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The development of the apostrophe with proper names in Turkish

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Abstract: In modern Turkish, the apostrophe is used to separate proper names from inflectional endings (*İzmir'de* 'in İzmir'). This is not the case with inflected common nouns (*şehirde* 'in the city'). In this respect, the apostrophe constitutes an instance of graphematic dissociation between proper names and common nouns. Interestingly, the apostrophe was originally employed to transliterate *hamza* and *ayn* in Arabic and Persian loanwords (*san'at* 'art'). However, these loanwords gradually lost the apostrophe (*sanat* 'art'). This implies that Turkish experienced a graphematic change whereby the apostrophe developed from a phonographic marker of glottal stop into a morphographic marker of morpheme boundaries in proper names. This refunctionalization process is illustrated by a diachronic corpus analysis based on selected issues of the newspaper *Cumhuriyet* from 1929–1975. The findings reveal that the use of the apostrophe with proper names was triggered by foreignness. More specifically, the apostrophe first occurred with foreign names to highlight morpheme boundaries (*Eden'in* 'of Eden') and then expanded to native names via animacy (*Doğan'ın* 'of Doğan').

Keywords: animacy, apostrophe, diachronic corpus analysis, foreignness, graphematic change, proper names

1 Introduction

In Turkish, the apostrophe separates proper names from inflectional endings. This is the case with the personal name *Emir* and the place name *İzmir* (*Emir'in* 'of Emir', *İzmir'in* 'of İzmir'), as shown in Table 1. In contrast, the apostrophe does not occur with inflected common nouns such as *amir* 'chief' and *şehir* 'city' (*amirin* 'of the chief', *şehirin* 'of the city').

This implies that there is a graphematic dissociation between proper names and common nouns. Dissociations are defined in terms of formal differences

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Table 1: Apostrophe and capitalization in Turkish proper names.¹

Case	Proper name		Common noun	
	Personal name	Place name	Human	Inanimate
Accusative	<i>Emir'i</i>	<i>İzmir'i</i>	<i>amiri</i>	<i>şehir</i>
Dative	<i>Emir'e</i>	<i>İzmir'e</i>	<i>amire</i>	<i>şehre</i>
Locative	<i>Emir'de</i>	<i>İzmir'de</i>	<i>amirde</i>	<i>şehirde</i>
Ablative	<i>Emir'den</i>	<i>İzmir'den</i>	<i>amirden</i>	<i>şehirden</i>
Genitive	<i>Emir'in</i>	<i>İzmir'in</i>	<i>amirin</i>	<i>şehrin</i>

between proper names and common nouns at the phonological, morphosyntactic, and graphematic level (see Nübling 2005; Nübling et al. 2015: 64–92). With regard to graphematic dissociations, Nübling et al. (2015: 86–92) distinguish between capitalization, graphemes, and syngraphemes (apostrophe, hyphen, etc.). In addition to the apostrophe, Turkish exhibits capitalization, which applies to proper names (*Emir*, *İzmir*), but not to common nouns (*amir* ‘chief’, *şehir* ‘city’). In Turkish, dissociations are found at the graphematic level, but not at the morphosyntactic level since proper names do not differ from common nouns with respect to inflection.

The apostrophe contributes to the principle of onymic schema constancy, according to which the shape of proper names is preserved in order to enable their recognition and processing (see Nübling 2005: 50–51). The need to retain the proper name body has been shown to have an effect on the phonology, morphosyntax, and graphematics of German (see Nübling 2017). In Turkish, however, the principle of onymic schema constancy is restricted to graphematics where the apostrophe has the function of highlighting morpheme boundaries. Moreover, common nouns and proper names can differ with respect to spelling although they share the same pronunciation. This is illustrated by the graphematic representation of /b d g dʒ/ in word-final and word-medial position (see Table 2). In word-final position, /b d g dʒ/ undergo devoicing, giving rise to [p t k tʃ], respectively. When a vowel-initial suffix is attached to the stem, /b d g dʒ/ are syllabified and occupy the word-medial onset. Such is the case with the accusative

¹ Note that the lexical item *şehir* ‘city’ displays phonologically conditioned allomorphy. The consonant cluster /hr/ is disallowed in the syllable coda and is repaired by means of vowel epenthesis yielding *şehir* in the nominative, *şehirde* in the locative, and *şehirden* in the ablative. When the consonant cluster is heterosyllabic, the process does not apply. This is the case with the accusative, dative, and genitive (see Lees 1961: 37–38; Kornfilt 1997: 513).

Table 2: Onymic schema constancy in Turkish proper names.

Phoneme	Graphematic alternation	Common noun	Proper name
/b/	<-p>, <-b>	<i>mehtap</i> - <i>mehtabı</i>	<i>Mehtap</i> - <i>Mehtap'ı</i>
/d/	<-t>, <-d>	<i>umut</i> - <i>umudu</i>	<i>Umut</i> - <i>Umut'u</i>
/g/	<-k>, <-ğ>	<i>ışık</i> - <i>ışığı</i>	<i>Işık</i> - <i>Işık'ı</i>
/dʒ/	<-ç>, <-c>	<i>sevinç</i> - <i>sevinci</i>	<i>Sevinç</i> - <i>Sevinç'i</i>

ending -(y)*I*.² In word-medial intervocalic position, /b d dʒ/ are retained while /g/ experiences deletion via lenition (see Lees 1961: 51–52 for word-final devoicing and word-medial deletion).³ As a result of deletion, the preceding vowel undergoes lengthening (see Ünal-Logacev et al. 2019). This phonologically conditioned allomorphy is reflected in the spelling of common nouns such as *mehtap* ‘moonlight’, *umut* ‘hope’, *ışık* ‘light’, and *sevinç* ‘joy’, which show the alternation of the graphemes <p t k ç> and <b d ğ c> in word-final and word-medial position, respectively (see Lewis 1967: 10–12 for examples). These phonological processes also apply to the corresponding personal names *Mehtap*, *Umut*, *Işık*, and *Sevinç*. Thus, we find devoicing in word-final position (*Mehtap* [mehtap], *Işık* [ɯʃuk]), but retention or deletion in word-medial position (*Mehtap'ı* [mehtabw], *Işık'ı* [ɯʃu:ɯ]). However, /b d g dʒ/ are represented with the graphemes <p t k ç> both in word-final and in word-medial position. That is, in contrast to common nouns, proper names do not display graphematic alternations.

The apostrophe has been intensively studied for German, both from a diachronic and synchronic perspective. Nübling (2014; 2017: 360–361) provides a comprehensive overview of the development of the apostrophe, showing that its occurrence with inflected proper names was motivated by animacy (personal names prior to place names) and foreignness (foreign names prior to native names) (see Kempf 2019: 135–136 for foreign personal names). With regard to Turkish, little is known about the factors that conditioned the emergence and

² Following convention in Turkish linguistics, capital letters represent archiphonemes that are subject to phonological processes such as vowel harmony and voicing assimilation. For example, *I* stands for the high vowels <i ü ı u> while *A* stands for the non-high vowels <a e>. In addition, parentheses contain consonants that are deleted after consonant-final stems or vowels that are deleted after vowel-final stems. For example, the genitive ending -(n)*In* is comprised of the forms -(n)*in*, -(n)*ün*, -(n)*ın*, and -(n)*un*, which result from vowel harmony and consonant deletion.

³ The phonological status of <ğ> has been a contentious issue in the literature (see Ünal-Logacev et al. 2019: 183–186 for a comprehensive overview). Following Lees (1961: 52), we assume deletion of word-medial /g/. Evidence supporting this assumption comes from Turkish varieties that have preserved the consonant in this position (see Károlyi 2012: 6–9).

development of the apostrophe with proper names. The goal of this paper is to provide a diachronic account of apostrophe usage from the introduction of the new Latin-based alphabet in 1928 to the present.

The paper is structured as follows: Section 2 discusses the functions of the apostrophe from a typological perspective. Section 3 deals with the 1928 alphabet revolution. Section 4 gives a diachronic overview of the functions of the apostrophe in newspapers and the Spelling Dictionary. Section 5 presents a diachronic corpus analysis which examines the use of the apostrophe with Arabic and Persian loanwords and inflected proper names in the newspaper *Cumhuriyet*. Section 6 summarizes the main findings of our study.

2 Functions of the apostrophe

Cross-linguistically, the apostrophe has been shown to have different functions (see Gallmann 1989: 102; Bunčić 2004; Scherer 2013). We will distinguish between diacritic, deletion, phonographic, and morphographic markers (see Table 3).⁴ As a diacritic marker, the apostrophe is added to consonant letters for denoting duration and place of articulation. For example, we find the apostrophe in Jèrriais for geminates (*s*'s /z:/, *ss*'s /s:/, *t't* /t:/), in Slovak for the palatal consonants *t'* [c], *d'* [j], *l'* [ʎ] before back vowels or in word-final position (*t'ava* [cava] 'camel', *cakat'* [tʃakac] 'to wait'), and in Ukrainian for the non-palatalization of the consonants <б п м в ф р> when adjacent to the diphthongs <я ю є і> (п'ять [pjatʲ] 'five') (Pugh and Press 1999: 31; Rothstein 2006: 419; Finbow 2016: 686). As a deletion marker, the apostrophe is employed for the omission of a letter (or letters). The apostrophe has been mainly associated with this function in the literature (see Bunčić 2004: 186–187). As a phonographic marker, the apostrophe is related to consonantal segments, especially the glottal stop [ʔ]. This is the case in Hawaiian and Mohawk (Elbert and Pukui 1979: 10; Mithun 1996: 159). Examples from Mohawk are *ksa'a* 'child' and *kati* 'thus' (Mithun 1996: 160–161). As a morphographic marker, the apostrophe highlights word and morpheme boundaries. Gallmann (1985: 33, 101–104) makes a distinction between the pragmatic-morphological principle for proper names and the graphematic-morphological principle for abbreviations, acronyms, and numerals. In German, for example, we find the pragmatic-morphological principle with inflected personal names and place names containing genitive -s (*Gino's* 'Gino's', *Berlin's* 'of Berlin') as well as

⁴ Note that scholars such as Klein (2002) and Scherer (2010; 2013) talk about the phonographic apostrophe to refer to the deletion marker ("Auslassungsapostroph", "Elisionsapostroph").

Table 3: Functions of the apostrophe in selected languages.

Language	Diacritic marker	Deletion marker	Phonographic marker	Morphographic marker
Jèrriais, Slovak, Ukrainian	✓			
Hawaiian, Mohawk			✓	
Catalan, French, Greek		✓		✓
Cupeño			✓	✓

with derived personal names (*Einstein’sche Zeit-Dilatation* ‘Einsteinian time dilation’). In turn, we find the graphematic-morphological principle with inflected abbreviations (*LKW*’s ‘trucks’), acronyms (*UFO*’s ‘UFOs’), and loanwords (*T-Shirt*’s ‘T-shirts’) as well as with derived abbreviations (*DRK’ler* ‘members of the German Red Cross’) (examples taken from Bankhardt 2010 and Scherer 2010). Both principles have in common that they constitute word shape preservation strategies (see Nowak and Nübling 2017). Interestingly, we rarely find languages where the apostrophe exclusively functions as a morphographic marker. However, we will see that in Turkish the apostrophe is mainly associated with this function (see Section 4).

Importantly, the different functions of the apostrophe can co-occur and even overlap. In this respect, Scherer (2013: 77) talks about the polyfunctionality of the apostrophe. For example, in Catalan, French, and Greek the apostrophe serves simultaneously as a deletion and a morphographic marker since the apostrophe coincides with a word or morpheme boundary. For example, in Greek the apostrophe is associated with vowel deletion at word boundaries, as in *το ’κανα* (< *το έκανα*) ‘I did it’ (Holton et al. 2012: 39). Similarly, in Catalan and French the apostrophe highlights vowel deletion at morpheme boundaries, as in Cat. *l’home* (< *el home*) and Fr. *l’homme* (< *le homme*) ‘the man’. Note that the apostrophe is optional in Greek, but obligatory in Catalan and French. In turn, in Cupeño, an Uto-Aztecan language formerly spoken in Southern California, the apostrophe functions at the same time as a phonographic and a morphographic marker since the glottal stop, which is represented by apostrophe, is restricted to word-final position (*tavxaa’* ‘to work’) and word-medial position, both after vowel-final prefixes (*pe’amu* ‘s/he hunted’) and before vowel-initial suffixes (*tavxaa’ily* ‘work’) (Hill 2005: 20–21, 50–53).

With regard to morphographic markers, we can distinguish between syngraphemes such as the apostrophe and hyphen (see Gallmann 1996 for a comprehensive overview). Thus, the function as a morphographic marker can be performed by the apostrophe, by the hyphen, or by both (see Table 4). In Turk-

Table 4: The apostrophe and hyphen as morphographic markers in selected languages.

	Apostrophe	Hyphen
Turkish	✓	
Armenian, Romanian, Spanish		✓
Catalan, Finnish, French, German	✓	✓

ish, we only find the apostrophe as a morphographic marker while in Armenian, Romanian, and Spanish we only find the hyphen as a morphographic marker (RAE/ASALE 2010: 411–422; DOOM 2005; Dum-Tragut 2009: 714–716). For example, in Romanian the hyphen functions as a morphographic marker with cliticization (*dă-l* ‘s/he gives it’), certain derivational prefixes and compounds (*ex-ministru* ‘ex-minister’, *prim-ministru* ‘Prime Minister’), derivation of foreign names and numerals (*shakespeare-ian* ‘Shakespearean’, *16-imi* ‘16th’), and the suffixed definite article occurring with abbreviations and acronyms (*pH-ul* ‘the pH’), names of letters and sounds (*x-ul* ‘the x’), and loanwords and foreign place names whose pronunciation differs from the spelling (*show-ul* ‘the show’, *Bordeaux-ul* ‘Bordeaux’) (see DOOM 2005: xl–xliii, lxiv–lxxvi). In other languages, by contrast, we find both the apostrophe and the hyphen as morphographic markers. This is the case in Catalan (IEC 2017: 105–109, 111–127), Finnish (Korpela 2015), French (Grevisse and Goosse 2016: 114–122), and German (Gallmann 1989). For example, in Catalan the apostrophe functions as both a deletion and a morphographic marker with the definite article *el/la*, the preposition *de* ‘from/of’, and reduced pronouns while the hyphen functions as a morphographic marker with full pronouns and some derivational prefixes and compounds (cf. *l’agafa* ‘s/he takes it’ vs. *agafar-lo* ‘to take it’). In Finnish, the apostrophe, the hyphen, and the colon function as morphographic markers. The apostrophe occurs with inflected loanwords and foreign place names whose pronunciation differs from the spelling (*show’t* ‘the shows’, *Bordeaux’ssa* ‘in Bordeaux’) while the hyphen occurs at the word-internal boundary of compounds with identical adjacent vowels (*kuorma-auto* ‘truck’). In addition, the colon is employed with inflected abbreviations (*UM:ssä* < *ulkoministeriössä* ‘in the Foreign Office’) and inflected numerals (*3:ssä* ‘in 3’), but not with inflected acronyms (*NATOssa* ‘in NATO’).

From a diachronic perspective, the functions of the apostrophe can vary as a result of a graphematic change. For example, in German the apostrophe was originally a phonographic marker which subsequently developed additional functions, serving also as a deletion and morphographic marker (see Nübling 2014). A similar development has taken place in Turkish, as we will see in the ensuing sections.

3 The Turkish alphabet revolution

The early years of the Turkish Republic can be characterized as an era of westernization, which implies that there was a break with previous traditions. The initiated reforms include the abolition of the caliphate, the Islamic calendar, and the Ottoman alphabet. The replacement of the Arabic-based alphabet by a Latin-based one is known as the Turkish alphabet revolution (*harf devrimi*).⁵ This section explores the historical background that led to the alphabet revolution, the contributions of the Language Commission (*Dil Encümeni*) and the Turkish Language Association (*Türk Dil Kurumu*), and the role of newspapers in introducing the new alphabet to the literate public.

The Ottoman alphabet was not well-suited for Turkish (see Taşdemir 2006: 30–39). On the one hand, some Arabic sounds were not present in spoken Turkish. This is the case with <ث> [θ], <خ> [χ], etc. On the other, some Turkish sounds could be represented by a single Arabic letter. For example, <و> represented the vowels [y u œ ɔ].⁶ First debates about the consequences of the Ottoman alphabet on illiteracy among the population arose in the mid-nineteenth century (see Şimşir 1992: 18–29; Taşdemir 2006: 3–18; Strauss 2008: 487–489; Yılmaz 2013: 63–64; Türker 2019: 38–87). After the Turkish Republic was established, these debates were still pursued in parliament and newspapers (see Levend 1960: 392–400; Doğaner 2005: 30–33; Taşdemir 2006: 18–29; Biçici and Yıldız Özlü 2020). The adoption of a new Latin-based alphabet was publicly announced by President Mustafa Kemal Atatürk on 9 August 1928. The Alphabet Law (*Türk Harflerinin Kabul ve Tatbiki Hakkında Kanun* ‘Law of the adoption and application of Turkish letters’) was passed by the Turkish Grand National Assembly on 1 November 1928 (see Şimşir 1992: 208–216).

The Language Commission (*Dil Encümeni*) was formed in May 1928 in order to develop the new alphabet.⁷ The first version was presented in the Elifba Report

5 The term *harf devrimi* (or *harf inkılâbı*) is not translated homogeneously in the literature, as can be observed in the following examples from English, French, and German: *alphabet reform* (Ertürk 2011; Yılmaz 2013), *Alphabetrevolution* (Bayraktarlı 2009), *alphabet revolution* (Türker 2019), *révolution alphabétique* (Caymaz and Szurek 2007), and *script revolution* (Strauss 2008). It will henceforth be referred to as the alphabet revolution.

6 For instance, اُون could be read as *ün* [yn] ‘fame’, *un* [un] ‘flour’, *ön* [œn] ‘front’, and *on* [ɔn] ‘ten’ (example taken from Türker 2019: 41).

7 Similar to the term *harf devrimi* (see Footnote 5), the term *Dil Encümeni* has been translated differently in English, French, and German: *Alphabetkommission* (Steuerwald 1963; 1964), *Alphabet Commission* (Yılmaz 2013), *commission linguistique* (Caymaz and Szurek 2007), *Language Commission* (Bayraktarlı 2009), *Language Council* (Ertürk 2011; Türker 2019), and *Sprachkommission* (Bayraktarlı 2009: 209). It will henceforth be referred to as the Language Commission.

(*Elifba Raporu*) in the same year (see Türker 2019: 108–123). The publications of the Language Commission include a grammar (*Muhtasar Türkçe gramer* ‘Concise Turkish grammar’), an alphabet (*Yeni Türk alfabesi* ‘New Turkish alphabet’), and a spelling dictionary (*İmlâ Lûgati*). The new alphabet is comprised of twenty-nine letters. Phonological processes such as word-final devoicing are reflected in the alternation of the graphemes <b d ğ c> and <p t k ç> in word-medial and word-final position, respectively (see Table 2 for examples). Soft <ğ> (*yumuşak g*) replaced the Ottoman letters <ğ> [ɣ] and <ک> [j], which followed back and front vowels, respectively. In addition, we find the apostrophe (*kesme işareti*), the circumflex (*uzatma işareti*, *düzeltilme işareti*), and the hyphen (*bağlama çizgisi*).⁸ The Spelling Dictionary discusses the orthographic rules and provides an extensive list which contains words in Ottoman letters alongside their new counterparts. The discussion revolves around the codification of the new alphabet. Rather than listing a fixed set of rules, it explains the motivation for capitalization and the use of the circumflex and apostrophe in Arabic and Persian loanwords. Capitalization follows the model of the contemporary French writing system.⁹ This is illustrated by first names (*Mehmet*), family names (*Ağaoğlu*), place names (*Ankara*), nationalities (*Türk* ‘Turk’), institutions (*Büyük Millet Meclisi* ‘Grand National Assembly’), titles of books (*Usul Hakkında Nutuk* ‘Discourse on the Method’), and titles following personal names (*İsmet Paşa* ‘General İsmet’). The circumflex indicates the front consonants *k* [c], *g* [j], *l* [l] before the back vowels [a u] (*kâr* [car] ‘profit’ vs. *kar* [kar] ‘snow’), vowel length (*nâr* [na:r] ‘fire’ vs. *nar* [nar] ‘pomegranate’), and the derivational *nisba* suffix *-î* (*ilmî* ‘scientific’) (see Steuerwald 1964: 10–21, 24–32). Apostrophe use is described in Section 4. The Spelling Dictionary was viewed as preliminary work for a future Turkish language academy. The second edition (*İmlâ Kılavuzu*) was published by the Turkish Language Association (*Türk Dil Kurumu*) in 1941. It contains orthographic rules and a word list in the new script only. The orthographic rules include capitalization, word-final devoicing, apostrophe, circumflex, and punctuation marks. Altogether, there have been twenty-seven editions of the Spelling Dictionary so far.

⁸ The hyphen was introduced for separating inflectional suffixes. The Language Commission illustrates its use in the orthography only (Dil Encümeni 1928c: 5). An example is *biliyor-um* ‘I know’ where the hyphen occurs before the verbal ending. In the Spelling Dictionary, the hyphen is found with inflected letters in italics (*ş-den* ‘from *ş*’), inflected numerals (*11-inci* ‘eleventh’), and words in metalinguistic use in italics (*ayn-ın* ‘of *ayn*’) (Dil Encümeni 1928a: x, xii, xiii). Although the hyphen was presented in contemporaneous newspapers (e. g. *Cumhuriyet* 20/09/1928), it was viewed as unnecessary and ultimately abandoned (Türker 2019: 121).

⁹ The seventh edition of the *Dictionnaire de l’Académie Française* (1879) only mentions capitalization of proper names (I: 248, II: 38, 155). With regard to the capitalization of nationalities, Grevisse and Goose (2016: 97) observe that in French this rule is not always followed.

The newspapers shifted to the new alphabet in the months leading up to 1 December 1928 when, according to the Alphabet Law, all newspapers had to be completely published in the new script. This was the case with *Cumhuriyet*, *Hakimiyeti Milliye*, *Milliyet*, *Vakit*, etc. Newspapers therefore played an important role during the alphabet revolution since they introduced the new letters and orthographic rules to their readers (see Acar 2011). This will be illustrated with *Cumhuriyet* and *Hakimiyeti Milliye*. *Cumhuriyet* presented the new alphabet (letters, numerals, apostrophe, circumflex, and hyphen) in the panel *Benim Alfabem* ‘My Alphabet’ on the front page of the issues from September 5 to September 21. Similarly, *Hakimiyeti Milliye* regularly provided sections on the new alphabet and thereby introduced the new spelling (letters, apostrophe, circumflex), with examples involving word formation (abbreviations, acronyms, compounding), inflection, and phonological processes (voicing assimilation, vowel harmony, word-final devoicing). Importantly, *Hakimiyeti Milliye* was a semi-official newspaper which largely followed the new orthographic rules. Moreover, its editor-in-chief, Falih Rıfkı Atay, was a member of the Language Commission. In contrast, these orthographic rules were not strictly followed by book publishers or by Istanbul-based newspapers such as *Cumhuriyet* (see Steuerwald 1963: 11–12; 1964: 8–9, 57, 108–109). This was not unusual in the 1930s and 1940s, which was criticized by the newspaper *Ulus* (Atay 1940; 1941).¹⁰

4 The apostrophe in Turkish

This section provides a diachronic account of the use of the apostrophe from the introduction of the new alphabet to the present. The focus will be on the alphabet and grammar of the Language Commission, orthographies and newspapers of that time, and selected editions of the Spelling Dictionary.

After the introduction of the new alphabet, the apostrophe (*kesme işareti*, *koma işareti*) was originally employed to transliterate the Arabic letters <ء> (*hamza*) and <ع> (*ayn*), as in *mes’ele* ‘issue’ (< Ar. مسألة) and *mes’ut* ‘happy’ (< Ar. مسعود) (see Steuerwald 1964: 22–23).¹¹ The letters <ء> and <ع> represent the voiceless glottal stop [ʔ] and the voiced pharyngeal fricative [ʕ], respectively.

¹⁰ Note that the *Hakimiyeti Milliye* newspaper changed its name to *Ulus* on 28 November 1934.

¹¹ Note that in Arabic, letters have different shapes according to their position within the word. With regard to <ع> (*ayn*), we find <ء> in word-initial, <ع> in word-medial, and <ع> in word-final position. This does not hold for <ء> (*hamza*), which can “sit aloof” (by itself) or have a “seat” (over or under a letter) according to specific rules (see Ryding 2005: 11–12, 16–21).

The apostrophe was spoken as a glottal stop. In this respect, Lewis (1967: 8–9) distinguishes between primary glottal stop for *hamza* and secondary glottal stop for *ayn*. The use of the apostrophe as a phonographic marker can be gleaned from the alphabet and the grammar of the Language Commission as well as from contemporaneous orthographies and newspapers. The Language Commission presented the apostrophe in their alphabet (*Yeni Türk alfabesi* ‘New Turkish alphabet’) and grammar (*Muhtasar Türkçe gramer* ‘Concise Turkish grammar’). The alphabet only contains the examples *mes’ud* ‘happy’ and *mebde* ‘beginning’ (Dil Encümeni 1928c: 5). By contrast, the grammar explains that the apostrophe is employed for <ء> (*hamza*) and <ع> (*ayn*).¹² It further illustrates the apostrophe with examples such as *mes’ud* ‘happy’ for *ayn* and *mes’ul* ‘responsible’ for *hamza* (Dil Encümeni 1928b: 9). This use is also reflected in orthographies and newspapers.¹³ As for newspapers, *Cumhuriyet* deals with the apostrophe in both the new alphabet in the panel *Benim Alfabem* ‘My Alphabet’ (19/09/1928) and in the Ottoman script (30/09/1928). Similarly, *Hakimiyeti Milliye* describes the apostrophe in both the Ottoman script (06/09/1928, 21/09/1928) and the new alphabet (30/09/1928, 01/10/1928, 02/10/1928).

The use of the apostrophe with inflected proper names was first put forward by Ata (1928) in the intellectual magazine *Hayat* following English usage, in particular.¹⁴ In an article published in *Hakimiyeti Milliye*, Ata (1929) criticizes that in some newspapers and magazines inflected proper names are highlighted by means of italics (*Baconun* ‘of Bacon’) or quotation marks followed by a blank

¹² As the grammar states (transliterated from Ottoman): “Hecenin nihayet bulduğuna delalet eder (yani bu işaretden sonra gelen harfle yeni hece başlar). Eski yazıda hece nihayetindeki sakın ع ile hemzenin yerine kaim olur. Bu takdirde dahil olduğu hece hafifçe çekilir” [The apostrophe shows where the syllable finds its end (thus, a new syllable begins with the letter following this symbol). It replaces ع and *hamza* at the end of a syllable in the old script. In this case, the syllable in which it is included is slightly retracted].

¹³ Türker (2019: 120) lists no less than 15 orthographies that were published in 1928. An account of the apostrophe is found, for example, in Hilmi (1928: 3, 19).

¹⁴ As Ata (1928: 423) points out with regard to his translation of Maurois’s (1924) *Ariel or the Life of Shelley*: “ismi haslar, karışmasın diye, türkçe lahikalarından bir (') ile ayrılmıştır. Böyle olmayınca ismin mücerredî, yani asıl şekli eyice anlaşılmaz; zaten İngilizler ve bazan Almanlar da böyle yapıyor” (sic) [Proper names are separated from Turkish endings with a (') in order to avoid confusion. Otherwise, the uninflected form – that is, the original form – cannot be understood very well. So do the English and sometimes the Germans]. Examples from his translation are *Godwin’in* ‘of Godwin’, *Godwin’ler* ‘the Godwins’, *Oxford’da* ‘in Oxford’, etc. Note that in addition to inflected proper names, the apostrophe occurs with Arabic and Persian loanwords such as *kat’î* ‘sure’, *neş’e* ‘joy’, etc.

space (“*Bacon*., *un* ‘of Bacon’”).¹⁵ Instead, he suggests that the apostrophe be applied to all proper name classes, including personal names (*Ahmet’in* ‘of Ahmet’), personal names with titles (*Mehmet Bey’e* ‘to Mr. Mehmet’), and institution names (*Büyük Millet Meclisi’nin* ‘of the Great National Assembly’). He further argues that in inflected foreign names the morpheme boundaries are not always straightforward.¹⁶ Ata’s proposal was supported by Atay, editor-in-chief of *Hakimiyeti Milliye*. As a result, the apostrophe was employed with inflected proper names in *Hakimiyeti Milliye* from 1929 onwards.¹⁷

Let us move on to the use of the apostrophe in the Spelling Dictionary. We will focus on the first five editions (1928–1957) and the most recent edition (2012) (see Table 5).¹⁸ According to the first edition (*İmlâ Lûgati*), the apostrophe is employed for the transliteration of *hamza* and *ayn* in word-medial position after a consonant (*san’at* ‘art’) and, albeit less frequently, after a vowel (*şe’niyet* ‘reality’) (Dil Encümeni 1928a: xii–xiii). Interestingly, the first edition presents one instance of inflected foreign name with an apostrophe: *Descartes’in* ‘of Descartes’ (p. xxviii).

The second edition (*İmlâ Kılavuzu*) included two new uses of the apostrophe (Türk Dil Kurumu 1941: xxxiii–xxxv). First, the apostrophe is compulsory with segment deletion (*ne ola > n’ola* ‘what happens’). Second, the apostrophe is optional with inflected proper names, as shown in (1). Note that the proper name class is not specified. However, the introduction contains examples of the apostrophe with the inflected names of persons (*Tasar’ın* ‘of Tasar’), institutions (*Türk Dil Kurumu’nun* ‘of the Turkish Language Association’) and books (*İmlâ Lûgati’nin* ‘of the

¹⁵ For example, the first edition of the Spelling Dictionary contains numerous examples of inflected proper names in italics (*Muhtasar Türkçe Gramer* in ‘of the Concise Turkish Grammar’, *İmlâ Lûgati*nde ‘in the Spelling Dictionary’, etc.) but only one in quotation marks in italics („*İmlâ Lûgati*”nde ‘in the Spelling Dictionary’) (examples taken from Dil Encümeni 1928a: vii, xiii, xvi).

¹⁶ This is illustrated by the foreign names *Bacon*, *Hugo*, and *Tolstoy*. For example, the genitive ending *-(n)In* in the inflected forms *Baconun* and *Hugonun* can be *-un* or *-nun* depending on whether the name ends in a consonant (*Bacon-un*, *Hugon-un*) or a vowel (*Baco-nun*, *Hugo-nun*), respectively. Similarly, the accusative ending *-(y)I* in the inflected forms *Hugoyu* and *Tolstoyu* can be *-u* or *-yu* depending on whether the name ends in a consonant (*Hugoy-u*, *Tolstoy-u*) or a vowel (*Hugo-yu*, *Tolsto-yu*), respectively. Thus, the apostrophe in *Bacon’un* ‘of Bacon’, *Hugo’nun* ‘of Hugo’, *Hugo’yu* ‘Hugo (acc.)’, and *Tolstoy’u* ‘Tolstoy (acc.)’ highlights the morpheme boundaries and contributes to the preservation of the proper name body.

¹⁷ Examples from the 2 January 1929 issue are *Necati’nin* ‘of Necati’ and *Smith’in* ‘of Smith’. Note, however, that this usage was not regular since examples without apostrophe abound (*Avrupanın* ‘of Europe’, *İstanbulun* ‘of Istanbul’, etc.).

¹⁸ Karabacak (1999) analyses the use of the apostrophe in the editions of the Spelling Dictionary published until 1993. However, she does not address the question of when new functions were introduced or whether they are obligatory or optional. For a comprehensive overview of the apostrophe in modern Turkish, see Göksel and Kerslake (2011: 16–20).

Table 5: Use of the apostrophe according to selected editions of the Spelling Dictionary.

İmlâ Lûgati (¹ 1928: xii)	İmlâ Kılavuzu (² 1941: xxxiv, ³ 1948: xxxiv)	İmlâ Kılavuzu (⁴ 1956: 21, ⁵ 1957: 21)	Yazım Kılavuzu (²⁷ 2012: 38–39)
<e> and <e>			
Inflected proper names			
Segment deletion			
Homophony avoidance			
Inflected numerals			
Inflected abbreviations, dates, letters, etc.			

Spelling Dictionary'). In addition, the spelling of word-final <p t k ç> is preserved when vowel-initial suffixes are attached despite the pronunciation being [b d g dʒ], as in *Ahmet'i* [ahmedî] (see Table 2 for examples). The third edition does not differ from the second one with respect to the functions of the apostrophe.

- (1) Apostrophe with inflected proper names (Türk Dil Kurumu 1941: xxxiii)
Özel adlar, kendilerinden sonra gelen eklerden bir (') işaretiyle ayrılabilir
 [Proper names can be separated from inflectional endings by (')]

The fourth edition added two new uses of the apostrophe. First, the apostrophe can be employed when inflection leads to homophony with monomorphemic words. For example, *karın* [karun] 'belly' is homophonous with the inflected forms *kar'ın* 'of snow' and *kan'n* 'your wife' (examples taken from Lewis 1967: 2). Thus, the apostrophe separates the base form from the inflectional ending, thereby highlighting morpheme boundaries. Second, the apostrophe can be used to separate numerals from inflectional endings (*1956'da* 'in 1956'). The fifth edition does not differ from the fourth one with respect to the functions of the apostrophe.

According to the latest edition (*Yazım Kılavuzu*), the apostrophe is employed for separating the inflectional endings of proper names (*Atatürk'üm* 'my Atatürk'), titles (*Ayşe Hanım'dan* 'from Ms. Ayşe'), abbreviations and acronyms (*TDK'nin* 'of the TDK'), numerals (*1985'te* 'in 1985'), names of days and months in specific dates (*12 Temmuz 2010 Pazartesi'nin* 'of Monday 12 July 2010'), and letters, suffixes, or words in metalinguistic use (*a'dan z'ye* 'from a to z', *-lık'la* 'with -lık') (Türk Dil Kurumu 2012: 38–40).¹⁹ The inflectional endings include case, comitative (-(y)la),

¹⁹ An example of an inflected word in metalinguistic use is *kömür'den kömürcü, kömürcülük* [...] 'derived from *kömür* 'charcoal' are *kömürcü* 'charcoal burner', *kömürcülük* 'charcoal burning' [...] (example taken from Türk Dil Kurumu 1988: xxvi).

copula (*-Dir*, *-miş*, *-(y)-sA*), and possessive. In addition, the apostrophe is employed to mark the deletion of one or more segments (*ne'n var?* < *neyin var?* 'what have you got?').²⁰ With regard to inflected proper names, there are some exceptions. First, inflected names of committees, conferences, institutions, organizations, sessions, and workplaces are not separated by the apostrophe (*Türk Dil Kurumundan* 'from the Turkish Language Association'). In this respect, institution names differ from other object name subclasses such as book names as well as from other proper name classes such as personal names and place names (see Section 5.3 for discussion). Second, personal names followed by the plural suffix *-lar* (*-lar*, *-ler*) do not occur with the apostrophe (*Ahmetler*).²¹ A possible explanation is that proper names lose their onymic status when they are pluralized (Nübling et al. 2015: 35). Third, ethnonyms, which are formed by combining a place name (*Ankara*) with the derivational suffix *-li* (*-li*, *-lı*, *-lu*, *-lü*), lack the apostrophe both before and after the derivational suffix, as in *Ankaralı* 'inhabitant of Ankara' and *Ankaralının* 'of the inhabitant of Ankara', respectively (see Göksel and Kerslake 2011: 324–325 for examples). The absence of the apostrophe in these cases is in accordance with the view that ethnonyms do not constitute proper names (Nübling et al. 2015: 36). However, Karabacak (1999: 602) reports that the apostrophe can be applied to proper names where the pronunciation differs from the spelling (*Bordeaux'lu* 'inhabitant of Bordeaux').²²

In summary, the use of the apostrophe with proper names was first put forward by Ata (1928; 1929) shortly after the alphabet revolution took place. However, this practice was not reflected in the orthographic rules until the second edition (1941) although it is found in *Hakimiyeti Milliye* from 1929. With regard to the Spelling Dictionary, we found the following changes: (1) the transliteration of *hamza* and *ayn* is present in the first five editions. However, the instances

²⁰ According to the TS Corpus, deletion is infrequent as can be observed in the following examples: *n'aber* 49 vs. *ne haber* 244 'what's up' and *n'oldu* 141 vs. *ne oldu* 8,765 'what happened'. In the case of deletion, the apostrophe coincides with morpheme boundaries. That is, the apostrophe functions simultaneously as a deletion and morphographic marker. Note that high-frequency strings displaying segment deletion have been lexicalized as a result of univerbation. Such is the case with *birbiri* 'each other' (< *biri biri*), *nasıl* 'how' (< *ne asıl*), *niçin* 'why' (< *ne için*), and *sütlaç* 'rice pudding' (< *sütlü aş*) (examples taken from Türk Dil Kurumu 2012: 18).

²¹ However, Karabacak (1999: 602) points out that the apostrophe can be applied when referring to the members of a family. Thus, *Ahmetler* denotes all individuals called *Ahmet* while *Ahmet'ler* designates *Ahmet* and relatives.

²² This is backed up by the TS Corpus, which reveals that the apostrophe occurs more frequently with *Liverpool* and *Bordeaux* (*Liverpool'lu* 106 vs. *Liverpoolu* 84, *Bordeaux'lu* 14 vs. *Bordeauxlu* 2) than with *Berlin* and *Londra* (*Berlin'li* 18 vs. *Berlinli* 198, *Londra'lı* 10 vs. *Londralı* 199).

of apostrophe slightly decrease in the word list.²³ In the most recent edition, the apostrophe is absent from Arabic and Persian loanwords, as in *kati* ‘sure’, *mesul* ‘responsible’, and *sanat* ‘art’ (Türk Dil Kurumu 2012: 331, 388, 460); (2) the use of the apostrophe for segment deletion and inflected proper names is introduced in the second edition and has continued to apply until the present day. Regarding inflected proper names, the apostrophe is optional in the second to fifth editions, but obligatory in the most recent one; (3) homophony avoidance by means of apostrophe is present in the fourth and fifth editions, but no longer in the most recent one; (4) the occurrence of the apostrophe with inflected numerals is introduced in the fourth edition and is still present; and (5) in the most recent edition, apostrophe use is extended to abbreviations, acronyms, dates, inflected letters, suffixes, and words in metalinguistic use.

This diachronic overview has shed light on a previously undocumented graphematic change involving the refunctionalization of the apostrophe, as illustrated in Figure 1. At a first stage, the apostrophe constitutes a phonographic marker for the transliteration of *hamza* and *ayn* in Arabic and Persian loanwords (*san'at* ‘art’). At a second stage, the apostrophe is gradually refunctionalized as a morphographic marker in proper names (*Ankara'da* ‘in Ankara’). At a final stage, the apostrophe is absent from Arabic and Persian loanwords (*san'at* > *sanat* ‘art’) and is mainly associated with inflected proper names. The absence of the apostrophe with Arabic and Persian loanwords reflects the loss of the glottal stop in spoken Turkish. After vowels, glottal stop deletion can be accompanied by compensatory vowel lengthening. This is the case with *tesir* [tɛ:sir] ‘effect’ and *malum* [ma:lum] ‘known’, which originally contained *hamza* (Ar. تَأْتِير) and *ayn* (Ar. معلوم), respectively (Steuerwald 1964: 117, 120; Lewis 1967: 14). The glottal stop still occurred in the 1960s with old-fashioned words such as *kur'a* ‘prize draw’ (Steuerwald 1964: 23, 122–123). Today, it is mainly found among older speakers (Kornfilt 1997: 488–489). In addition, we see that the pragmatic-morphological principle (for inflected proper names) is followed by the graphematic-morphological principle (for inflected abbreviations, acronyms, and numerals).²⁴

²³ More specifically, the first edition contains 105 instances of Arabic and Persian loanwords with apostrophe while the fifth one contains 98. We can observe the following differences: First, some words no longer exhibit the apostrophe (*sanat* ‘art’). Second, others have acquired the apostrophe (*kur'a* ‘prize draw’). Third, some words still retain the apostrophe (*kat'etmek* ‘to cut’). For a comparison between the first and second edition, see Steuerwald (1964: 120–123).

²⁴ Note that Scherer (2010; 2013) expanded the notion of pragmatic-morphological and graphematic-morphological principle in order to explain the use of the apostrophe with loanwords in German (*Bureau*’s ‘bureaus’, *T-Shirt*’s ‘t-shirts’). However, this does not apply for Turkish. A possible explanation is that French and English loanwords are adapted to Turkish graphematics and phonology (*büro* ‘bureau’, *tişört* ‘t-shirt’).

Figure 1: Diachronic development of the apostrophe.

5 The apostrophe in *Cumhuriyet* (1929–1975)

As we have seen in the previous section, Turkish exhibits a graphematic change involving a refunctionalization of the apostrophe. However, little is known about the refunctionalization patterns in the intermediate stage where the apostrophe occurred both as a phonographic marker with Arabic and Persian loanwords and as a morphographic marker in inflected proper names (see Figure 1). Moreover, the use of the apostrophe with inflected proper names was introduced in the second edition (1941) of the Spelling Dictionary. Importantly, the apostrophe was optional rather than compulsory. The optionality of this rule is well suited for a variationist analysis. In this section, we will conduct a corpus analysis in order to examine the loss of the apostrophe with Arabic and Persian loanwords on the one hand and the factors that motivated the refunctionalization of the apostrophe on the other. This issue will be illustrated by the newspaper *Cumhuriyet*.²⁵ This newspaper was chosen for the following reasons: First, *Cumhuriyet* is a daily national newspaper which was grounded in 1924 and is still published today. This allows for an in-depth diachronic study of the apostrophe from 1929 onwards. Second, recall from Section 3 that in contrast to the semi-official newspaper *Hakimiyeti Milliye*, book publishers and Istanbul-based newspapers such as *Cumhuriyet* did not strictly follow the orthographic rules. For example, *Hakimiyeti Milliye* employed the apostrophe with inflected proper names as early as 1929 (see Footnote 17 for

²⁵ Note that there is no historical corpus of Turkish that comprises the time span from the alphabet revolution to the present. The TS TimeLine Corpus only ranges from 1998 to 2016. Since the newspaper *Cumhuriyet* is not freely available online, the issues we selected for our study had to be obtained from the *Cumhuriyet* archive site and later manually examined.

examples). However, it will be shown that *Cumhuriyet* also employed it, albeit at a later point and under specific conditions. In this section, we will address the following questions:

- What are the distribution patterns of the apostrophe with Arabic and Persian loanwords and inflected proper names?
- Which factors condition the occurrence of the apostrophe with inflected proper names?

5.1 Study design

We selected twenty-two issues published between 1929 and 1975. This time span begins directly after the introduction of the Latin alphabet and ends with the regular use of the apostrophe with inflected proper names. We analysed the front pages of two issues per year with five-year intervals (1929, 1930, 1935, etc.).²⁶ To examine the distribution of the apostrophe with Arabic and Persian loanwords and inflected proper names, we coded all instances of apostrophe. Further, in order to address the question of which factors trigger the occurrence of the apostrophe with proper names, we considered all instances of inflected proper names both with and without apostrophe. Following previous diachronic studies on German which demonstrated that the apostrophe is motivated by foreignness and animacy (see Section 1), we will test the following hypotheses: First, if the apostrophe is triggered by foreignness, we expect it to occur with foreign names prior to native names (regardless of animacy). Second, if the apostrophe is triggered by animacy, we expect it to occur with human names (personal names) prior to inanimate names (place names, object names, etc.). Our hypotheses are summarized in (2).

- (2) Hypotheses for the apostrophe with inflected proper names
- H1 (Foreignness): The apostrophe occurs with foreign names prior to native names
- H2 (Animacy): The apostrophe occurs with personal names prior to other proper name classes

The tokens were lemmatized according to the Turkish Dictionary (Türk Dil Kurumu 1988) and subsequently annotated for word class, proper name class, presence of

²⁶ The selected issues are the following: 31/01/1929, 31/07/1929, 31/01/1930, 31/07/1930, 31/01/1935, 31/07/1935, 31/01/1940, 31/07/1940, 01/02/1945, 31/07/1945, 31/01/1950, 31/07/1950, 31/01/1955, 31/08/1955, 31/01/1960, 31/07/1960, 31/01/1965, 31/07/1965, 31/01/1970, 31/07/1970, 31/01/1975, 30/07/1975. Note that we took two issues per year with a six-month interval.

apostrophe, overlap of the apostrophe with a morpheme boundary, morphological ending (case, copula, derivation, possession, etc.), and foreignness (native vs. foreign). With regard to word class, we distinguished between common noun, numeral, and proper name. Since the apostrophe with common nouns is associated with loanwords, we specified the etymology (Arabic, French, Greek, Persian). With regard to proper name class, we followed the classification of proper names put forward by Nübling et al. (2015: 99–104), thereby differentiating between personal names, place names, object names, event names, and weather names. Object names were subclassified as names of institutions, means of transport, etc. (see Vasil'eva 2004: 617 for a classification of institution names).

Foreignness was determined only for personal names and place names. Personal names were classified as native if they were of Turkish origin (*Atatürk*, *İnönü*), but as foreign if they originated from other languages such as English (*Churchill*, *Eden*), French (*de Gaulle*, *Molière*), German (*Rommel*, *von Ribbentrop*), etc. Place names were classified as native if they belonged to the Turkish vocabulary. This holds not only for place names from Turkey (*Türkiye* 'Turkey', *Ankara* 'Ankara'), but also for place names from abroad (*İngiltere* 'England', *Londra* 'London'). Note that native place names from abroad are integrated into the Turkish graphematic and phonological system (*Varşova* < *Warszawa* 'Warsaw'). By contrast, place names were classified as foreign if they exhibited a low degree of familiarity and linguistic integration in terms of graphematics and phonology (see Nowak and Nübling 2017 and Zimmer 2018: 137–176 for German). The degree of familiarity of the place name correlates with the conceptual distance between the speaker (or reader in the case of newspapers) and the named object (see Zimmer 2018: 141). Graphematic deviations include letters which are absent from the Turkish alphabet (<w> in *Washington*), letters which despite being present in the Turkish alphabet have a different pronunciation (<y> for [i] in *Vichy*, <z> for [ts] in *Salzburg*), and violations of the one-to-one correspondences between letters and sounds. This is the case with letters that are not spoken (<g> in *Washington*), letters that have the same pronunciation (<i> and <y> for [i] in *Vichy*), and combinations of letters for a single sound (<sh> in *Washington*). Phonological deviations include violations of phonotactics (<str> and <g> in *Strasbourg*) as well as sounds that do not belong to the phoneme inventory (<z> for [ts] in *Salzburg*). Examples of foreign place names are given in Table 6. For instance, *Luzon* (Philippine island) is in line with Turkish graphematics and phonology. However, its degree of familiarity is rather low. *Vichy* (French city) is in accordance with Turkish phonology. However, it contains the letter <y>, which in Turkish is employed for the onglide [j], and further violates the one-to-one correspondence principle (<ch> for [ʃ], <i> and <y> for [i]). In addition, its degree of familiarity is rather low. *Washington* exhibits graphematic and phonological deviations. However, its

Table 6: Features of foreign place names.

Example	Graphematics	Phonology	Familiarity
<i>Luzon</i>	✓	✓	✗
<i>Vichy</i>	✗	✓	✗
<i>Washington</i>	✗	✗	✓
<i>Salzburg</i>	✗	✗	✗

degree of familiarity is rather high. *Salzburg* does not obey Turkish graphematics (<z> represents [z] in Turkish) and phonology (<g> for [k], <z> for [ts]) and further exhibits a low degree of familiarity. Interestingly, the low degree of linguistic integration and familiarity is associated with the apostrophe, as in *Luzon'a* 'to Luzon' (01/02/1945), *Vichy'den* 'from Vichy' (31/07/1940), *Washington'da* 'in Washington' (31/07/1945), and *Salzburg'da* 'in Salzburg' (31/07/1940). Moreover, of the 31 foreign place names found in our study, 25 occur with the apostrophe.

Finally, we excluded the following cases: 1) inflected proper names separated by quotation marks («*Cumhuriyet*»in 'of Cumhuriyet' 31/01/1930) or a blank space (*CKMP nin* 'of the CKMP' 31/07/1965), of which we found 5 and 15 tokens, respectively. This implies that this practice is infrequent as compared to the apostrophe (see Section 5.2); 2) uninflected proper names with apostrophe (6 tokens). This is the case with names of Arabic origin such as *Kur'an* 'Quran' (31/01/1970) and *Mes'ul* (31/01/1929); and 3) names of months (7 tokens). This is the case with *Mayısta* 'in May' (31/07/1960) and *Ramazanın* 'of Ramadan' (31/01/1930). Following Nübling (2004: 836–837), names of months are not considered proper names.

5.2 Results

This section is structured as follows: First, we will provide an overview of the tokens obtained from the corpus analysis. Second, we will present the distribution of the apostrophe with Arabic and Persian loanwords and inflected proper names. Third, we will examine the influence that foreignness and animacy have on the occurrence of the apostrophe with inflected personal names and place names. Finally, we will analyse the apostrophe with object names and event names.

We found a total of 1,252 tokens, of which 547 contain the apostrophe while 705 do not. These tokens are arranged in Table 7 according to word class, proper name class, and foreignness. Arabic and Persian loanwords are comprised of uninflected and inflected forms (*san'at* 'art', *san'atı* 'art (acc.)', both from 31/01/1929). The apostrophe is restricted to word-medial position such that the apostrophe

Table 7: Apostrophe according to word class, inflected proper name class, and foreignness.

Category	N	With apostrophe	Without apostrophe
Word class			
Arabic and Persian loanwords	53	53	n/a
Inflected proper names	1,182	477 (40 %)	705 (60 %)
Inflected numerals	12	12	n/a
Inflected loanwords (French, Greek)	4	4	n/a
Inflected proper names			
Personal names	247	169 (68 %)	78 (32 %)
Place names	698	238 (34 %)	460 (66 %)
Object names	205	66 (32 %)	139 (68 %)
Event names	32	4 (13 %)	28 (87 %)
Foreignness (personal names, place names)			
Native	818	303 (37 %)	515 (63 %)
Foreign	122	100 (82 %)	22 (18 %)

never coincides with a morpheme boundary. Note that the absence of the apostrophe with Arabic and Persian loanwords, numerals, and inflected French and Greek loanwords was not considered. With regard to inflected proper names, we can observe a gradual decrease in the use of the apostrophe according to proper name class: personal names (68 %), place names (34 %), object names (32 %), and event names (13 %). Inflected weather names are not attested. With regard to foreignness, the apostrophe is more frequently attested with foreign names than with native names (82 % vs. 37 %).

Figure 2 documents the refunctionalization of the apostrophe from a phonographic marker of glottal stop in Arabic and Persian loanwords to a morphographic marker of morpheme boundaries in proper names. The use of the apostrophe with Arabic and Persian loanwords is widely attested in 1929. From 1930 to 1955, it drastically decreases. After 1960, the phonographic marker disappears. Examples of Arabic and Persian loanwords with a frequency of ≥ 5 are *kat'i* ‘sure’, *mes’ele* ‘issue’, and *san’at* ‘art’ (with 8, 15, and 6 tokens, respectively). The use of the apostrophe with inflected proper names undergoes profound changes from 1929 to 1935: it abruptly increases in 1930 and is abandoned in 1935. The 56 tokens of inflected proper names with apostrophe are comprised of 1 foreign personal name (*Makdonald’in* ‘of MacDonald’ 31/01/1930) and 55 native place names (*İstanbul’un* ‘of Istanbul’ 31/01/1930). This finding runs counter to the idea that the apostrophe is triggered by animacy. For the period between 1940 and 1955, we can observe that the apostrophe gradually establishes itself as a morphographic marker. In addition, the apostrophe also occurs with inflected numerals (12 to-

Figure 2: Apostrophe with Arabic and Persian loanwords and inflected proper names.

kens) and inflected French and Greek loanwords (4 tokens).²⁷ In this respect, loanwords behave as proper names (see Ackermann and Zimmer 2017 and Zimmer 2018: 221–252 for German).

To study the role of foreignness and animacy, we concentrated on personal names and place names (see Section 5.3 for further proper name classes). We excluded the years 1929 to 1935 for two reasons. First, the apostrophe does not occur with inflected proper names in 1929 and 1935 (see Figure 2). Second, the apostrophe is mostly restricted to native place names in 1930. Figure 3 shows the distribution of the apostrophe with foreign personal names and place names from 1940 to 1975. Notwithstanding the low frequency of foreign names (especially in 1955 and 1970), the overall picture reveals that foreignness strongly correlates with apostrophe usage. Moreover, the occurrence of the apostrophe with foreign names is not sensitive to animacy since it is found both with personal names (*Mihailoviç'in* ‘of Mihailoviç’ 31/07/1940) and place names (*Versailles'dan* ‘from Versailles’ 31/07/1940).

Figure 4 depicts the distribution of the apostrophe with native personal names and place names in the period from 1940 to 1975. Between 1940 and 1955,

²⁷ With regard to inflected numerals, we found 1 token for 1960 (*3'te* ‘in 3’ 31/07/1960), 9 for 1970 (*1946'dan* ‘from 1946’ 31/01/1970), and 2 for 1975 (*1969'da* ‘in 1969’ 30/07/1975). With regard to inflected French and Greek loanwords, we found 1 for 1965 (*kompleks'ten* ‘from the complex’ 31/07/1965) and 3 for 1975 (*tifo'da* ‘in typhoid fever’, *trinitrine'i* ‘trinitrine (acc.)’, *Tüberküloz'da* ‘in tuberculosis’, all from 31/01/1975).

Figure 3: Apostrophe with inflected foreign personal names and place names.

Figure 4: Apostrophe with inflected native personal names and place names.

the apostrophe with native names is rare. Note that the frequency of personal names in 1940 and 1945 is low (only 6 tokens) and does not allow us to observe an impact of animacy. However, animacy has a clear effect in 1960 and 1965 where the apostrophe occurs more frequently with native personal names than with native place names (91 % vs. 46 % and 74 % vs. 33 %, respectively). In 1970 and

Table 8: Coefficients of the mixed-effects regression model.

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	−1.6	0.28	−5.7	9.4E-09***
PN_Class_PersN	1.52	0.42	3.59	0.00033***
Foreignness_Foreign	3.66	0.57	6.42	1.3E-10***
Year	1.71	0.17	10.2	1.9E-24***

1975, the use of the apostrophe with both native personal names and native place names is regular.

We fit a mixed-effects logistic regression model with the response variable “apostrophe” and the predictor variables “proper name class” (place name vs. personal name), “foreignness” (native vs. foreign), and “year”.²⁸ The model coefficients are given in Table 8, showing that all three predictor values had a highly significant effect.

We now turn to the hypotheses postulated in (2). The corpus analysis provides evidence that foreignness triggers the use of the apostrophe with personal names and place names regardless of animacy, thereby confirming Hypothesis 1. On the other hand, animacy motivated the use of the apostrophe with native names in 1960 and 1965 since the apostrophe occurs more frequently with personal names than with place names. Thus, Hypothesis 2 is only partly borne out. This is discussed in more detail in Section 5.3.

Let us move on to object names and event names. With regard to object names, we found a total of 205 tokens, which were subclassified as names of books, institutions, languages, newspapers, songs, and means of transport. The subcategory of institution names is overrepresented with 195 tokens, of which 60 contain an apostrophe (*Senato’dan* ‘from the Senate’ 31/07/1970) while 135 do not (*Dışişleri Bakanlığına* ‘to the Ministry of Foreign Affairs’ 31/01/1975). Interestingly, 35 of 60 cases constitute abbreviations and acronyms, which are first attested from 1960

28 The model was fit using the package lme4 (Bates et al. 2015) for R (R Core Team 2020). The numeric variable “year” was z-scored (standardized) by subtracting the sample mean from each individual value and dividing the result by the standard deviation of the sample. All variance inflation factors (VIFs) are below 1, which indicates that there is no reason to be concerned about collinearity. The index of concordance C, which measures how well the model discriminates between the binary responses, is very high (C = 0.95). To assess the model fit, we used Nakagawa and Schielzeth’s (2013) conditional R² measure (R²_{GLMM(c)}) as implemented in the R package MuMIn (Barton 2017), which characterizes the variance described by both fixed and random effects. With a value of R²_{GLMM(c)} = 0.75, the model fit can be considered not perfect (which is unsurprising given the relatively small amount of data) but fairly acceptable.

onwards (*CHP'nin* 'of the CHP' 31/07/1965). With regard to event names, we found a total of 32 tokens, of which only 4 exhibit the apostrophe (*İnebahtı'da* 'at [the battle of] Lepanto' 31/01/1965) while 28 lack it (*Londra konferansında* 'at the London Conference' 31/08/1955). In summary, object names and event names are characterized by the absence of the apostrophe. An explanation is that these proper name classes usually contain non-onymic material (see Nübling et al. 2015: 269–270, 320–322). This is the case with *havayolu* 'airline' in *İran havayollarını* 'Iran Airlines (acc.)' (31/01/1975). In this respect, object names and event names do not constitute prototypical proper names as opposed to personal names and place names.

The findings can be summarized as follows: First, the loss of the apostrophe as a phonographic marker of glottal stop in Arabic and Persian loanwords was complete by 1960. Second, the refunctionalization of the apostrophe from a phonographic marker to a morphographic marker of morpheme boundaries in proper names took place between 1940 and 1955. Third, this refunctionalization began with foreign names in 1940. Later, it expanded to native names in 1960 and 1965. Importantly, the apostrophe is more frequently found with personal names than with place names. Fourth, the apostrophe regularly occurs with inflected personal names and place names from 1970 onwards. Finally, object names and event names rarely exhibit the apostrophe.

5.3 Discussion

The discussion will revolve around foreignness and the influence of the Spelling Dictionary on apostrophe usage. Foreignness has been shown to have an impact on morphosyntactic phenomena. This is the case with spatial relations in French and Latin (Adams 2013: 328–329; Stolz et al. 2017: 137–140), genitive constructions with place names in German (Nübling 2012; Nowak and Nübling 2017; Zimmer 2018), and the definite article with place names in Romance languages (Caro Reina 2020). In addition, foreignness motivates the use of syngraphemes. As we saw in Section 2, loanwords and foreign place names are separated from inflectional endings with the apostrophe in Finnish (*show't* 'the shows', *Bordeaux'ssa* 'in Bordeaux'), and with the hyphen in Romanian (*show-ul* 'the show', *Bordeaux-ul* 'Bordeaux') (see Bunčić 2004: 189 for Polish and Russian). Similarly, foreign personal names and place names are separated from inflectional endings by means of the apostrophe in *Cumhuriyet*. More specifically, foreignness initiates the use of the apostrophe with inflected personal names and place names from 1940 onwards (see Figure 3). This raises the following questions:

- Why do foreign names attract the use of the apostrophe?
- Why did this practice begin in 1940?

- What is the effect of foreignness on other proper name classes such as object names and event names?

A possible explanation for the concentration of the apostrophe with inflected foreign names is that the apostrophe contributes to highlighting morpheme boundaries, as originally pointed out by Ata (1929) (see Footnote 16). For example, the inflected personal name *Edenin* can contain the genitive ending *-in* or *-nin* depending on whether the name ends in a consonant (*Eden-in*) or a vowel (*Ede-nin*), respectively. The apostrophe in *Eden'in* 'of Eden' (01/02/1945) visualizes the morpheme boundary. This is not necessary for inflected native names (*Eminin* 'of Emin', *Edirnenin* 'of Edirne') and inflected native common nouns (*merdivenin* 'of the stairs', *müzenin* 'of the museum') since the base forms are stored in the mental onomasticon and lexicon (*Emin*, *Edirne*, *merdiven*, *müze*). In this way, the apostrophe helps to decode the morphological information in inflected foreign names which are new to the reader. In addition, specific grammatical endings following the apostrophe can indicate a possible difference in pronunciation.²⁹ The question of why the use of the apostrophe began in 1940 can be answered by taking into account the historical events covered in the newspapers of the time. Among these historical events, the Second World War (1939–1945) was decisive for the introduction of a high number of foreign names unknown to the reading public. More specifically, 54 (44 %) of the 122 foreign names are attested for 1940 and 1945. Moreover, 29 of these 54 are directly related to the Second World War (*Obersalzberg'e* 'to Obersalzberg' 31/07/1940, *Roosevelt'in* 'of Roosevelt' 01/02/1945). In contrast, we only find 51 (42 %) foreign names between 1950 and 1975 (*Kumcho'nun* 'of Kumcho' 31/07/1950). Finally, the occurrence of the apostrophe with foreign object names and event names is minimal compared to foreign personal names and place names. This is because object names and event names from abroad are usually translated into Turkish (*Milletlerarası Adalet Divanına* 'to the International

²⁹ This can be observed in the following cases: First, when word-final *e* is not spoken, the name ends with a consonant. As a result, dative and genitive suffixes beginning with a vowel are attached, as in *Bainville'e* 'to Bainville' (01/02/1945), *Ballentine'in* 'of Ballentine' (31/07/1950), *Deane'in* 'of Deane' (31/07/1950), *Gaulle'e* 'to Gaulle' (31/01/1960), *Molière'in* 'of Molière' (01/02/1945), and *Tate'in* 'of Tate' (31/07/1970). Otherwise, we would find the corresponding consonant-initial suffixes (**Bainville'ye*, **Ballentine'nin*). Second, when word-final consonants are not spoken, the name ends with a vowel. As a result, genitive suffixes beginning with a consonant are attached, as in *Lavoisier'nin* 'of Lavoisier' (01/02/1945). Otherwise, we would find the corresponding vowel-initial suffixes (**Lavoisier'in*). Third, when word-final *e(s)* is not spoken, vowel harmony and voicing assimilation apply according to the preceding segments, as in *Lancaster House'da* 'in Lancaster House' (31/08/1955) and *Versailles'dan* 'from Versailles' (31/07/1940) (not **Lancaster House'de*, **Versailles'ten*).

Court of Justice' 31/01/1975). Therefore, we cannot observe an effect resulting from foreignness in these proper name classes.

As shown in Section 4, the Spelling Dictionary gradually increases the number of functions of the apostrophe. We will now compare the Spelling Dictionary and the *Cumhuriyet* newspaper with respect to the apostrophe with inflected proper names in order to address the question of whether the rules of the Spelling Dictionary have an influence on the use of the apostrophe in *Cumhuriyet*. The Spelling Dictionary includes the optional use of the apostrophe with inflected proper names in the second edition (1941). However, this use is first attested with native place names and foreign personal names in 1930 (*İtalya'nın* 'of Italy', *Mak-donald'ın* 'of MacDonald', both from 31/01/1930) (see also Figure 2). This implies that the Spelling Dictionary features pre-existent practices rather than introducing new ones. Similar observations have been made for graphematic changes such as sentence-internal capitalization in Early New High German (Bergmann 1999: 73–75).

6 Conclusions

Turkish exhibits graphematic dissociations between common nouns and proper names (*İzmir'de* 'in İzmir' vs. *şehirde* 'in the city'). These dissociations originated from a graphematic change involving the refunctionalization of the apostrophe from a phonographic marker of glottal stop in Arabic and Persian loanwords to a morphographic marker of morpheme boundaries in proper names. This paper studied the emergence and development of the apostrophe from the Turkish alphabet revolution (1928) to the present. The use of the apostrophe was examined in the different editions of the Spelling Dictionary published by the Language Commission (*Dil Encümeni*) and the Turkish Language Association (*Türk Dil Kurumu*) as well as in early issues of the newspapers *Hakimiyeti Milliye* and *Cumhuriyet*. The apostrophe was originally employed as a phonographic marker for transliterating <ء> (*hamza*) and <ع> (*ayn*) in Arabic and Persian loanwords (*san'at* 'art'). The use of the apostrophe as morphographic marker in proper names was first proposed by Ata in 1928 and was practiced by *Hakimiyeti Milliye* from 1929 onwards. However, the Spelling Dictionary did not include this use until the second edition in 1941. In this respect, the Spelling Dictionary did not have a direct influence on apostrophe usage.

To illustrate this graphematic change, we conducted a diachronic corpus analysis based on selected issues of the newspaper *Cumhuriyet* from 1929–1975. The main findings can be summarized as follows: The loss of the apostrophe as a phonographic marker in Arabic and Persian loanwords is complete by 1960

Table 9: Functions of the apostrophe in Turkish.

	Diacritic marker	Deletion marker	Phonographic marker	Morphographic marker
1928 Turkish			✓	
Modern Turkish		(✓)		✓

(*san'at* > *sanat* 'art'). This development is in line with the loss of the glottal stop in spoken Turkish. With regard to inflected proper names, we observed that the refunctionalization of the apostrophe as a morphographic marker is triggered by foreignness and later by animacy with native names. More specifically, foreign personal names and place names occur with the apostrophe from 1940 onwards while native personal names and place names do not occur with the apostrophe until 1960 and 1965. The use of the apostrophe with native names is sensitive to animacy since we find the apostrophe more frequently with personal names than with place names. Finally, refunctionalization is accomplished by 1970, after which the apostrophe regularly applies to inflected foreign and native names.

As a result of this graphematic change, the apostrophe functions as a morphographic marker for highlighting morpheme boundaries primarily in inflected proper names, but also in inflected abbreviations, acronyms, dates, and numerals. In this respect, the pragmatic-morphological principle is followed by the graphematic-morphological principle. In addition, the apostrophe is employed, albeit less frequently, as a deletion marker (see Footnote 20 for examples). However, there is an overlap of both functions since deletion occurs at morpheme boundaries. The different functions of the apostrophe in 1928 Turkish and in modern Turkish are summarized in Table 9.

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