (eng)), *yerellik* (locality (eng)), *yerelitme* (localisation (eng)), *yerelitmek* (localise (eng)), *yeryüzü* (face of the earth, surface (eng)), *yerekte*
The term *aşıntı* (erosion (eng)), which is already a Turkish term, was discovered in the textbooks from 1929, 1934, 1935, 1936 and 1937. This indicates that some efforts were already being made towards (re-)turkifying Arabic and/or Persian elements before the Terminology Reform was realised in 1937/38, on however minimal a scale. In geography dictionaries consulted (cf. References) we find the information that the Arabic form of *aşıntı* was *itikâl*. *Aşıntı* was later replaced by the Turkish term *aşınma*, as seen in textbooks from 1940, 1943, 1944 and 1945, and used interchangeably to refer to the concept of *erosion*, thus both forms can be considered synonyms as they represent the same concept. In the 1985 textbook we find the synonymous terms *aşıntı* and *aşınma* being replaced by the Latinate form *erozyon*. However, it is interesting to observe that in the 2006, 2008a and 2008b textbooks, the concept of *erosion* is also variously expressed by the terms *aşınma*, *aşındırma*, *aşınım* and *toprak süpürülmesi* (a descriptive term to refer to the concept of *erosion*, acting as a circumlocution), to replace the predominantly used Latinate form *erozyon*, leading to inconsistency.

### Table 5. The (Re-)Turkification Process of Geography Terms from 1929 to 2008

<table>
<thead>
<tr>
<th>Term</th>
<th>Synonym</th>
<th>Term</th>
<th>Synonym</th>
<th>Term</th>
<th>Synonym</th>
<th>Term</th>
<th>Synonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arazi</td>
<td>arazi</td>
<td>yeryüzü şekilleri</td>
<td>arazi</td>
<td>yeryüzü şekilleri</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><em>aşıntı</em></td>
<td><em>aşınma</em></td>
<td><em>erozyon</em> (lat)</td>
<td><em>erozyon</em> (lat)</td>
<td><em>aşınma</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><em>cedi medarı</em></td>
<td><em>oğlak dönencesi</em></td>
<td><em>oğlak dönencesi</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>cenup</td>
<td>güney</td>
<td>güney</td>
<td>güney</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><em>cihet</em></td>
<td>yön</td>
<td>yön</td>
<td>yön</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><em>çumudije</em></td>
<td>glasiye (fra)</td>
<td>buzul</td>
<td>buzul</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>delta (gre)</td>
<td>delta (gre)</td>
<td>delta (gre)</td>
<td>delta (gre)</td>
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<tr>
<td>8</td>
<td>garp [west (eng)]</td>
<td>garp</td>
<td>batı</td>
<td>batı</td>
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<td></td>
</tr>
<tr>
<td>9</td>
<td>harta [map (eng)]</td>
<td>harta</td>
<td>harta</td>
<td>harta</td>
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<td></td>
</tr>
<tr>
<td>10</td>
<td>hattisitiva [equator (eng)]</td>
<td>hattisitiva</td>
<td>ekvator (lat)</td>
<td>ekvator (lat)</td>
<td></td>
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<tr>
<td>11</td>
<td>kutup nevahisi [polar region (eng)]</td>
<td>kutup bölgesi</td>
<td>kutup bölgesi</td>
<td>kutup dairesi</td>
<td></td>
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<tr>
<td>12</td>
<td>meddücezir [tides (eng)]</td>
<td>gelgit</td>
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<td>gelgit</td>
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<tr>
<td>13</td>
<td>mesâhâ-i sathiye [superficies (eng)]</td>
<td>yüzölçümü</td>
<td>yüzölçümü</td>
<td>yüz ölçümü</td>
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<tr>
<td>14</td>
<td>muntaka [region (eng)]</td>
<td>muntaka</td>
<td>havza bölge</td>
<td>bölge</td>
<td>alan</td>
<td># havza = ova [plain (eng)]</td>
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</tr>
<tr>
<td>15</td>
<td>mikyas [scala (eng)]</td>
<td>ölçek</td>
<td>ölçek</td>
<td>ölçek</td>
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<tr>
<td>16</td>
<td>müstemleke [colony (eng)]</td>
<td>müstä'mere</td>
<td>sömürge</td>
<td>sömürge</td>
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</tr>
<tr>
<td>17</td>
<td>nehir [river (eng)]</td>
<td>nehir</td>
<td>akarsu</td>
<td>akarsu</td>
<td>akarsu [running water (eng)]</td>
<td># nehir</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>nüsfl küre [hemisphere (eng)]</td>
<td>yarım küre</td>
<td>yarım küre</td>
<td>yarım küre</td>
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<tr>
<td>19</td>
<td>nüfus kesafeti [population density (eng)]</td>
<td>nüfus kesafeti</td>
<td>nüfus yoğunluğu</td>
<td>nüfus yoğunluğu</td>
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<tr>
<td>20</td>
<td>sahil [shore (eng)]</td>
<td>sahil</td>
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<td>sahil</td>
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<tr>
<td>21</td>
<td>sath-ı mål [slope (eng)]</td>
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<td>aklan</td>
<td>aklan</td>
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<td></td>
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<tr>
<td>22</td>
<td>serat medari [tropic of cancer (eng)]</td>
<td>seretan medari</td>
<td>yengeç dönenesi</td>
<td>yengeç dönenesi</td>
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<tr>
<td>23</td>
<td>sisle-i cibâl [mountain chains (eng)]</td>
<td>sisle-i cibâl</td>
<td>sıradağlar</td>
<td>sıradağlar</td>
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<td>24</td>
<td>sühûnet [temperature (eng)]</td>
<td>norânet, germil</td>
<td>sühûnet</td>
<td>ısı</td>
<td>ısı</td>
<td>sıcaklık</td>
<td>sıcaklık</td>
</tr>
<tr>
<td>25</td>
<td>suhur [lock (eng)]</td>
<td>suhur</td>
<td>kâlte</td>
<td>kayaç</td>
<td>taş [stone (eng)]</td>
<td>kayaç</td>
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</tr>
<tr>
<td>26</td>
<td>şark [east (eng)]</td>
<td>şark</td>
<td>doğu</td>
<td>doğu</td>
<td>doğu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>şâmâl [north (eng)]</td>
<td>yesâr</td>
<td>kuzey</td>
<td>kuzey</td>
<td>kuzey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>tesâyye mürhânsisi [contour-line (eng)]</td>
<td>esyüselti eğrisi</td>
<td>esyüselti eğrisi</td>
<td>izohips (gre)</td>
<td>esyüselti eğrisi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>tül [longitude (eng)]</td>
<td>boylam</td>
<td>boylam</td>
<td>boylam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>zelzele [earthquake (eng)]</td>
<td>zelzele</td>
<td>deprem</td>
<td>deprem</td>
<td>deprem</td>
<td>seisma (gre)</td>
<td></td>
</tr>
</tbody>
</table>
The Arabic terms *cedi medarı* (tropic of capricorn (eng)), *cenup* (south (eng)), and *cibet* (direction (eng)) which appear in textbooks from 1929, 1934, 1935, 1936 and 1937 became (re-)turkified soon after the Terminology Reform in 1937/38; these terms persisted until 1985 at the latest, when the Arabic forms representing the concepts *tropic of capricorn*, *south*, and *direction* were replaced by the Turkish terms *oğlak dönencesi*, *güney*, and *yön* respectively (cf. Table 5). The same situation can be observed in the (re-)turkification process of the terms *meddücezir* (tides (eng)), *mesâhâ-i sathiye* (superficies (eng)), *mikyas* (scala (eng)), *müstemleke* (colony (eng)), *sath-ı mâil* (slope (eng)), *seretan medarı* (tropic of cancer (eng)), *silstile-i cibâl* (mountain chains (eng)), *şark* (east (eng)), *şimâl* (north (eng)), and *tûl* (longitude (eng)).

In the 1940, 1943, 1944, and 1945 textbooks, it was detected that the Arabic term *cümudiye* (glacier (eng)), a monosemous and mononymous term, was initially replaced by the French term *glasiye*, which was itself replaced in 1985 by the Turkish term *buzul* representing the same concept (cf. Table 5). As the form *buzul* was coined by affixation, it is considered a neologism.

On the other hand, the term *hattıisitiva* (equator (eng)) became Latinised in 1985 with the term *ekvator* (cf. Table 5). This term was never replaced by a Turkish term, thus remaining a borrowing.

The Arabic compound term *kutup nevahisi* (polar region (eng)) was partially (re-)turkified, i.e. the term *kutup* (pole (eng)) remained Arabic whereas the term *nevahisi* (regions (eng)) was replaced with the Turkish term *bölgesi* (cf. Table 5).

Besides representing the concept *tides* in geography, the term *meddücezir* also denotes ‘prolongation of the first letter ‘elif’ of the Arabic alphabet’. Although this homonymous character of the Arabic term *meddücezir* (tides (eng)) is not believed to have caused an obstacle in communication, the term was (re-)turkified soon after the Terminology Reform in 1937/38, and was replaced by the form *gelgit* to refer to the concept of *tides* (cf. Table 5). As the geography term *gelgit* was coined by compounding: *gel* (imperative of the verb to come) + *git* (imperative of the verb to go), in this way, it became a term of monosemous and mononymous character, proving an ideal term for unambiguous communication.

The Arabic term *mesâhâ-i sathiye* (superficies (eng)) which is a compound term consisting of the combination of *mesâhâ* (to measure (eng)) and *sath* (surface (eng)) was (re-)turkified by literal translation, thus becoming a
neologism specific to geography. The two forms yüzölçümü (surface + measurement) and yüz ölçümü both represent the concept of superficies and can be considered monosemous and mononymous (cf. Table 5).

The Arabic term mıntaka (region (eng)) received the alternate forms havza (arb) and bölge (tr), as could be detected in Turkish geography textbooks published in the years 1940, 1943, 1944, and 1945 (cf. Table 5). However, after 1985 the dominant term became bölge, which was used interchangeably with the term alan after 2006 to refer to the same concept. On the other hand, the concept of the term havza, which used to be used as a synonym for mıntaka, expanded and became a quasi-synonymous expression for ova (plain (eng)).

Although in geography textbooks from 1929, 1934, 1935, 1936, and 1937 the Arabic term nehir (river (eng)) was used interchangeably with the Turkish term akarsu (running water (eng)) to refer to the same concept, the term nehir dominated textbooks until 1985, when the Turkish alternate term akarsu returned to use (cf. Table 5). After 2006, the concept of river was expressed by the Turkish term akarsu and the Arabic term nehir received an upward shift in meaning, i.e. its present definition comprises a more general concept. Moreover, the plural forms of the Arabic term nehir which are enhâr, enhür, and nûhûr are used as synonyms. Interestingly, the Arabic term nûhûr has a homonym, nûhûr (the sacrifices (eng)), which became a homograph after the Alphabet Reform in 1928, although, before the Alphabet Reform it had been a homophone.

One of the most interesting developments observed in the (re-)turkification process of the 30 terms can be seen in the Arabic term sühûnet (temperature (eng)) (cf. Table 5). This term, which has harâret and germî as synonyms, originally simultaneously represented the concepts of heat and temperature. Although originally homoponic with the term sühûnet (thickness, density, solidity (eng)), it became homographic after the Alphabet Reform in 1928. After the Terminology Reform in 1937/38, it was used interchangeably with the (re-)turkified term ısı representing the concept of temperature. In 1985, the Turkish term ısı dominates contiguous texts scanned in Turkish secondary geography textbooks; the Turkish term sıcaklık appears as its synonym. However, the 2006, 2008a and 2008b geography textbooks demonstrate a change in the definition of the (so far) apparently synonymous terms ısı and sıcaklık. Texts scanned indicate that the Turkish term sıcaklık is equivalent to the Arabic term sühûnet in concept, whereas the apparent synonym ısı diverges from the concept of temperature and receives a new definition representing the con-
cept of heat. Thus, the Arabic term sühûnet becomes (re-)turkified as sıcaklık representing the concept of temperature, whereas the Turkish term ışı conceptually diverges from the old traditional meaning, coming to represent the concept of heat.

Other interesting developmental stages could be observed in the (re-)turkification process of the geography term subûr (rock (eng)), which was initially (re-)turkified as külte based on its etymological relationship with külçe (chunk (eng)) to refer to the concept of a compact mass (cf. Table 5). Since this term was frequently confused with the physics term kütle (mass (eng)), the term kayaç was later coined to refer to the concept of rock. However, this form led to confusion with the form of the lexeme kayma (slip, slide, glide (eng)) and was frequently associated with the derived forms of the lexemes kaya (skiing (eng)), kaypak (slippery (eng)), kaymak (slipping, sliding, gliding (eng)), kayağan (slippery (eng)), kayan (slippery, slithery, sliding (eng)), kayar (slides, shifts (eng)), and kaygan (slippery (eng)). Thus, the lexeme taş (stone (eng)) from the LGP was transferred into the LSP to refer to the concept of rock by assigning to it a more comprehensive and general meaning. A similar incident occurred with the German term das Gestein (stone/rock (eng)), for instance, which was derived from the lexeme der Stein (stone (eng)), receiving a more comprehensive meaning and, hence, representing a more generalised concept.

The Arabic term şımâl (north (eng)) has the Arabic term yesâr as its synonym. Yesâr is homonymous as it denotes not only north but also two other independent concepts, richness and left. In the 1940, 1943, 1944, and 1945 textbooks şımâl was used interchangeably with the (re-)turkified term kuzey. Thereafter, the Arabic form şımâl used for the concept of north disappeared and the Turkish form kuzey began to predominate in geography textbooks (cf. Table 5).

The Arabic term tüül (longitude (eng)) is a polysemous term as it simultaneously denotes length, size, and duration. When the form tüül was replaced with boylam, this term became monosemous and mononymous simultaneously, making it an ideal term for unambiguous communication. It was coined by affixation (boy-la-m (size/length-suffix for verb-suffix for noun)) (cf. Table 5).

The Arabic term zelzele (earthquake (eng)), associated with the concept sarsma (to shake by moving from side to side (eng)), was not (re-)turkified until 1985, when it received two forms, deprem and yersarsıntısı used synonymously to refer to the concept of earthquake (cf. Table 5). The term
deprem was derived from the lexemes deportmek, debertmek, tepreşmek, all of which denote yerinden oynamak (to move something from its place (eng), yerinden oynatmak (to move from its own place (eng))) or kimildatmak (to move something from one place to another). The synonym for this concept is yersarsıntısı. In the 1985 textbook, both forms are used interchangeably within the same text and throughout parallel texts to refer to the concept of earthquake. In the textbooks published in 2006, 2008a and 2008b, it could be seen that the form deprem had overtaken yersarsıntsısı, which had been replaced by the Greek term seizma as the alternate form.

5.3. The Statistical Analysis

In this study, 30 terms were manually extracted from Turkish geography textbooks published between 1929 and 2008 (cf. Table 5 & Table 6) in order to measure the evolutionary process, that is, the dynamics, of geography terms by analysing variations diachronically over a span of almost 80 years. Twenty-eight of the 30 terms extracted were etymologically Arabic (arb), one term Turkish (tur), and one Greek (gre). Based on information on Table 5 and Table 6, it can be seen that, just after the terminology reform in 1937, textbooks published between 1940 and 1945 show a tendency towards the (re-)turkification of these 30 geography terms. Of these, only sixteen are still in Arabic, ten are in Modern Turkish, two are in Western languages (i.e. Greek (gre) and French (fra)), and two are hybrids (i.e. mixed compounds). In 1985, the situation can be said to have improved in terms of (re-)turkification; only three terms appear in Arabic, twenty-one in Modern Turkish, three in Western languages and three as hybrids. According to Table 6, the current situation of geography terms can be said to be stable; twenty-one terms are in Arabic, ten are in Modern Turkish, four are in Western languages and two are hybrids.

Table 6. An Overview of Table 5

<table>
<thead>
<tr>
<th>Before 1937</th>
<th>After 1937</th>
<th>1985</th>
<th>Currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>arb</td>
<td>28</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>fra/gre/lat</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>hyb</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>tur</td>
<td>1</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>
Although many terms can be said to have been (re-)turkified, some returned to their original status. This is the case with the term *arazi* (terrain (eng)); although in 1985 it was (re-)turkified as *yeryüzü şekilleri*, as of 2006 it appears as *arazi* again. Nevertheless, some synonyms of *yeryüzü şekilleri* are still in use, e.g. *yerşekilleri/yer şekilleri, yeryüzü şekilleri, yüzey şekilleri*. Some (re-)turkified terms became ‘westernised’ in time, e.g. *tesviye mühhanisi* (arb) – *üşükselti eğrisi* (tur) – *izohips* (gre) (contour-line (eng)), and *zelzele* (arb) – *deprem/yersarsıntısı* (tur) – *seizma* (gre) (earthquake (eng)). Furthermore, some terms which were originally Turkish became ‘westernised’, e.g. the term *aşıntı/asınma* (erosion (eng)) is replaced as *erozyon* as of 1985. Some terms are unchanged: *delta* (gre) (delta (eng)) a Greek term remains untouched to date. Others became first westernised and then (re-)turkified, e.g. *cumudiye* (arb) – *glasiye* (fra) – *buzul* (tur) (glacier (eng)). Finally, there are the hybrids, which are of complex nature; consisting either of a combination of Modern Turkish terms and Arabic terms, e.g. *yarımküre* (hemisphere (eng)), or of a combination of Arabic and Modern Turkish terms, e.g. *kutup bölgesi* (polar region (eng)), and *nüfus yoğunluğu* (population density (eng)). This indicates that some efforts towards (re-)turkification were made.

Data in Table 5 and Table 6 can also be demonstrated in a pie-chart (cf. Chart 1-4): Before the terminology reform in 1937, 94% of terms were Arabic, 3% Modern Turkish, and another 3% from Western languages. After the terminology reform in 1937, Arabic terms decline to 53%, Turkish terms increase to 33%, and terms in Western languages and hybrids increase to 7% each. In 1985, the situation has changed enormously: Arabic terms comprise only 10% of the chart, whereas Turkish terms increase to 70%. It is interesting to note that terms in Western languages and hybrids increase to 10%. Currently, the situation can be said to be quite stable: Arabic terms comprise 10% of the chart, whereas Turkish terms make up 70%. Terms in Western languages are on the increase, i.e. they comprise 13% of the chart whereas hybrids decrease to 7%.
Chart 1. Before the Terminology Reform.

Chart 2. After 1937.
As can be seen from Charts 1, 2, 3 and 4, terms in Western languages are on the increase: before the terminology reform they consisted only 3% of the 30 terms selected, immediately after the terminology reform in 1937 they made up 7% of the terminology, however, in 1985 they increased to 10% and currently comprise 13% of the 30 terms extracted manually.
from geography textbooks. This indicates a tendency towards introducing borrowings from Western languages. Thus, a thorough analysis of secondary school geography textbooks from 2006, 2008a and 2008b was necessary to assess the extent of this trend.

6. Conclusion

The statistical analysis of geography terms in Turkish primary and secondary school textbooks demonstrates that Arabic was the dominant language, comprising 94% of terminology in geography textbooks published between the years 1929 to 1937, that is, until the Turkish terminology reform. In comparison, Turkish and Western languages (such as French, Greek and Latin) comprised only 3% each of this terminology. However, immediately after 1937, Turkish geography textbooks from 1940 to 1945 reveal that Arabic was reduced, accounting for only 53% of terms while the use of Turkish increased to 33%. On the other hand, geography terms of Western (language) origin showed an increase of 4%, making up 7% of the geography textbook terminology. Finally, there seems to be no significant change between the years 1985 and 2008 as Turkish maintains its dominant position with 70%, compared to Arabic, with only 10% of the geography textbook terminology. Nevertheless, the use of terms from Western languages shows an increase of 3% in textbooks from 1985 and another 3% in 2008 compared to previous years. Hence, the study demonstrates that, although Arabic influence has been reduced, and the use of Turkish has increased in the post-1937 period, there is also strong tendency towards borrowing from Western languages.

It needs mentioning that a terminology policy is a living and ever-developing instrument for controlling LSP. As an on-going process, it needs to be continually adapted to the challenges faced in a changing world. For this reason, creating awareness in the whole community in order to ensure successful implementation is absolutely vital, to ensure that policies meet with strong support rather than resistance. This can be achieved by engaging the community in the process of language planning, and by motivating the users of the language to benefit as much as possible from recent advances, as results of the policy will have an impact on professional communication and education.

The institution and development of the Turkish language policy marked positive effects in promoting a sense of Turkish identity. The careful application of a language policy such as that developed by Atatürk could be of benefit to countries facing similar concerns of language purity, be it at the LGP or LSP level. The establishment of language/terminology unity
will play an important role in restoring a language, and increasing its chance of survival.

Notes

1 The term language planning has previously been referred to as language engineering (Miller 1950), glottopolitics (Hall 1951), language development (Noss 1967), language regulation (Gorman 1973), and language policy (as cited in İmer 1998: 8).

2 In the Turkish language policy, the term simplification (= sadeleştirmeye) is used in the sense of eliminating Arabic and/or Persian borrowings which had Turkish equivalents in the language. This movement, which occurred at the beginning of the 20th century, was not considered sufficient, as there existed Arabic and/or Persian elements which had no Turkish equivalents.

3 The term purification (= özleş(t)irmeye) is used in the Turkish language policy to refer to the process of resisting the introduction of foreign language elements into the Turkish language (internal purification = iç özleş(t)irmeye) and the preservation and protection of the existing elements from foreign elements (external purification = dış özleş(t)irmeye).

4 Turkification means “to produce the Turkish word/term equivalent to the Arabic and/or Persian word/term”. However, in this case, the concept which receives a Turkish label was established after Turkish was influenced from Arabic and Persian and, thus, the concept to which an Arabic or Persian label was attached receives a Turkish label. The term returkification, on the other hand, means “to produce the Turkish word/term equivalent to the Arabic and/or Persian word/term, which used to exist before the Turkish language was influenced from Arabic and Persian”.

References


Dictionaries


Atatürk ve Türk Terim Devrimi: Coğrafya Terimlerinin (Yeniden) Türkçeleştirilmesi*

Burcu İlkay Karaman**

Öz
Bu makale, Türkiye’deki coğrafya ders kitaplarındaki terimler üzerine bir araştırmayı sunmaktadır. Bu bağlamda, yapılan istatistiksel çalışmaya bakılıcak olursa, 1937’deki terim devriminden önce coğrafya kitaplarındaki metinlerin %94’lük gibi önemli bir bölümü Arapça terimlerden oluşurken, geriye kalan %3’lük bölümü Türkçe ve diğer %3’lük bölümü ise Batı Dilleri olan Fransızca, Yunanca ve/ya Latinceden oluşmaktadır. Ancak, 1937’deki terim devriminden hemen sonra Arapça terimlerin %53’lere gerilediği gözlemlenirken, Türkçe terimlerin %33, Batı Dillerinden gelen terimlerin %7 ve melez terimlerin, yani hibridlerin (Arapça ve Türkçeden oluşan birlesik terimlerin) ise %7’ye çıktığı görülmüştür. Türk Dil Kurumu 1985 yılında, Arapça terimlerin %10’lara gerilemesi ve Türkçe terimlerin %90’lere çıkması ile çabalarının meyvelerini almıştır; ancak, Batı Dillerinden gelen terimler ile melez terimlerin aynı süre içerisinde %10’lara çıktığı gözlemlenmiştir.

Anahtar Kelimeler
Terimbilimi, Türk Terim Devrimi, terim inşaası, terim politikaları, Türk Dil Kurumu, türkçe coğrafya terimleri, dil ve kimlik

* Bu çalışmada yürütülen istatistiksel analize katkılarından dolayı Dökuz Eylül Üniversitesi, Fen Bilimleri Fakültesi, İstatistik Bölümü öğretim üyesi Prof. Dr. Serdar Kurt, Prof. Dr. Elif Denizçioğlu, Doç. Dr. Ali Ruza Fıruzan, Yrd. Doç. Dr. Süleyman Alpaykut ve Yrd. Doç. Dr. Emel Kuruoğlu’na teşekkürlerimi sunarım.
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Ататюрк и турецкая терминологическая реформа: тюркизация географических терминов

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Аннотация
Эта статья представляет собой исследование терминов, встречающихся в турецких учебниках географии. В этом контексте статистический анализ показывает, что до терминологической реформы 1937 года 94% текста учебника по географии состояло из арабских терминов, остальные 3% из турецких и оставшиеся 3% из терминов, взятых из западных языков, таких как французский, греческий и/или латинский. Тем не менее, анализ учебников, вышедших сразу после терминологической реформы 1937 года показывает, что наличие арабских терминов снизилось до 53%, доля турецких терминов увеличилась до 33%, терминов западных языков до 7%, термины-гибриды (комбинации арабского и турецкого языков) выросли до 7%. Турецкое лингвистическое общество в 1985 году достигло желаемого результата, снизив долю арабских терминов до 10%, увеличив турецкие термины до 70%; однако необходимо отметить, что доля терминов западных языков и терминов-гибридов также возросла до 10% за этот же период.

Ключевые слова
терминология, турецкая терминологическая реформа, терминообразование, терминологическая политика, Турецкое лингвистическое общество, турецкие географические термины, язык и идентичность

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