Grammaticalization of reflexivity in Basque: a corpus-based diachronic and typological analysis

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The purpose of this paper is to provide a detailed overview of the changes undergone by the reflexive *buru*-construction in Basque under the light of grammaticalization theory. On the basis of quantitative historical data, the reflexive construction is argued to have undergone changes predicted by the grammaticalization path of reflexive markers: the distinction between regular and reflexive possessive pronouns is lost; anaphoric, non-reflexive uses of *buru* disappear; and number agreement between the subject and *buru* is no longer obligatory. The *buru*-construction is furthermore argued to have become more prevalent at the expense of other reflexivization strategies. As opposed to these changes, the reflexive construction seems to have degrammaticalized as well: the number of direct object uses of this construction decreases over time, and it occurs in subject position with more predicates in present-day written Basque than in the historical period. In view of these facts, an argument is made against unidirectional conceptions of grammaticalization. External motivations for these developments, such as the standardization of the language, are also considered.

Keywords: reflexivity, grammaticalization, degrammaticalization, Basque, corpus linguistics, diachrony, typology

1. Reflexivity: background, definition, types and related categories

Studies on language change and grammaticalization theory have occasionally addressed the diachronic emergence and development of reflexive markers in different languages (Haspelmath 1990: 42-46, Heine 1999: 1-29, Schladt 2000: 103-124, Lehmann 2015: 45-52, Evseeva & Salaberri 2018: 385-435, Kuteva et al. 2019: 224 among others). Basque reflexives have been mentioned in some of these studies; however, a

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comprehensive analysis of the development of reflexivity throughout the history of this language is still largely missing. In view of this state of affairs, the purpose of this paper is to provide a detailed overview of the changes undergone by the reflexive strategies of Basque under the light of grammaticalization theory. With this aim in mind, this section is dedicated to laying out a definition of the concept 'reflexive' and to set it apart from the related but distinct grammatical categories 'intensifier', 'middle', 'anticausative' and 'autocausative'. This investigation is based on a usage-based view of grammar in line with Heine (1999), Schladt (2000) and König (2007), among others. Consequently, formal research on reflexivity such as Everaert (1986) and Reinhart & Reuland (2002), among others, has not been taken into consideration.

Faltz (1977: 3-4) defines an 'archetypal reflexive context' as one in which a simple clause, consisting minimally of one verb, expresses a two-argument predication: one of these is a human agent or experiencer and the other a patient. Both arguments, the first of which is usually referred to as 'antecedent' and the second as 'reflexive marker', have the same referent, and they may be overtly or covertly realized (Kemmer 1993: 44). Stated differently, a reflexive marker indicates that the agent/experiencer and the patient of the same event are the same entity (Kemmer 1993: 24, Heine 1999: 3, Schladt 2000: 103). Therefore, the function of the reflexive marker is to mark 'identity with' or 'back reference to' the antecedent (Haspelmath 1987: 27, Lehmann 2015: 45).

Different types of reflexive markers have been observed to occur cross-linguistically. A basic distinction seems to set apart verbal reflexives, i.e. reflexives expressed by verbal elements such as affixes and conjugation, from nominal reflexives, i.e. reflexives encoded by means of nouns and pronouns (Geniušienė 1987: 238, Ljutikova 2002: 95). Here it should be pointed out that languages may have more than one reflexive strategy: according to Kazenin (2001: 926), cross-linguistically it is most common for languages to have one single reflexive means, in which case it is usually a nominal strategy, or two, in which case the second is usually a verbal element. As will be shown in the following section, Basque belongs to the latter type.

Regarding the grammatical categories that are related to reflexivity, the first of these concerns intensifiers[2]. The main difference between intensifiers and reflexives

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[2] These grammatical elements have many alternative names, including 'intensifiers' (Moravcsik 1972, König 2001, 2007, Ljutikova 2002), 'secondary reflexives' (Faltz 1977) and 'emphatic pronouns' (Heine 1999, Schladt 2000). For the sake of clarity and simplicity, the term 'intensifier' will be used throughout this paper.

pertains to their syntactic distribution: reflexive markers occur as arguments of noun and verb phrases, whereas intensifiers function as adjuncts (König & Siemund 2000: 50, König & Gast 2008: 8). Despite the fact that in many languages intensifiers and reflexive markers are encoded by the same lexical means, these moreover tend to have different diachronic origins (König & Siemund 2000: 41, 2005: 196-197). These facts motivate a distinction between reflexives and intensifiers.

A second category associated with reflexivity is middle voice. Kemmer (1993: 1) points out that there is no universally accepted definition of middle voice, since this term has been used to denote various grammatical phenomena. According to Benveniste (1966: 172), the only way to define the term 'middle voice' is in contrast to active voice: the active expresses an action of the verb that is initiated by and develops outside of the subject. As opposed to this, the middle indicates an event whereby the subject constitutes the site in which said event develops. Consequently, unlike in the active, in the middle voice the subject is internal to the action (ibid.). Markers of the middle voice thus denote events in which the subject is the site of the action, such as verbs of grooming ('to wash'), change of body posture ('to stand up'), translational motion ('to place') and emotional reaction ('to be angry'), among others (Benveniste 1966: 172, Kemmer 1993: 16). Both reflexivity and middle voice involve 'intrinsic coreference' (Heine 1999: 4), therefore it should not come as a surprise that many languages do not formally distinguish between both grammatical categories.

Despite this semantic and formal overlap reflexivity should not, however, be regarded as a subtype of middle voice, or vice versa. Evidence that these are two distinct categories is provided by the number of semantic roles expressed by each: reflexivity invokes two semantic roles inhering in the event involved, whereas in the case of middle voice there is only one (Heine 1999: 4). Accordingly, in some languages reflexive and middle voice are expressed by different formal means, and may thus be argued to constitute distinct grammatical categories. This is, for example, the case of Tzutujil (Dayley 1981: 464-465, 476).

A third grammatical category that relates to reflexivity is anticausative. According to Haspelmath (1990: 33), anticausatives are transitive predicates which express a spontaneous process and which do not imply an agent, such as 'to get lost' or 'to change'. In many languages reflexives and anticausatives are encoded by the same

formal means. However, whereas all anticausatives denote spontaneity, this is not the case of reflexives (Haspelmath 1987: 29). Furthermore, as was mentioned earlier in this section the notion of agent is internal to the definition of reflexivity. The fact that reflexives imply an agent, whereas anticausatives do not, suggests that these should be treated as different grammatical categories (ibid.). Finally, both autocausatives and reflexives indicate that the agent/experiencer and the patient of the same event are the same entity. Nevertheless, autocausativity is overwhelmingly confined to predicates denoting change of location, such as 'to hide' and 'to walk', whereas reflexivity is not. Therefore, autocausatives should rather be regarded as a subtype of reflexive, as Geniušienė (1987: 87) does.

In short, then, reflexivity is known to overlap semantically and formally with related, yet distinct grammatical categories, often subject to language-specific conditions. Details concerning the interplay of these conditions in Basque are provided in the following section. The remainder of this article is structured as follows: Section 2.1 is dedicated to presenting the relevant facts concerning the reflexive *buru*-construction in present-day Basque. Section 2.2 discusses intransitivization and personal pronouns as alternative reflexive strategies, whereas in Section 3 the properties of the 'head'-reflexive in Archaic Basque (1400-1600 CE) and Old-Classical Basque (1600-1750 CE)[3] are discussed. This is followed in Section 4 by a layout of cross-linguistic grammaticalization clines of reflexive markers as discussed in the literature. Sections 5.1 and 5.2 present an overview of the corpus and methodology of the study, respectively. The ensuing Section 5.3 provides data and examples of reflexives throughout the mid-16th to the late-20th centuries, in addition to a discussion of their development. Finally, in Section 6 the conclusions that can be drawn from the data are laid out.

2. Overview of reflexivity in present-day Basque

2.1. The reflexive *buru*-construction

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[3] The periodization of Basque follows Lakarra (1997: 516), which is a proposal that has gained wide acceptance in the literature.

The main reflexive strategy in present-day Basque consists of using the word *buru* 'head' preceded by a possessive pronoun (*nire/neure/ene* 'my', *zure/zeure* 'your', *haren/bere* 'her, his' etc.) and followed by a definite article (*-a*) (Saltarelli 1988: 104, Hualde & Ortiz de Urbina 2003: 620). This reflexive construction, which always triggers third-person agreement in the verb, usually occurs as the direct object of the verb (1a), but it can also act as an indirect object (1b), subject (1c) and as a more peripheral verbal modifier, such as comitative (1d) and genitive (1e), among various other grammatical functions[4]:

(1)　　a.　　*Jon-ek*　　*bere*　　*buru-a*　　*ispilu-a-n*

　　　　　　John-ERG　　3SG.GEN　　head-DEF.ABS　mirror-DEF-LOC

　　　　　　ikus-i　　*du*

　　　　　　see-PFV　　AUX

　　　　　　'John has seen himself/his head in the mirror'

　　　　b.　　*Bere*　　*buru-a-ri*　　*galdera*　　*bat*

　　　　　　3SG.GEN　　REFL-DEF-DAT.SG　　question　　one.ABS

　　　　　　egin　　*dio*

　　　　　　make.PFV　　AUX

　　　　　　'She/he has asked herself/himself a question'

　　　　c.　　*Zeu-en*　　*buru-ek*　　*zora-tzen*　　*zaituztete*

　　　　　　2PL.INT-GEN　　REFL-ERG.PL　　madden-IPFV　　AUX

　　　　　　'You (pl) madden yourselves (lit. your selves/minds madden you)'

　　　　d.　　*Neu-re*　　*buru-a-rekin*　　*haserre*　　*nago*

　　　　　　1SG.INT-GEN　　REFL-DEF-COM.SG　　angry　　be.1SG

　　　　　　'I am angry at (lit. with) myself'

　　　　e.　　*Geu-re*　　*buru-en*　　*jabe*　　*gara*

　　　　　　1PL.INT-GEN　　REFL-GEN.PL　　owner　　be.1PL

　　　　　　'We own ourselves (lit. we are our selves' owners)'

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[4] Unless sources are specified in a previous paragraph, all examples have been produced by the author: this applies to examples (1a-e), (2a-b), (5a-b), (9a-d) and (10a-b). These instances of reflexivity are largely analogical to those provided in reference grammars and their grammaticality has been consulted with native speakers.

A note of caution concerns examples (1a) and (1c): in such sentences the reading of the *buru*-construction is ambiguous between a reflexive meaning ('John has seen himself in the mirror', 'Your selves madden you (pl)'), on the one hand, and a non-reflexive literal ('John has seen his head in the mirror') and metaphoric ('Your minds madden you (pl)') meaning, on the other. This is because the reflexive ('self') *buru*-construction is formally identical to the literal ('head') and metaphoric ('mind') *buru*-constructions: as a consequence, the interpretation of sentences (1a) and (1c) depends solely on context (Ibarretxe-Antuñano 2002: 484-485).

Another consequence of this ambiguity is that the reflexive character of the *buru*-construction as a subject (1c) seems problematic. In spite of this, whenever the reflexive reading of sentences like (1c) is favored by context the *buru*-construction should be considered to be a reflexive marker. There are four reasons that motivate this view: first of all, in (1c) there are two semantic roles inhering in the event *zoratu* 'to madden', namely the agent *zeuen buruek* 'your selves' and the covert personal pronoun *zuek* 'you (pl.)', which acts as the patient. At the same time, the agent and the patient are understood to refer to the same entity. Therefore, considering the 'head'-noun in (1c) to be a reflexive marker goes in line with the definition of reflexive laid out in Section 1. Second, switching the position of the agent and the patient does not seem to alter the possibility to have a reflexive reading (2a-b), thus (2a) and (2b) may be argued to be semantically equivalent[5]:

(2)   a.   *Zeu-en*   *buru-ek*   (*zuek*)   *zora-tzen*   *zaituztete*
           2PL.INT-GEN   REFL-ERG.PL   2PL.ABS   madden-IPFV   AUX
           'You madden yourselves (lit. your selves madden you)'

      b.   (*Zuek*)   *zeu-en*   *buru-a-k*   *zora-tzen*
           2PL.ERG   2PL.INT-GEN   REFL-DEF.ABS-PL   madden-IPFV
           dituzue
           AUX
           'You madden yourselves'

A third reason that speaks in favor of the possibility to have subject reflexives in Basque is the fact that descriptive grammars, if they mention them at all, usually refer to constructions matching (1c) and (2a) as 'subject reflexive' (Saltarelli 1988: 113, de Rijk 2008: 367, though see Hualde & Ortiz de Urbina 2003: 622). Finally, cross-linguistically it is perfectly possible for reflexive constructions to behave as subjects at specific stages of the grammaticalization cline (Schladt 2000: 113-116): this occurs, for example, in Georgian (Amiridze 2006: 194-196). Therefore, here *buru*-reflexives in subject position have been quantified as reflexive (see the Appendix). In any case, subject reflexives are quite infrequent in present-day Basque (Hualde & Ortiz de Urbina 2003: 622). For more details on subject reflexives in this language, see de Rijk (2008: 366-367) and Section 5.3.1.

Despite the fact that *possessive pronoun - buru - definite article* is the most common form of the reflexive 'head'-construction in Basque, some degree of flexibility is allowed: occasionally the definite article can be replaced by a demonstrative pronoun (3a), and the noun can be modified by an adjective (3a-b, de Rijk 2008: 365). Moreover, apparently the reflexive structure can become the head of a relative clause (3c); number agreement (both verbal and nominal) between *buru* and the subject is optional (3d, Oihartzabal 1989: 77, Hualde & Ortiz de Urbina 2003: 622, de Rijk 2008: 365):

(3)   a.   *Neu-re   buru   triste   hau   dakusat*

           1SG.INT-GEN   REFL   sad   this.ABS   see.1SG.PRES

           'I see this sad self of mine'

       b.   *Bere   buru   gaixo-a   gorroto   du*

           3SG.GEN   REFL   poor-DEF.ABS   hate.3SG.PRES AUX

           'She/he hates her/his poor self'

       c.   *Zergatik   kalte egi-ten   diozu hain maite duzu-n*

           why   harm do-IPFV   AUX   so   love   AUX-which

           zu-re   buru-a-ri?

           2SG-GEN   REFL-DEF-DAT.SG

           'Why do you harm yourself, whom you so love?'

       d.   *Geu-re   buru-a   engaina-tzen dugu*

           1PL.INT-GEN   REFL-DEF.ABS.SG   deceive-IPFV AUX

'We deceive ourselves (lit. our self)'

Saltarelli (1988: 104-105) claims that reflexive *buru*-constructions 'are frozen forms in that they do not admit material between the constituents nor do they admit modifiers either to the left (e.g. relative modification) or the right (e.g. adjectives)'. This statement needs to be taken with some degree of skepticism, since the examples (3a, 3c) provided by Oihartzabal (1989: 77) and de Rijk (2008: 365) contradict this claim. In any case, these divergent views indicate that the acceptability of left- and right-modification of the reflexive 'head'-construction in Basque is, at best, quite limited: the two examples given by Oihartzabal (1989: 77-78) of relative clauses headed by the reflexive *buru*-construction are unique in the whole existing body of oral and written present-day Basque, as a search of the available corpora indicates (see Section 5.1 for more details on the corpora of oral and written Basque). Moreover, the current knowledge concerning the ability of the 'head'-construction to head relative clauses is very limited. Therefore, relative constructions cannot be used to measure the degree of grammaticalization of the *buru*-construction and have accordingly been left out. Adjectival modification of this construction (3a-b) seems to be more widespread, but this is also ungrammatical for many native speakers, as pointed out by de Rijk (2008: 364-365).

One final comment on the *buru*-construction concerns cases in which the 'head'-noun does not take a definite article, but rather a suffix of the instrumental (4a)[6] or ablative (4b) case (Euskaltzaindia 1991: 236, Creissels & Mounole 2011: 177):

(4) a. *Zeu-re*   *buru-z*   *asma-tu*   *behar* *duzu* *nobela*
         2SG.INT-GEN   head-INS   imagine-PFV   must   AUX   novel

         bat
         one.ABS

         'You must imagine a novel by yourself'

     b. *Bere*   *buru-tik*   *lege* *berri* *bat*   *asma-tu*
         3SG.GEN   head-ABL   law   new   one.ABS   imagine-PFV

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[6] Despite the fact that neither Euskaltzaindia (1991: 236) nor Creissels & Mounole (2011: 177) discuss instrumental-marked instances of the 'head'-construction, example (4a) (*zeure buruz*) has been given here next to (4b) (*bere burutik*) because, in semantic terms, these are practically equivalent constructions. Therefore, all claims concerning (4b) also apply to (4a).

zuen

AUX

'She/he imagined a new law by herself/himself'

Euskaltzaindia (1991: 236) argues that the construction *bere burutik* in example (4b) corresponds to a 3rd-person singular reflexive possessive pronoun (*bere*) marked in the ablative case (for more on reflexive possessive pronouns, see Section 3). According to this view, *buru* is being used here as a kind of expletive word due to the reluctance of Basque to attach spatial case suffixes onto animate nouns and pronouns. In other words, Euskaltzaindia (1991: 236) proposes that saying *bere burutik* is a way to avoid pronominal forms such as *beregandik* '3SG.GEN.ABL'. As pointed out by Creissels & Mounole (2011: 177), however, this proposal does not explain why *buru* is used to avoid case-marking *bere*, whereas this does not occur with other pronominal and nominal forms.

As an alternative explanation Creissels & Mounole (2011: 177) suggest that *bere burutik* is simply an ablative-marked version of the reflexive *buru*-construction. Despite the fact that this may superficially seem so, there are two reasons why constructions like (4b) should not be considered reflexive. First of all, example (4b) is a two-argument predication because the verb *asmatu* 'to imagine' is a transitive predicate, but the agent (the covert 3rd-person singular pronoun *hark*) and the patient (*lege berri bat*, 'a new law') do not refer to the same entity. Therefore, this sentence does not fulfill the definition of reflexivity as laid out in Section 1. Second, in (4b) the word *buru* can be replaced by at least one non-reflexive stem, *kabu* 'initiative, determination' without a change in meaning (5a). This is not possible when the *buru*-construction has a reflexive interpretation (5b):

(5)   a.   *Bere*   *kabu-z*   *lege*   *berri*   *bat*   *asma-tu*

3SG.GEN   initiative-INS   law   new   one.ABS   imagine-PFV

zuen

AUX

'She/he imagined a new law by herself/himself (lit. by her/his own initiative)'

b. *Jon-ek*   *bere*   *kabu-a*   *ispilu-a-n*

John-ERG   3SG.GEN   initiative-DEF.ABS   mirror-DEF-LOC

ikus-i   *du*

see-PFV   AUX

'John has seen himself in the mirror'

In view of these facts, the constructions *bere buruz* and *bere burutik* cannot be regarded as case-marked uses of the reflexive 'head'-construction. Accordingly, they have been left out of the discussion.

2.2. Other means of encoding reflexivity in present-day Basque

The *buru*-construction is not the only reflexive strategy available to Basque: reflexivity can also be expressed by means of intransitivizing a transitive verb (Euskaltzaindia 1991: 63, Hualde & Ortiz de Urbina 2003: 621). In such cases, the intransitive auxiliary verb *izan* 'to be' is used instead of the transitive **edun* 'to have'[7], and the subject is marked absolutive instead of ergative. Intransitivization is not restricted to the expression of reflexivity, but is shared by a wide scope of valency-changing operations: these include reciprocal, anticausative, middle voice and impersonal constructions (Etxepare & Uribe-Etxebarria 2012: 303). Therefore, from a general point of view intransitivization should not be considered a dedicated marker, but rather a multifunctional valency-changing device. This goes in line with cross-linguistic generalizations, since there seem to be no languages in which a verbal means used to encode reflexivity does not encode other categories as well (Kazenin 2001: 917)[8]. For an overview of non-reflexive uses of intransitivization, see Hualde & Ortiz de Urbina (2003: 363-425).

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[7] The participle of the auxiliary verb **edun* is accompanied by an asterisk because this is a reconstructed form, i.e. it is not attested as such in Basque. For details, see Hualde & Ortiz de Urbina (2003: 221). For more on the grammaticalization of participles in Basque, see Trask (1995), Mounole (2007) and Mounole & Lakarra (2018), among others.

[8] Alternatively, one may argue that Basque instantiates a language type which contrasts 'heavy' (reflexive, by means of the *buru*-construction) and 'light' (middle voice, by means of intransitivization) forms in line with Kemmer (1993: 25-27). This would imply, however, assuming that voice or diathesis exists in Basque. Even though the term 'mediopassive' is found in one reference grammar of Basque (de Rijk 2008: 279), a strong argument has been made against the existence of diathesis in this language, at least as a distinct grammatical category (Euskaltzaindia 1991: 222). Therefore, this approach has not been pursued further.

The choice between the *buru*-construction and intransitivization as a reflexive strategy varies among predicates: the former can be used with all transitive verbs, whereas the latter is unacceptable for mental-state verbs such as *maite izan* 'to love', *ezagutu* 'to know', *hobetsi* 'to prefer' and verbs of active representation such as *irudikatu* 'to picture' and *erakutsi* 'to show' (6a-b, Albizu 2009: 15):

(6)   a.   **Jon*   *maite* *da*

                John.ABS   love   AUX

                'John loves himself'

        b.   *Jon-ek*   *bere*   *buru-a*   *maite* *du*

                John-ERG   3SG.GEN   REFL-DEF.ABS   love   AUX

                'John loves himself'

Other predicates like *aurkeztu* 'to present', *prestatu* 'to prepare' and *babestu* 'to protect' allow for both strategies, depending on certain semantic nuances of the predicate (Hualde & Ortiz de Urbina 2003: 381-382). One of the semantic nuances that determine the choice of reflexive strategy is intentionality: whereas intransitivization is used to indicate that the action denoted by the verb is accidental (i.e. involuntary), the *buru*-construction implies that the event involved is intentional (7a-b, Ortiz de Urbina 1993: 37-39):

(7)   a.   *Jon*   *eba-ki*   *da*

                John.ABS   cut-IPFV   AUX

                'John cut himself (accidentally)'

        b.   *Jon-ek*   *bere*   *buru-a*   *eba-ki*   *du*

                John-ERG   3SG.GEN   REFL-DEF.ABS   cut-IPFV   AUX

                'Jon cut himself (intentionally)'

In example (7a) no agent is implied and the event denotes a spontaneous action. Therefore, according to the definition provided by Haspelmath (1987: 29, 1990: 33) this sentence should be considered anticausative instead of reflexive. More specifically, (7a) seems to be a fairly typical example of involuntary agent construction as defined by

Fauconnier (2011: 313). In any case, example (7a) is worth mentioning here since it illustrates that (i) in Basque intransitivization can express more meanings in addition to reflexive and that (ii) the interplay between the expression of intentionality and choice of reflexive strategy is available to so-called 'extroverted' or 'other-directed' predicates.

Other-directed predicates include verbs of destruction and violence, such as 'to kill', 'to hit' and 'to cut', mental-state predicates as well as verbs like 'help', 'replace', 'speak with' and 'prefer' (König 2001: 758). The interplay observable in Basque between reflexive strategy and intentionality with respect to other-directed predicates is common cross-linguistically and can be found in languages such as Russian and Turkish (ibid.). The choice of reflexive strategy in Basque does not, however, always imply a change in meaning. This is the case of the verb *ikusi* 'to see', for which both the *buru*-construction and intransitivization are available as reflexive markers (8a-b, Hualde & Ortiz de Urbina 2003: 380):

(8) a. *Jon*   *ispilu-a-n*   *ikus-i*   *da*
         John.ABS   mirror-DEF-LOC   see-PFV   AUX
         'John saw himself in the mirror'

     b. *Jon-ek*   *bere*   *buru-a*   *ispilu-a-n*
         John-ERG   3SG.GEN   REFL-DEF.ABS mirror-DEF-LOC
         ikus-i   *du*
         see-PFV   AUX
         'John saw himself in the mirror'

One last group of predicates that is relevant to the present discussion concerns so-called 'inherent reflexives': these encompass predicates such as *gorde* 'to keep, to hide', *jantzi* 'to dress', *garbitu* 'to clean' and *zikindu* 'to soil', among others (Hualde & Ortiz de Urbina 2003: 383-384). Despite the label given to these verbs by these authors, it should be pointed out that not all of them always have a reflexive meaning (ibid.). Moreover, the predicates labeled by Hualde & Ortiz de Urbina (2003: 383) as 'inherently reflexive' in fact coincide with those observed by Benveniste (1966: 172) and Kemmer (1993: 16) to cross-linguistically correlate with middle voice. Therefore, the label 'introverted

predicates' (Haspelmath 2008: 40) or 'self-directed verbs' (König 2001: 758) seems more suitable to refer to this group[9].

According to Hualde & Ortiz de Urbina (2003: 384), in Basque it is impossible to reflexivize introverted predicates by means of the *buru*-construction. This is, however, not true under a contrastive focus reading, as can be seen by the grammaticality of the following examples (9b, 9d):

(9) a. *Miren jantz-i   da*
          Miren dress-PFV   AUX
          'Miren dressed up'

     b. *Miren-ek   bere   buru-a   jantz-i   du*
          Miren-ERG   3SG.GEN   REFL-DEF.ABS dress-PFV   AUX
          'It is herself that Miren dressed'

     c. *Miren garbi-tu   da*
          Miren wash-PFV   AUX
          'Miren washed up'

     d. *Miren-ek   bere   buru-a   garbi-tu   du*
          Miren-ERG   3SG.GEN   REFL-DEF.ABS wash-PFV   AUX
          'It is herself that Miren washed'

To sum up so far, in Basque one finds (i) verbs that allow only for the *buru*-reflexive, such as *maite izan* 'to love', *ezagutu* 'to know' and *hobetsi* 'to prefer', and (ii) verbs that allow for either the *buru*-construction or intransitivization as a reflexive strategy, such as *aurkeztu* 'to present', *prestatu* 'to prepare' and *babestu* 'to protect', extroverted/other-directed predicates and introverted/self-directed predicates. In some subtypes of (ii) the choice of reflexive strategy relates to semantic and syntactic nuances of the event in question, such as intentionality (in the case of extroverted predicates) and contrastive focus (in the case of introverted predicates). In general terms, and despite claims to the contrary (Hualde & Ortiz de Urbina 2003: 384), it can be argued that all

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[9] The distinction between introverted/self-directed verbs and extroverted/other-directed verbs can be made on semantic grounds alone (König & Siemund 2000: 60-61), or on the basis of frequency effects, as argued by Ariel (2008: 229) and Haspelmath (2008: 45). Since (i) there seems to be no consensus in the literature whether semantic or frequency effects are more relevant in this regard and (ii) due to space and time limitations a purely semantic distinction has been maintained here.

transitive verbs accept the *buru*-construction as a reflexive means, whereas this is not the case of intransitivization. Furthermore, there are no verbs in Basque which only allow for intransitivization as a reflexive strategy.

These facts imply that the 'head'-reflexive has a higher type frequency than intransitivization. Moreover, in the part of the corpus used in this study which comprises 20th-century occurrences of both reflexive strategies (see the Appendix) the 'head'-reflexive outnumbers intransitivization by 138 (90.8%) to 14 (9.2%). This means that, at least for 20th-century written Basque, token frequency is also higher for the *buru*-construction. Type frequency and token frequency are among the most widely accepted diagnostics for syntactic productivity (Bybee & Thompson 1997: 384-386, Barðdal 2008: 27-28 among others). In this line of thought, in written Basque intransitivization can be argued to have lower syntactic productivity than the 'head'-reflexive. For more details on this matter, see Section 5.3.2 below.

A third reflexive strategy available to Basque concerns so-called 'weak' reflexives. Weak reflexives are labeled thus by de Rijk (2008: 365) because they are identical to personal pronouns, despite having a reflexive reading. This author moreover contrasts weak reflexives to reflexives formed by the *buru*-construction, which have a dedicated form and can therefore be referred to as 'strong' reflexive elements ('strongly reflexive nominals'). It should be pointed out, however, that the labels 'weak' and 'strong' reflexive are not widespread in Basque linguistics. Therefore, the term 'reflexive (uses of) personal pronouns' may likewise be used to refer to the former.

Weak reflexives have a highly restricted syntactic scope: these are only possible when an argument of the verb that is coreferent with the subject is marked for certain peripheral oblique cases, such as benefactive and prosecutive. In such cases one finds variation between a personal pronoun (10a) and the 'head'-construction (10b):

(10) a. *Lan*   *hau*   *ni-retzat*   *egin*   *dut*
          work   this.ABS   1SG-BEN   do.PFV   AUX
          'I have done this work for myself (lit. for me)'

      b. *Lan*   *hau*   *neu-re*   *buru-a-rentzat*   *egin*   *dut*
          work   this.ABS   1SG.INT-GEN   REFL-DEF-BEN.SG   do.PFV AUX
          'I have done this work for myself'

The causes for the variation between sentences like (10a) and (10b) are not entirely clear: de Rijk (2008) does not delve deeper into the matter, and other descriptive grammars do not address this issue. The use of strong and weak reflexive strategies may, in any case, correlate with the cross-linguistic observation by König & Siemund (2000: 47-48) and König (2001: 758): the more complex reflexive strategy tends to be used to express the more remarkable situation. Insofar as the *buru*-construction is syntactically more complex than a personal pronoun, one could argue that (10a) should translate as 'I have done this work for myself (neutral situation)' and (10b) as 'I have done this work for myself (remarkable situation)'.

As mentioned above, weak reflexives are possible only in a few peripheral oblique cases, mostly benefactive and prosecutive. de Rijk (2008: 366) also provides three attested examples of instrumental and comitative case-marked weak reflexives. All these instances stem, however, from one single source, namely Ezkila (1974), which is a translation of the Bible carried out by a group of priests in Bayonne-Baiona: this makes the validity of the examples quite doubtful. Therefore, weak reflexives can hardly be claimed to occur in cases other than the ones mentioned above.

3. Reflexivity in the history of Basque

The reflexive 'head'-construction seems to present a slightly different picture in Archaic and Old-Classical Basque when compared to the present-day language. This can be seen, according to Mitxelena (1992: 671-675), Hualde & Ortiz de Urbina (2003: 620-629) and de Rijk (2008: 364-366), by the fact that certain syntactic properties and modifications of the *buru*-reflexive have become less frequent and less acceptable for speakers. This implies that such properties must have been more frequent in the early historical period, an implication which these authors do not, however, support with data.

The properties and modifications in question include the possibility to replace the definite article with another referential element (11a), for the 'head'-noun to be modified by an adjective (11b), to have obligatory number agreement between the subject and the reflexive (11c), to have *buru*-constructions without an antecedent, i.e. in an anaphoric, non-reflexive meaning (11d) and for *buru* to act as a subject (11e):

(11) a. *Beti*   *assidaigunean*   *obra-ren-bat*   *edo*   *icussi*

always   begin.AUX.FUT.SUBJ   work-GEN-one   or   see

daigunean   *gueu-re*   *buru-au*

AUX.FUT.SUBJ   1PL.INT-GEN   REFL-this.ABS

neçesidade-ren   *bat-en*

need-GEN   one-GEN

'Whenever we shall begin some work or shall see ourselves (lit. this self of ours') in need' (Kapanaga, 1656)[10]

b. *Hun-enganic* *gu-re*   *vici-a*   *eduqu-i*   *behar* *dugu,*

this-ABL   1PL-GEN   life-DEF.ABS   have-PFV   must   AUX

gu-re   *eguiazco*   *buru-a-ganic*

1PL-GEN   real   REFL-DEF-ABL

'From this we must have our lives, from our real self' (Leizarraga, 1571)

c. *Geu-re*   *buru-a-k*   *ahalik*   *eta*   *hobekiena*

1PL.INT-GEN   REFL-DEF-PL   much   as   best

errekaita-tu *eta*   *begira-tu-a-gatik*   *ere*

take.care-PFV and   protect-PFV-DEF-PROS   even

'No matter how well we take care of and protect ourselves' (Axular, 1643)

d. *Aygaloun-i*   *ene*   *buri-a*   *sal-du*

Aygaloun-DAT.SG   1SG.GEN   REFL-DEF.ABS   sell-PFV

uqhen   *behin*

PFV   once

'He once sold me (lit. my self) to Aygaloun' (1835; Oihartzabal, 1991: 888)

e. *Ne-re*   *buru-a-k*   *ere*   *ema-ten*   *dit*   *franko* *lan*

1SG-GEN   REFL-DEF-ERG   also   give-IPFV   AUX   some   work

'I am busy enough with myself already (lit. my self keeps me busy enough)' (Labaien, 1931)

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[10] The names next to the translations refer to the authors, not the editors. Unless otherwise specified, the historical examples have been taken from *Euskal klasikoen corpusa* 'Corpus of Basque classics' (Euskara Institutua 2013). Sentences taken from this corpus are not rendered in the standard spelling of present-day Basque, but in the way they were written down and have been edited.

A word of caution concerns example (11a): in accordance with a cross-linguistically widespread path of grammaticalization, the present-day Basque definite article -*a* has been argued to be historically derived from a distal demonstrative pronoun **ha(r)* (Mitxelena 2011: 216, Manterola 2015: 325 among others). Within this same process of grammaticalization other demonstrative pronouns, including (*h*)*au*(*r*) 'this' and (*h*)*ori* 'that', are believed to have lost their deictic value and thus to have behaved as articles in the historical period (Mitxelena 2011: 231, Manterola 2015: 28). However, the evolution of (*h*)*au*(*r*) and (*h*)*ori*, unlike that of **ha(r)*, does not culminate in grammaticalization. Rather, these two elements go back to being demonstrative: consequently, it is difficult to tell whether the historical attestations of (*h*)*au*(*r*) and (*h*)*ori* have a demonstrative or article value (Mitxelena 2011: 231). Therefore, it seems more appropriate to refer to all three by the more general term 'D-element' (Himmelmann 1997: 6-7).

These facts have important implications for the discussion at hand, since examples like (11a) may be argued to be no different from any attestation of the reflexive *buru*-construction with the D-element -*a*. In fact, the corpus shows that the same Basque author may attach to nouns (including *buru*) any of the three D-elements -*a*, -(*h*)*au*(*r*) and -(*h*)*ori* in the same book, especially in 16th-, 17th- and 18th-century literature. Nonetheless, whenever a language has more than one D-element the cross-linguistic tendency is for each one to represent a division of labor, i.e. either exclusive-specific vs. definite, or exclusive-specific vs. non-specific (Becker 2018: 186). In view of this tendency, it seems unlikely for 16th- to 18th-century Basque authors to have used the forms -*a*, -(*h*)*au*(*r*) and -(*h*)*ori* interchangeably: rather, a context-dependent difference in meaning must have been implied. Because of this, and for the sake of accuracy, examples like (11a) have been quantified here not as regular attestations, but as cases of modified *buru*-reflexive; see Sections 5.2 and 5.3.3 for more details.

Another important property concerning reflexivity that is present in Archaic and Old-Classical Basque and absent in present-day Basque is the distinction between regular[11] vs. reflexive possessive pronouns. In Archaic Basque, and to a lesser extent in

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[11] The forms used as regular possessive pronouns for the 1st and 2nd person —except for the archaic 1st person possessive pronoun *ene*— are, in fact, genitive case-marked personal pronouns, which is why some scholars prefer not to single them out as a separate class (Hualde & Ortiz de Urbina 2003: 159). Regarding their reflexive counterparts, these apparently arose by adding the demonstrative form (*h*)*au*(*r*)

Old-Classical Basque, reflexive possessives are used in cases of coreference with another full noun phrase, whether overt or covert, in the same clause (Sarasola 1979: 431, Rebuschi 1989: 161, Trask 1997: 239, Hualde & Ortiz de Urbina 2003: 624-625). Thus in example (12a) below one finds the 1st-person singular regular possessive pronoun *ene* 'my' because this form does not corefer to any noun phrase in the clause. As opposed to this, in example (12b) the 1st-person singular reflexive possessive pronoun *neure* 'my own' is used, since this form is coreferent with the subject of the clause, *nic* '1SG.ERG' (Sarasola 1979: 433):

(12)   a.   *Ene*   *ardi-éc*   *ene*   *voz-a*
            1SG.GEN   sheep-ERG.PL   1SG.GEN   voice-DEF.ABS
            ençu-ten   *duté*
            hear-IPFV   AUX
            'My sheep$_i$ hear my$_j$ voice' (Leizarraga, 1571) (no coreference)

       b.   (*Ni-c*)   *eçagu-tzen*   *ditut*   *neu-re*   *ardi-a-c*
            1SG-ERG   know-IPFV   AUX   1SG.REFL-GEN sheep-DEF-ABS.PL
            'I$_i$ know my$_i$ own sheep' (Leizarraga, 1571) (coreference between *nic* and *neure*)

From the 18th century onwards the contrast between regular (12a) and reflexive (12b) possessive pronouns gradually disappears from the language: on the one hand, western and central dialects generalize the reflexive forms of possessive pronouns (such as *neure*) by extending their use to environments where no coreference is involved. On the other hand, eastern dialects generalize the regular forms of possessive pronouns (such as *ene*) by spreading their use to environments in which there is coreference (Mounole & Lakarra 2018: 447, Mounole & Gómez-López 2018: 522-523). In present-day Basque the distinction between regular and reflexive possessive pronouns is all but lost except in the 3rd person in eastern varieties (Trask 1997: 97).

4. Reflexivity and grammaticalization

'this' to personal pronouns (Trask 1997: 97).

Grammaticalization is understood here as a 'subset of linguistic changes whereby a lexical item or construction in certain uses takes on grammatical characteristics, or through which a grammatical item becomes more grammatical' (Hopper & Traugott 2003: 2). This definition of grammaticalization, as well as similar ones (Kuryłowicz 1965: 69), implies that grammaticalization is unidirectional, i.e. that it is an irreversible process (Bybee et al. 1994: 12, Hopper & Traugott 2003: 16, Lehmann 2015: 18). A number of counterexamples has been found, however, to this unidirectional conception of grammaticalization, such as the shifts *inflectional affix > clitic* and *inflectional affix > word* described in Newmeyer (2001: 206-209). Some researchers consider these and other counterexamples insignificant (Heine et al. 1991: 4-5, Hopper & Traugott 2003: 132), whereas others such as Luraghi (1998: 355), Campbell (2001: 127-141) and Newmeyer (2001: 205) find that they falsify the unidirectionality hypothesis.

The existence of potential counterexamples to grammaticalization has resulted in the description of an opposite diachronic process: degrammaticalization, i.e. the change from a grammatical bound element to an independent content word (Norde 2009: 8, 2011: 475-476) or, more generally, from a more grammatical to a less grammatical status (Viti 2015: 382). Despite the fact that very few instances of language change have been widely accepted as genuine counterexamples to unidirectionality (Haspelmath 2004: 17, Viti 2015: 382), both the notions of grammaticalization and degrammaticalization will be tested here against the diachronic evolution of reflexivity in Basque. For more details, see Sections 5.3 and 6 below.

According to Schladt (2000: 117), the main cross-linguistic source of reflexive markers is the grammaticalization of body-part terms (henceforth, BPTs): 89 out of 148 (60.1%) languages in his study have reflexive markers originating in this kind of element. Less frequent sources include nouns meaning 'head', 'person', 'self', emphatic pronouns, oblique case-marked personal pronouns, adverbs meaning 'again' and 'alone', verbs meaning 'to return, come back' and locative adpositions (Evseeva & Salaberri 2018: 395, Kuteva et al. 2019: 47-48, 56-57, 224, 243). The source is, in any case, conditioned to a great extent by the linguistic area a given language is spoken in, since BPTs are the dominant source only in Africa and Asia, emphatic pronouns in Europe, and 'return'-verbs in the languages of Australia and Oceania. This suggests that

reflexive strategies frequently spread through contact (Heine 1999: 9-10, Schladt 2000: 110-111).

Various parameters have been put forward in order to describe the development of lexical items according to grammaticalization theory. Kuteva et al. (2019: 3) mention four interrelated mechanisms: desemanticization or semantic bleaching (the form loses its meaning content), extension or context generalization (the form is used in new contexts), decategorialization (the form loses its morphosyntactic properties) and erosion or phonetic reduction (the form loses its phonetic substance). With regard to the grammaticalization of reflexive markers, Schladt (2000: 113-116) suggests the following path of change:

Semantic change

(13)   a.   Stage 1: the BPT is the object of the clause and has only its source meaning.

          b.   Stage 2: the BPT is reinterpreted by means of synecdoche and starts to stand for the subject referent, thus acquiring a reflexive function. The expression is, however, still ambiguous in the sense that it can have both the source and the target meaning.

          c.   Stage 3: the BPT functions only as a reflexive and can develop new uses, such as the reciprocal one.

Formal change

(14)   a.   Stage 1: the BPT behaves as a full noun phrase both morphosyntactically (case marking, agreement) and syntactically (word order permutations, presence of a possessive pronoun).

          b.   Stage 2: the BPT may optionally display reduced behavior morphosyntactically (loss of agreement) or syntactically (constraints on word order, elision of the possessive pronoun).

          c.   Stage 3: the BPT shows constrained syntactic behavior, in the sense that it must be coreferential with the subject, is confined to one particular function within the clause and may not undergo word order permutations such as topicalization.

d.   Stage 4: the BPT does not behave morphosyntactically as a noun phrase anymore, but rather has the properties of a pronoun.

According to Schaldt's (2000: 113-116) and Lehmann's (2015: 49-50) models[12], reflexive markers tend to arise as body-part terms and then become progressively grammaticalized until they merge morphologically with the verb, thus becoming verbal reflexives. If the existence of this path of change is admitted, then the model proposed by Schladt can be used to test the degree of grammaticalization of the 'head'-reflexive in Basque. In fact, some of the properties of the *buru*-construction that have been discussed in Sections 2.1 and 3 can be regarded as potential symptoms of ongoing grammaticalization: the formal identity between reflexive ('self') vs. literal ('head') and metaphoric ('mind') meaning of the word *buru*, for example, indicates that this construction is at Stage 2 of semantic change (Evseeva & Salaberri 2018: 422-423).

Furthermore, variability concerning the acceptance of adjectival modification suggests that the 'head'-reflexive displays reduced morphosyntactic behavior, which is why this construction may be argued to be at Stage 2 of formal change. The loss of the abovementioned distinction between regular and reflexive possessive pronouns, which is, stated differently, the loss of reflexive agreement between the possessive pronoun and the 'head'-noun, points in the same direction. More details concerning the grammaticalization of the *buru*-construction will be discussed in Section 5.3.

5. The diachronic development of reflexives in Basque

5.1. A brief description of the corpus

This study draws on a corpus of seventy historical texts and approximately 1.4 million words comprising the mid-16th to the late-20th centuries. In order for the corpus to be as representative of the language as possible, various textual genres have been considered, which also encompass all main dialects of the language (see the Appendix, Table 2 for details). In addition, a number of digital databases have been used for the study: *Euskal klasikoen corpusa* 'Corpus of Basque classics' (Euskara Institutua 2013),

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[12] For similar proposals concerning the grammaticalization of reflexive markers, see Kemmer (1993: 197) and Heine (1999: 3-4), among others.

Bonaparte ondareko eskuizkribuak 'Manuscripts from the Bonaparte commons' (Pagola et al. 2004) and *Ereduzko prosa dinamikoa* 'Exemplary dynamic prose' (Sarasola et al. 2017). Unfortunately, spoken language databases have been left out, since the few currently available corpora of oral Basque almost exclusively present linguistic data from the 21st century[13].

The fact that only written sources have been studied should not be considered a trivial issue: in cross-linguistic terms, written language has been argued not to exhibit the same properties as spoken language, therefore this difference should be borne in mind at the time of making generalizations on the basis of data (Linell 2005: 3). In accordance with this line of thought, the difference between written and spoken language has been shown to have consequences for the study of grammaticalization (Herlin & Kotilainen 2004: 265-269). In fact, a few of the properties discussed in Section 5.3 will be shown to be typical of the written language. Moreover, a considerable part of the historical corpus of Basque texts consists of translations and religious writings, which are often based on a model written in Latin or a Romance language. The influence of these source languages on different features pertaining to reflexivity in Basque, such as the choice of reflexive strategy, should therefore be borne in mind. Finally, this study presents an idealized view of the language in the sense that dialectal differences are barely considered. Variation across dialects is only assessed when relevant to the discussion (Section 5.3.2).

5.2. Methodology

The properties which, as discussed in Section 3 above, seem to set apart reflexive constructions in Archaic and Old-Classical Basque from present-day Basque reflexives have been treated as variables. Therefore, all collected attestations of reflexive constructions have been tested for (i) their grammatical function within the clause; (ii) frequency of occurrence with respect to intransitivization; (iii) frequency of modification; (iv) frequency of non-reflexive anaphoric uses; (v) frequency of number agreement between the reflexive and the subject and (vi) frequency of occurrences as

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[13] These include, among others, *Ahotsak.eus* (https://ahotsak.eus/), *Euskararen herri hizkeren atlasa* 'Atlas of Basque folk varieties' (Euskaltzaindia 1999) and *Nafarroako ondare materiagabearen artxiboa* 'Archive of immaterial heritage of Navarre' (http://www.navarchivo.com/).

opposed to 'weak' reflexives. The results of these tested variables, which are treated separately in the following section, have been organized into nine fifty-year periods within the analyzed time frame, i.e. the mid-16th to the late-20th centuries. The texts and digital corpora mentioned in the previous section are not syntactically tagged, which is why all tokens (N=2360) have been collected manually.

Every single occurrence of the *buru*-construction in the corpus has been controlled for its meaning, i.e. literal ('head'), metaphoric ('mind') and reflexive ('self'), the first two having been left out of the discussion: as mentioned in Section 2.1, the reading of the *buru*-construction depends on context. Therefore, context was used in order to decide the meaning of each attestation of the 'head'-construction and for disambiguation of ambiguous cases. The same applies to intransitivization: it was mentioned in Section 2.2 that intransitivization can be used to express many valency-changing operations in addition to reflexive, including reciprocal, anticausative, middle and impersonal. Since most of these readings are context-dependent, context was used to disambiguate and filter out non-reflexive uses of intransitivization.

5.3. Discussion of the data

5.3.1. *The grammatical functions of reflexives*

The formal dimension of Schladt's (2000: 113-116) grammaticalization path for reflexive markers (14a-d) predicts that, over time, reflexive constructions become increasingly restricted to the direct object position. This is not, however, borne out by the Basque data: in the 450-year period under study the main grammatical functions fulfilled by the *buru*-construction remain largely unchanged. This can be seen in the following figure:

Figure 1. The grammatical functions of the reflexive *buru*-construction (1545-2000 CE).
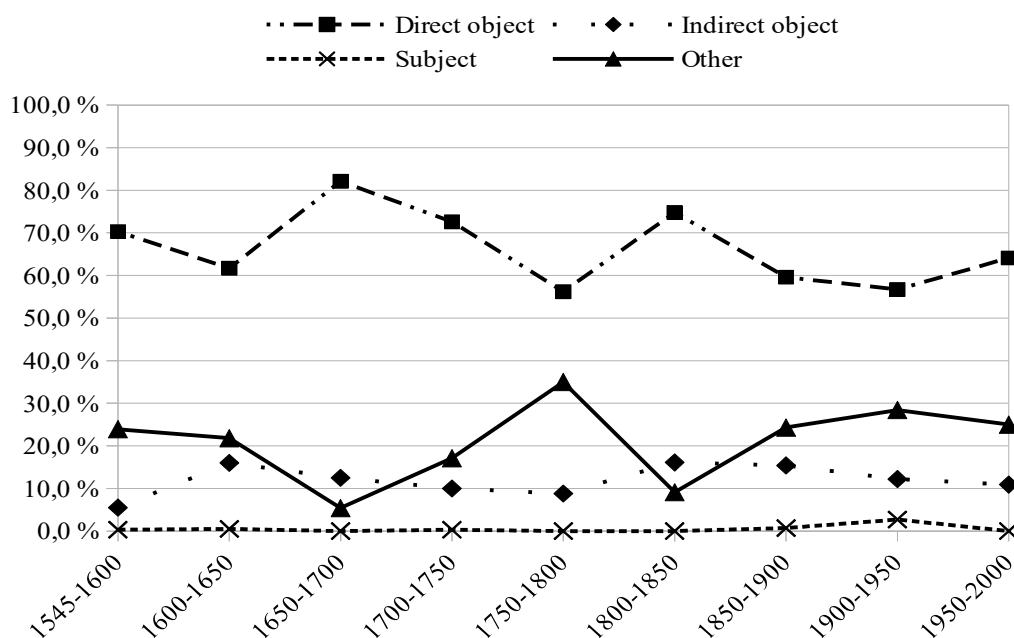
The direct object is, indeed, the most frequent grammatical function of the reflexive construction, but this preference barely changes from 70.3% in the earliest period to 64.1% in the latest period. Thus not only does the preference for acting as a direct object not increase, but it slightly decreases. The picture is similar for indirect object, which slightly increases (5.5% to 10.9%) but in general terms remains the same. Moreover, and despite the fact that in present-day Basque the reflexive *buru*-construction can behave as a subject mostly with mental-state predicates (Saltarelli 1988: 113, de Rijk 2008: 367), the occurrences of this construction as a subject in historical written Basque are testimonial (0.4%, with a total of only 6 attestations).

As mentioned in Section 2.2, two of the most widely accepted diagnostics for syntactic productivity are token frequency and type frequency (Bybee & Thompson 1997: 384-386, Barðdal 2008: 27-28). Therefore, in order to observe whether the grammatical functions of the reflexive 'head'-construction in the historical corpus imply a change with respect to present-day (21st-century) Basque, token and type frequency of the reflexive construction in present-day Basque should be measured and compared to the historical data. A database suitable for this purpose seems to be *Ereduzko prosa dinamikoa* 'Exemplary dynamic prose' (Sarasola et al. 2017), which comprises a 55 million-word corpus of books, articles and press written between 2001 and 2016.

According to a search in this corpus, there are 31651 attestations of the reflexive *buru*-construction, of which 17485 (55.2%) are direct objects, 7505 (23.7%) indirect objects, 113 (0.4%) subjects and 6548 (20.7%) fulfill other grammatical functions. In comparison to the 20th-century historical data, this implies that the token frequency of direct object 'head'-reflexives has decreased (64.1% vs. 55.2%), whereas the frequency of indirect object reflexives has increased (10.9% vs. 23.7%) and subject reflexives have remained practically the same (1.3% vs. 0.4%). Comparing the historical data to the present-day Basque data thus confirms the abovementioned tendency for direct object 'head'-reflexives to decrease.

Another point of discussion concerns 'head'-reflexives in subject position. Even though the token frequency of these elements has not changed over time, the number of predicates subject reflexives may occur with (i.e. type frequency) seems to tell a different story. In the historical corpus subject reflexive constructions are attested only with two verbs, namely *esan* 'to say' (15a) and *lana eman* 'to make busy' (15b):

(15)   a.   *Alde*   *bat-etik*   *bere*   *buru-a-k*   *zirautsan*
             side   one-ABL   3SG.GEN   REFL-DEF-ERG   say.3SG.PST

             tsarr-a   *za-la*   *gogoko-a*   *e=tzan*   *emakume*
             bad-DEF   AUX-that   likable-DEF   NEG=AUX   woman

             bat-egaz   *eskon-du-te-a*
             one-INS   marry-PFV-NMLZ-DEF

             'One the one hand, he told himself (lit. his self told him) that it was bad to marry a woman he did not like' (Agirre, 1906)

       b.   *Ne-re*   *buru-a-k*   *ere*   *ema-ten*   *dit*   *franko lan*
             1SG-GEN   REFL-DEF-ERG   also   give-IPFV   AUX   some   work

             'I am busy enough with myself already (lit. my self keeps me busy enough)' (Labaien, 1931)

If a comparison is established between historical Basque and present-day Basque, it becomes evident that the number of predicates that occur with subject reflexives has increased (Saltarelli 1988: 113, de Rijk 2008: 367, Albizu 2009: 15):

Table 1. Predicates that occur with subject reflexives in historical and present-day Basque.

Historical (16th-20th c.) Basque	Present-day Basque
Esan 'to say, tell'	*Egin* 'to do, make'
Lana eman 'to make busy'	*Gidatu* 'to guide'
	Kezkatu 'to worry'
	Lana eman 'to make busy'
	Liluratu 'to fascinate'
	Zoratu 'to drive crazy'

A second search of *Ereduzko prosa dinamikoa* (Sarasola et al. 2017) reveals that the token frequency of subject vs. direct/indirect object reflexives in present-day Basque is 3 vs. 112 for *esan*, 0 vs. 4 for *egin* and 0 vs. 2 for *gidatu*. Furthermore, there are six attestations of this construction with the verb *kezkatu* (five instrumental and one comitative) and one with *liluratu* (comitative). There are no attestations of the reflexive *buru*-construction with the verbs *lana eman* and *zoratu*. Overall, then, the frequency of occurrence of the 'head'-reflexive with the seven verbs in Table 1 is 118/131 (90.1%) for direct and indirect object, 10/131 (7.6%) for other modifiers of the verb and only 3/131 (2.3%) for subject. This means that, even though the overall type frequency of subject reflexives has increased, the verbs subject reflexives can occur with still clearly prefer to have direct or indirect object reflexives, such as (1a-b) above.

Nevertheless, the higher number of predicates with which the reflexive construction can behave as a subject in present-day written Basque suggests that the subject function has become slightly more acceptable, even if not more frequent, over time. Therefore, a domain (subjecthood) of the reflexive construction whose occurrence should become more restricted over time has, in fact, increased its type frequency. This is, together with the reduced token frequency of direct object reflexive constructions, a development that contradicts Schladt's (2000: 113-116) model of grammaticalization for reflexive markers.

5.3.2. *Intransitivization vs. the 'head'-construction*
Concerning the grammaticalization of reflexive markers, no prediction is made by Heine (1999: 3-4), Schladt (2000: 113-116) and Lehmann (2015: 49-50) with regard to the diachronic interaction between different reflexive strategies, aside from the fact that

reflexive markers tend to arise as nominal strategies and to grammaticalize into verbal markers. The following figure shows the frequencies of occurrence of the reflexive *buru*-construction and of intransitivization in the history of Basque:

Figure 2. The frequencies of nominal vs. verbal reflexive strategy in Basque (1545-2000 CE).
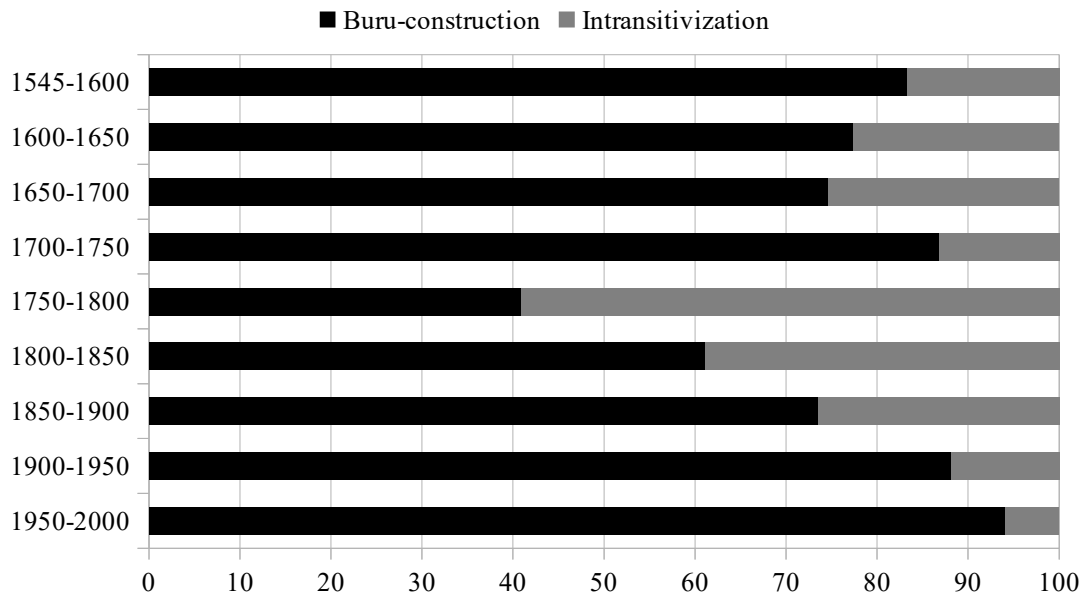
The data indicate that the proportion between the nominal strategy (*buru*-construction) and the verbal strategy (intransitivization) has remained, except for the period between 1750 and 1850, similar since the earliest texts. The last two centuries offer, however, an interesting insight: the nominal strategy seems to be rapidly gaining ground at the expense of the verbal strategy, with an increase of 53.2% between 1800 and 2000. This is in line with Mounole (2011: 145), who claims that "[D]ans les textes des 15ème et 16ème siècles, le mécanisme de détransitivisation semble être étendu à plus de verbes que de nos jours". Dialectal variation in the choice of reflexive strategy is also relevant, since northern dialects seem to favor the *buru*-construction more often than southern dialects, both in historical and in present-day Basque (Mounole 2011: 270). This may, however, be related to the fact that texts written in southern dialects show a stronger influence of Latin and Romance languages. The decrease of intransitivization as a reflexive strategy might, in any case, be an exclusive development of the written language, as in spoken Basque the tendency seems to be exactly the opposite (Euskaltzaindia 1991: 63).

The decline of the verbal strategy in written Basque may be related to efforts of standardization and normativization of the language, which began in the late-19th century. In this respect, the verbal reflexive is often dispreferred by present-day authors and by the literary norm in general because it replicates the Romance model and is thus perceived as less 'natural' in Basque. From a general point of view, then, standardization at the written level may be claimed to have affected the process of grammaticalization of the *buru*-reflexive. This should not be surprising, since standardization processes have been known, among other things, to slow down and even halt processes of language change (Laitinen 2004: 247).

5.3.3. '*Plain' vs. 'modified' reflexive constructions*

Another variable to be tested with regard to the grammaticalization of the reflexive *buru*-construction in Basque concerns its tolerance of modification: as mentioned in Section 2.1, the most frequent form of the reflexive construction is *possessive pronoun - buru - definite article*, in that order. This structure can be altered, however, in the sense that (i) the definite article can be replaced by another D-element[14] and (ii) an adjectival modifier can modify the 'head'-noun. Accordingly, and for practical purposes, all cases in which the structure of the reflexive construction is *possessive pronoun - buru - definite article* have been tagged as 'plain', all cases in which (i-ii) applies have been marked as 'modified'. The following figure presents the data concerning the frequency of modification of the *buru*-construction:

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[14] Recall that, as argued in Section 3, the D-elements (*h*)*au*(*r*) 'this' and (*h*)*ori* 'that' that accompany *buru* may or may not have deictic value in the historical attestations (Mitxelena 2011: 231, Manterola 2015: 28). They are, however, likely to imply a context-dependent difference in meaning as opposed to the definite article (Becker 2018: 186).

Figure 3. Frequency of modification of the reflexive construction in Basque (1545-2000 CE).
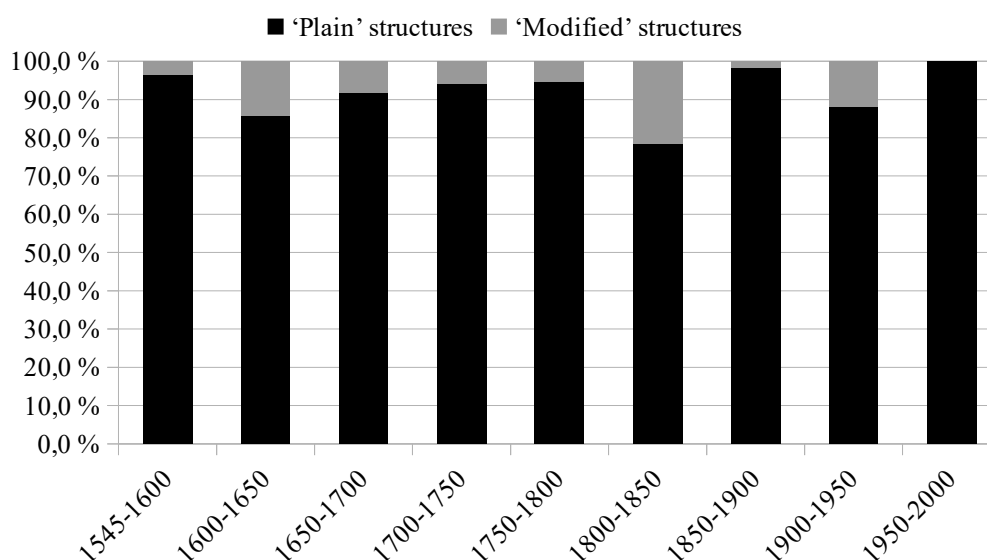
First of all, the data show that modification of the *buru*-construction has been an infrequent possibility since the mid-16th century. Second, a reduced acceptability of modification seems, indeed, to be observable at first sight, as the final period (1950-2000) shows no cases of modification at all. This is not to say, however, that changes (i-ii) have become ungrammatical; see de Rijk (2008: 365) for some examples in present-day Basque. Third, it is worth pointing out that in the whole corpus there is not one single attestation of reflexive constructions heading relative clauses (cf. example 3c above) of the kind mentioned by Oihartzabal (1989: 77-78). In general terms, then, the degree of modification of the reflexive 'head'-construction cannot be claimed to have changed significantly: this variable neither supports nor contradicts predictions borne out by the grammaticalization path of reflexive markers (Schladt 2000: 113-116).

5.3.4. *Anaphoric non-reflexive uses of the 'head'-construction*
As pointed out by Saltarelli (1988: 110), Mitxelena (1992: 672) and Hualde & Ortiz de Urbina (2003: 623-624), among others, some attestations of the *buru*-construction in historical Basque seem to have an anaphoric use, but they are not reflexive, as there is no antecedent in the same clause:

(16)   a.   *Hebe-tic   ioan   gabe   ene*

here-ABL	leave.PFV	without	1SG.GEN

buru-ya   *eguin*   *vehar* *duçu*   *ene*   *nahi-a*

REFL-DEF.ABS do.PFV   must   AUX   1SG.GEN   will-DEF.ABS

'Before I leave this place you must do my will (lit. before my self

leaves this place you must do my will)' (Etxepare, 1545)

b. *Ene*   *bekhatu-ek*   *iragan*   *eta*   *erdira-tu*

1SG.GEN   sin-ERG.PL   pierce.PFV   and   tear-PFV

dute   *ene*   *buru-a*

AUX   1SG.GEN   REFL-DEF.ABS

'My sins have pierced and torn me (lit. have pierced and torn my self)'

(Axular, 1643)

c. *Zergatik*   *ni-re*   *buru-a-ren*   *garbi-tasun-a*

why   1SG-GEN   REFL-DEF-GEN   clean-NMLZ-DEF

eska-tzen   *didazu?*

require-IPFV   AUX

'Why do you require my (lit. my self's) cleanliness?' (Orixe, 1929)

The following figure presents the frequency of occurrences of constructions like (16a-c)
in the period under study:

Figure 4. Frequency of anaphoric vs. reflexive uses of the *buru*-construction in Basque (1545-2000 CE).
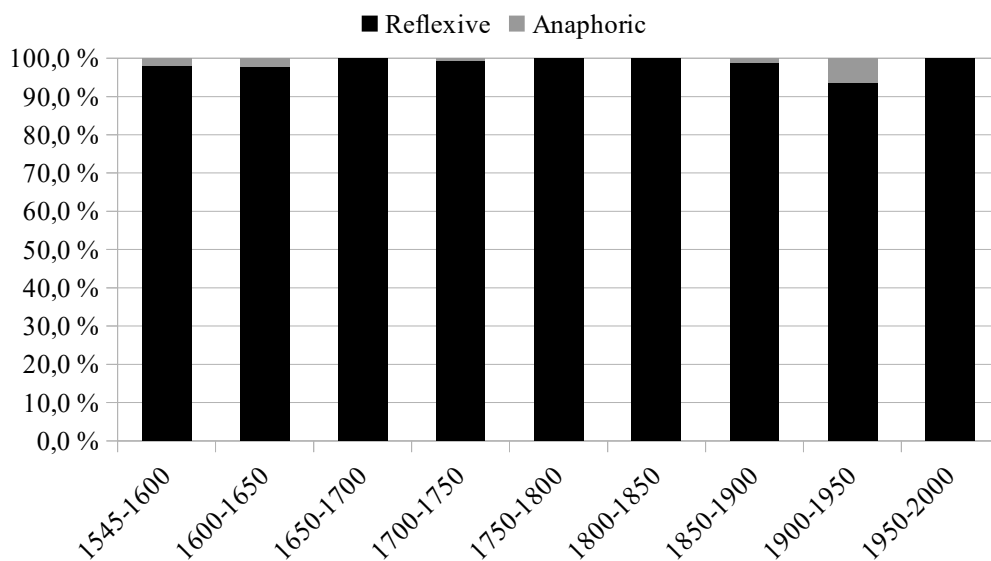
The data show without a doubt that constructions like (16a-c) are possible, but quite rare throughout the history of Basque. In fact, the total of attestations amounts to just 19 (1.3%), and some periods (1650-1700, 1750-1850 and 1950-2000) do not have a single occurrence. To this should be added the fact that in present-day Basque such constructions are ungrammatical, at least for some speakers (de Rijk 2008: 367). In this study the latest attestations date to the 1920s and 1930s[15]. A conclusion to be drawn from this is that anaphoric non-reflexive uses of the *buru*-construction have become nearly, if not completely extinct.

The models of grammaticalization of reflexive markers discussed above do not regard anaphoric uses as part of the process. However, if one considers the claim that reflexive markers arise as noun phrases and become pronouns in their path towards grammaticalizing into affixes (Heine 1999: 3-4, Schladt 2000: 113, Lehmann 2015: 49-50), it may be assumed that, at least in some cases, noun phrases can acquire anaphoric properties before taking a reflexive meaning (17):

(17)   NOMINAL > ANAPHORIC > REFLEXIVE[16]

The extinction of sentences like (16a-c) above implies that a non-reflexive use of the 'head'-construction is no longer available in present-day Basque. This may be regarded as an indication that the *buru*-construction has become more restricted to the reflexive domain, which is predicted by the grammaticalization chain of reflexive markers as envisaged by Schladt (2000: 113-116).

5.3.5. *Loss of obligatory number agreement*
A feature explicitly mentioned by Schladt (2000: 113-116) that typically characterizes noun phrases as opposed to pronouns is agreement. In this sense and regarding Basque,

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[15] A few later examples can be found in the literature, such as the ones provided by Mitxelena (1988: 37, 170). However, as argued by Hualde & Ortiz de Urbina (2003: 624), Mitxelena seems to be using these constructions not anaphorically, but rather emphatically. In fact, Mitxelena (1992: 672) himself points out this emphatic use of the anaphoric, non-reflexive *buru*-construction in earlier literature, which suggests that in (Mitxelena 1988: 37) he is just replicating this emphatic use.

[16] As pointed out by Haspelmath (1990: 54) and Kemmer (1993: 197), among others, reflexives may undergo further developments into anticausative, passive etc. Therefore, the grammaticalization path as given in (17) is not complete. These further changes are, however, not part of the focus of this paper, which is why they have been left aside.

most descriptive grammars claim that number agreement between the reflexive *buru-*construction and the subject is optional (Hualde & Ortiz de Urbina 2003: 621-622, de Rijk 2008: 365). Many prescriptive grammars recommend, however, to mark the reflexive construction in the singular even when the antecedent is plural (18a-b, Euskaltzaindia 1991: 62, Petrirena 2011: 106):

(18) a. *Bi*   *gizon*   *hai-ek*   *bere*   *buru-a*
          two   man   those-ERG.PL 3SG.GEN   REFL-DEF.ABS
          hil   *nahi*   *zuten*
          kill.PF   want   AUX
          'Those two men wanted to kill themselves (lit. their self)'

      b. *Gu-k*   *geu-re*   *buru-a*   *maite* *dugu*
          1PL-ERG   1PL.INT-GEN   REFL-DEF.ABS   love   AUX
          'We love ourselves (lit. our self)'

This suggests that number agreement between the subject and the reflexive construction is being progressively lost, which calls for the question whether a historical development can be observed. The following figure presents the data:

Figure 5. Frequency of number agreement between the subject and the reflexive *buru*-construction in Basque (1545-2000 CE).


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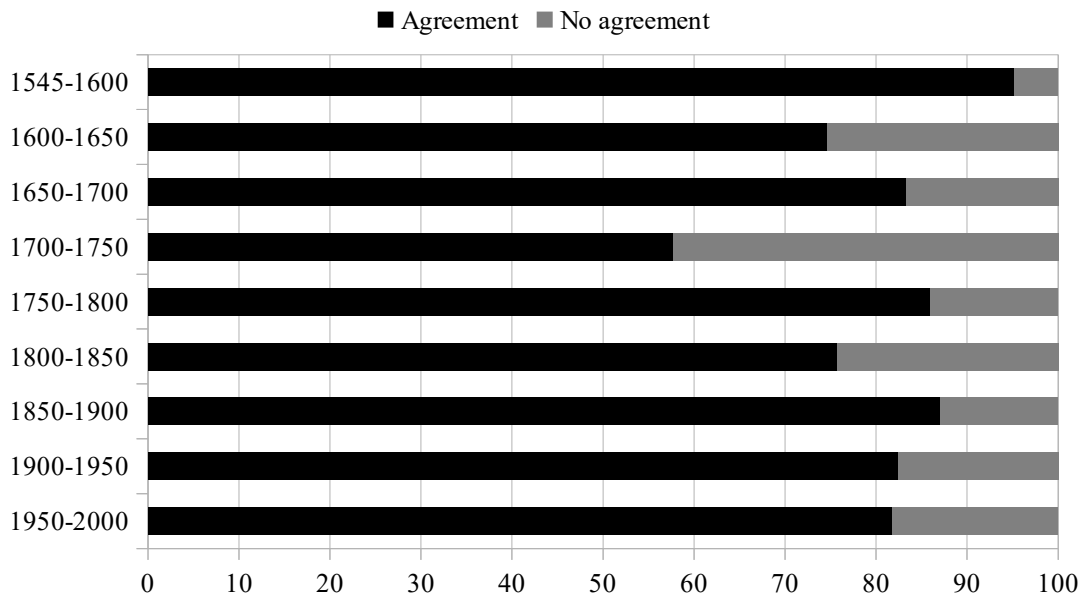
The data are not very helpful in clarifying the question whether number agreement between subject and reflexive is progressively lost, as the frequencies seem to considerably vary between a 57.7% rate of agreement in the 1700-1750 period and a 95.2% rate of agreement in the 1545-1600 period. In general terms, however, the contrast between 4.8% of non-agreeing reflexive constructions in 1545-1600 and 18.2% in 1950-2000 indicates that the rate of non-agreeing tokens has more than tripled. Thus even if the process seems to be quite slow and to have had some setbacks, agreement has indeed decreased. More importantly, number agreement is largely optional in present-day Basque as argued above, whereas a 95.2% rate of agreement in the 1545-1600 period indicates that this was probably not the case in the earliest historical period.

5.3.6. *'Strong' vs. 'weak' reflexives*

One further variable to be tested concerns the occurrence of 'strong' vs. 'weak' reflexives. As mentioned in Section 2.2, 'strong' reflexives refer to any instance of the reflexive *buru*-construction, whereas 'weak' reflexives refer to personal pronouns used in a reflexive sense (de Rijk 2008: 365-366). 'Weak' reflexives appear only in certain oblique cases, mostly benefactive and prosecutive, and they are usually optional, which is why they should be regarded as a highly restricted alternative to the reflexive *buru*-construction. The following figure presents the data:

Figure 6. Frequency of 'strong' vs. 'weak' reflexives in Basque (1545-2000 CE).
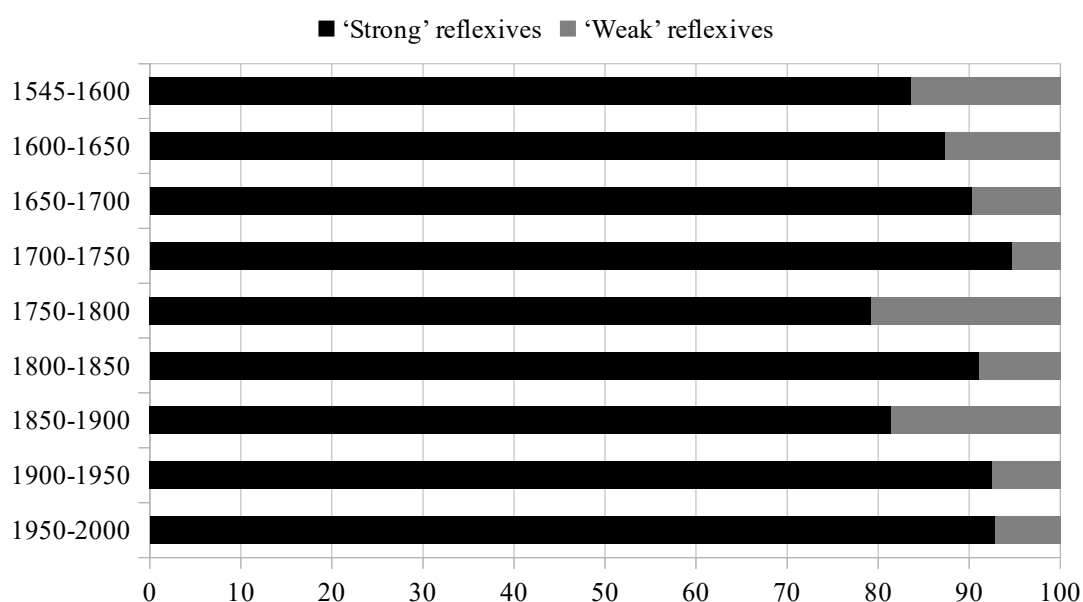
The data show that, except for some fluctuations in the late-18th and early-19th centuries, the proportion of 'strong' and 'weak' reflexives seems to have remained almost constant in the period under study. If the initial and final stages are compared to each other, a slight decrease of 'weak' reflexives can be observed with 16.4% vs. 83.6% in 1545-1600 and 7.2% vs. 92.8% in 1950-2000. As mentioned above, the models of grammaticalization by Heine (1999: 3-4), Schladt (2000: 113-116) and Lehmann (2015: 49-50) do not make any predictions with respect to the interaction between different reflexive strategies, which is why this variable cannot be claimed to be entirely relevant to the analysis of grammaticalization of the 'head'-reflexive in Basque. This development does show, however, that the *buru*-reflexive has become more prevalent, which may be related, as is the case of the decline of intransitivization mentioned in section 5.3.2 above, to the more widespread support for the *buru*-construction in present-day written Basque.

6. Conclusions and future research

This study has provided an overview of the diachronic changes affecting the reflexive *buru*-construction in the history of Basque. It has been argued that the reflexive construction has undergone developments which are in accordance with models of grammaticalization of reflexives (Kemmer 1993: 197, Heine 1999: 3-4, Schladt 2000: 113-116, Lehmann 2015: 49-50): these are (i) the loss of the distinction between regular and reflexive possessive pronouns; (ii) the extinction of anaphoric, non-reflexive uses of *buru*; and (iii) the loss of obligatory number agreement between the subject and the 'head'-noun. The increased prevalence of the reflexive *buru*-construction at the expense of other reflexive strategies (i.e. intransitivization and so-called 'weak' reflexives) also seems to point in this direction. This latter change has been argued to be typical of written Basque and to be related to the standardization of the language (Laitinen 2004: 247).

As opposed to these developments, the reflexive *buru*-construction seems to have progressed in the opposite direction: (i) the number of direct object uses of this construction has decreased over time, and (ii) this construction has been argued to occur in subject position with more predicates in present-day Basque than in the historical

period. These changes contradict the prediction that reflexive markers become increasingly restricted to the direct object position (Schladt 2000: 113-116). Moreover, at the same time as the abovementioned formal changes have affected the reflexive construction, it does not seem to have undergone any semantic shift, as predicted by Schladt's (2000: 113-116) model. The semantic part of the grammaticalization cline (13a-c) thus seems to be independent of the formal one (14a-d), and vice versa. This could be regarded as an instance of so-called 'layering', i.e. the fact that the *buru*-construction has preserved the original meaning of 'head' next to the innovative reflexive one (Hopper 1991: 22).

From a grammaticalization perspective, this state of affairs seems difficult to reconcile with unidirectional conceptions of language change as advocated by Heine et al. (1991: 4-5), Bybee et al. (1994: 12) and Hopper & Traugott (2003: 16-17), among others. An overview of the changes undergone by the reflexive *buru*-construction in the history of Basque rather suggests that changes may occur both in the predicted direction of grammaticalization (Kemmer 1993: 197, Heine 1999: 3-4, Schladt 2000: 113-116, Lehmann 2015: 49-50) and in the opposite direction of degrammaticalization (Norde 2009: 8, 2011: 475-476, Viti 2015: 382). Alternatively to invoking the concept of degrammaticalization, one may also propose that the changes discussed in this paper imply a kind of leftward and rightward oscillation along the grammaticalization cline[17], i.e. that the *buru*-construction has acquired both more and less grammatical uses in its path towards becoming more grammatical. This possibility is allowed for by some conceptions of grammaticalization (Luraghi 1998, Haspelmath 2004).

In order to further test these claims, future research should delve deeper into the questions addressed in this paper by providing more quantified data and further insights into the development of the reflexive *buru*-construction. Future studies should also attempt to integrate and analyze historical oral Basque data, however scarce.

Abbreviations

| 1/2/3 | first/second/third person | INT | intensive |
| ABL | ablative | IPFV | imperfective |

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[17] Silvia Luraghi, personal communication.

ABS	absolutive	LOC	locative
AUX	auxiliary	NEG	negative particle
BEN	benefactive	NMLZ	nominalizer
BPT	body-part term	PFV	perfective
COM	comitative	PL	plural
DAT	dative	PRES	present tense
DEF	definite	PROS	prosecutive
ERG	ergative	PRT	partitive
FUT	future	PST	past tense
GEN	genitive	SG	singular
INS	instrumental	SUBJ	subjunctive

Acknowledgments

Appendix[18]

Table 2. The corpus of texts[19].

Author	Title	Genre	Dialect
D. Agirre	*Kresala*	Novel	WB
J. B. Agirre 'Asteasukoa'	*Eracusaldiac*	Religious essay	CB
Anonymous	*Othoitce eta cantica espiritualac*	Religious essay	Z

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[18] The abbreviations in tables 3-12 stand for the following: DO = 'head'-reflexives as direct objects; IO = 'head'-reflexives as indirect objects; Subj = 'head'-reflexives as subjects; Other = 'head'-reflexives which fulfill other grammatical functions; Intrans = cases of intransitivization as a reflexive strategy; Modified = 'head'-reflexives modified by D-elements other than -*a*, adjectives or inclusive morphemes; Conj = conjoined 'head'-reflexives; Not-refl = anaphoric, non-reflexive uses of the 'head'-construction; Not-agr = 'head'-reflexives that do not agree in number with the subject; Weak = 'weak' reflexives (de Rijk 2008: 365-366). Since reflexives can be, for example, indirect objects and conjoined phrases at the same time, the former five variables (DO, IO, Subj, Other and Intrans) taken together make up % 100 of cases, just like the latter five variables (Modified, Conj, Not-refl, Not-agr and Weak).

[19] The abbreviations for the dialects are the following: All = all dialects; CB = Central Basque; HN = High Navarrese; NL = Navarrese-Lapurdian; R = Roncalese; StU = Standard Unified Basque; WB = Western Basque; Z = Zuberoan (Zuazo 2008).

Anonymous	*Refranes y sentencias*	Proverbs	WB
M. Arzadun	*Doctrina*	Translation	WB
J. I. 'B. Atxaga'	*Sara izeneko gizona*	Novel	StU
P. A. 'Axular'	*Gero*	Prose	NL
P. Barrutia	*Acto para la Nochebuena*	Theater play	WB
A. Belapeire	*Catechima laburra*	Religious essay	Z
J. Beriain	*Dotrina*	Translation	HN
J. Beriain	*Tratado de como se ha de oyr missa*	Religious essay	HN
D. Betolatza	*Doctrina*	Translation	WB
E. Bustintza	*Euskalerriko ipuñak*	Stories	WB
X. M. 'Count of Peñaflorida'	*El borracho burlado*	Theater play	CB
X. M. 'Count of Peñaflorida'	*Gavon-sariac*	Theater play	CB
J. B. Coyos	*Zubererazko istorio, alegia eta ipuin irri-egingarri*	Stories	Z
J. B. Dirassar	*Hegiko Bordatik*	Autobiography	NL
J. P. Duvoisin	*Baigorriko zazpi liliak*	Stories	NL
J. Egiategi	*Filosofo huskaldunaren ekheia*	Religious essay	Z
K. Eleizegi	*Garbiñe*	Theater play	CB
F. Elizalde	*Dotrina*	Translation	HN
J. Etxeberri 'Sarakoa'	*Escuararen hatsapenac*	Prose	NL
J. Etxeberri 'Sarakoa'	*Escuarazco hatsapenac latin ikhasteco*	Prose	NL
J. Etxeberri 'Sarakoa'	*Lau-urdiri gomendiozco carta*	Letter	NL
P. M. Etxenike	*Itzulpenak*	Translation	HN
B. Etxepare	*Linguae vasconum primitiae*	Poetry	NL
B. S. T. 'Frai Bartolome'	*Euscal-errijetaco olgueeta*	Religious essay	WB
B. Goienetxe	*Marechalaren liburia*	Other	Z
I. Haraneder	*Jesu Christoren evangelio saindua*	Translation	NL
C. Harizmendi	*L'office de la vièrge Marie*	Religious essay	NL
P. Hualde Mayo	*Doctrina*	Translation	R
J. J. Irazusta	*Nork bere bidea*	Autobiography	CB
M. O. Kapanaga	*Dotrinea*	Translation	WB

A. Kardaberatz	*Eusqueraren berri onac*	Prose	CB
E. Lapeire	*Kredo edo sinhesten dut*	Religious essay	NL
M. Larramendi	*Carta*	Letter	CB
J. P. Lazarraga	*Eskuizkribua*	Mix of poetry and prose	WB
J. Leizarraga	*ABC edo Christinoen instructionea*	Translation	NL
J. Leizarraga	*Calendrera*	Translation	NL
J. Leizarraga	*Catechismea*	Translation	NL
J. Leizarraga	*Iesus Christ gure iaunaren testamentu berria*	Translation	NL
J. Leizarraga	*Othoitza ecclesiasticoen forma*	Translation	NL
P. Lhande	*Yolanda*	Novel	CB
J. M. A. E. 'X. Lizardi'	*Itz-lauz*	Autobiography	CB
J. Lizarraga 'Elkanokoa'	*Jesukristo, Maria eta santuen bizitzak*	Translation	HN
J. Lizarraga 'Elkanokoa'	*Urteko igande guzietarako prediku laburrak*	Religious essay	HN
E. Materra	*Doctrina* (I)	Translation	NL
E. Materra	*Doctrina* (II)	Translation	NL
S. Mendiburu	*Jesusen bihotzaren devocioa*	Translation	CB
J. A. Mogel	*Peru Abarca*	Novel	WB
A. Oihenart	*Atsotizac edo refrauac*	Proverbs	Z
J. Oihenarte	*Kaniko eta Belxitina*	Theater play	Z
N. O. 'Orixe'	*Santa Kruz apaiza*	Novel	CB
J. Otxoa de Arin	*Doctrina*	Translation	CB
S. Salaberria	*Neronek tirako nizkin*	Autobiography	CB
J. M. Satrustegi	*Lapur zuriak*	Stories	HN
J. Tartas	*Arima penitentaren occupatione devotac*	Religious essay	Z
J. Tartas	*Onsa hilceco bidia*	Religious essay	Z
J. A. Ubillos	*Doctriñ berri-ecarlea*	Translation	WB
Various authors	Minor texts (Mitxelena 1964, Sarasola 1983)	Other	All
A. M. Zabala	*Gabon gau bat eta beste ipuin asko*	Stories	CB

Table 3. Reflexives in 16th-century Basque (1).

Text	Year	DO	IO	Subj	Other	Intrans
Linguae	1545	7 (63.6%)	1 (9.1%)	0 (0.0%)	0 (0.0%)	3 (27.3%)
Testamentu[20]	1571	207 (58.6%)	16 (4.5%)	1 (0.3%)	73 (20.7%)	56 (15.9%)
Testu labur[21]	1590	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Doctrina	1596	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Refranes	1596	2 (33.3%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	3 (50.0%)
Total		218 (58.6%)	17 (4.6%)	1 (0.3%)	74 (19.9%)	62 (16.7%)

Table 4. Reflexives in 16th-century Basque (2).

Text	Year	Modified	Conj	Not-refl	Not-agr	Weak
Linguae	1545	0 (0.0%)	0 (0.0%)	4 (44.4%)	1 (11.1%)	4 (44.4%)
Testamentu	1571	3 (4.5%)	9 (13.4%)	1 (1.5%)	3 (4.5%)	51 (76.1%)
Testu labur	1590	0 (0.0%)	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)
Doctrina	1596	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Refranes	1596	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (100%)
Total		3 (3.6%)	9 (10.8%)	6 (7.2%)	4 (4.8%)	61 (73.5%)

Table 5. Reflexives in 17th-century Basque (1).

Text	Year	DO	IO	Subj	Other	Intrans
Eskuizkribua	1602	7 (70.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)	2 (20.0%)
Doctrina (I)	1617	2 (40.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60.0%)
Tratado	1621	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	14 (100%)
Doctrina (II)	1623	12 (52.2%)	2 (8.7%)	0 (0.0%)	0 (0.0%)	9 (39.1%)
Dotrina	1626	1 (11.1%)	0 (0.0%)	0 (0.0%)	2 (22.2%)	6 (66.7%)
Gero	1643	94 (51.6%)	28 (15.4%)	1 (0.5%)	38 (20.9%)	21 (11.5%)
Dotrinea	1656	9 (47.4%)	4 (21.0%)	0 (0.0%)	0 (0.0%)	6 (31.6%)
Atsotitzak	1657	4 (66.7%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	1 (16.7%)
Office	1658	1 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Onsa hilceco	1666	16 (69.6%)	2 (8.7%)	0 (0.0%)	0 (0.0%)	5 (21.7%)
Arima	1672	11 (73.3%)	1 (6.7%)	0 (0.0%)	2 (13.3%)	1 (6.7%)
Catechima	1696	5 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (50.0%)

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[20] This heading encompasses five texts by Joanes Leizarraga: *Testamentu berria*, *Othoitza ecclesiasticoen forma*, *Catechismea*, *Kalendrera* and *ABC edo Christinoen instructionea*. The heading and the decision to place them together are due to Linschmann & Schuchardt's (1990) edition.
[21] This heading encompasses all minor texts collected by Mitxelena (1964) and Sarasola (1983).

Text	Year	DO	IO	Subj	Other	Intrans
Total		162 (50.8%)	37 (11.6%)	1 (0.3%)	44 (13.8%)	75 (23.5%)

Table 6. Reflexives in 17th-century Basque (2).

Text	Year	Modified	Conj	Not-refl	Not-agr	Weak
Eskuizkribua	1602	4 (75.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
Doctrina (I)	1617	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (66.7%)	1 (33.3%)
Tratado	1621	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Doctrina (II)	1623	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (100%)	0 (0.0%)
Dotrina	1626	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (50.0%)
Gero	1643	5 (10.0%)	7 (14.0%)	4 (8.0%)	10 (20.0%)	24 (48.0%)
Dotrinea	1656	1 (25.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	1 (25.0%)
Atsotitzak	1657	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Office	1658	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Onsa hilceco	1666	0 (0.0%)	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Arima	1672	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Catechima	1696	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (100%)
Total		10 (13.3%)	10 (13.3%)	4 (5.3%)	18 (24.0%)	33 (44.0%)

Table 7. Reflexives in 18th-century Basque (1).

Text	Year	DO	IO	Subj	Other	Intrans
Vascongad[22]	1712	22 (44.0%)	5 (10.0%)	0 (0.0%)	14 (28.0%)	9 (18.0%)
Doctrina	1713	2 (16.7%)	1 (8.3%)	0 (0.0%)	2 (16.7%)	7 (58.3%)
Dotrina	1735	2 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (75.0%)
Doctrina	1738	1 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Evangelio	1740	135 (65.5%)	14 (6.8%)	1 (0.5%)	32 (15.5%)	24 (11.7%)
Gutuna	1747	1 (50.0%)	1 (50.0%)	0 (0.0%)	0 (% 0.0)	0 (0.0%)
Devocioa	1747	70 (77.8%)	11 (12.2%)	0 (0.0%)	7 (7.8%)	2 (2.2%)
Berri onac	1761	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Teatro zar[23]	1764	2 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)

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[22] This heading encompasses three texts by Etxeberri Sarakoa: *Escuararen hatsapenac*, *Escuarazco hatsapenac latin ikhasteco* and *Lau-urdiri gomendiozco carta*. The heading and the decision to place them together are due to Urkixo's (1907) edition by the same name.
[23] This heading encompasses one text by Pedro Barrutia and two by the Count of Peñaflorida: *Acto para la Nochebuena*, *Gabon-sariak* and *El borracho burlado*, respectively. The heading and the decision to place them together are due to Aresti's (1965) edition by the same name.

Text	Year	DO	IO	Subj	Other	Intrans
Filosofo	1785	1 (25.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)	2 (50.0%)
Doctriñ	1785	10 (31.2%)	1 (3.1%)	0 (0.0%)	11 (34.4%)	10 (31.2%)
Santuen biz	1793	64 (21.8%)	10 (3.4%)	0 (0.0%)	36 (12.3%)	183 (62.5%)
Total		310 (44.0%)	44 (6.2%)	1 (0.1%)	103 (14.6%)	247 (35.0%)

Table 8. Reflexives in 18th-century Basque (2).

Text	Year	Modified	Conj	Not-refl	Not-agr	Weak
Vascongad	1712	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	6 (85.7%)
Doctrina	1713	0 (0.0%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	4 (80.0%)
Dotrina	1735	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (66.7%)	1 (33.3%)
Doctrina	1738	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Evangelio	1740	2 (16.7%)	3 (25.0%)	2 (16.7%)	4 (33.3%)	1 (8.3%)
Gutuna	1747	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)	0 (0.0%)
Devocioa	1747	1 (4.3%)	3 (13.0%)	0 (0.0%)	14 (60.9%)	5 (21.7%)
Berri Onac	1761	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Teatro zar	1764	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (100%)
Filosofo	1785	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Doctriñ	1785	1 (8.3%)	2 (16.7%)	0 (0.0%)	6 (50.0%)	3 (25.0%)
Santuen biz	1793	2 (4.9%)	6 (14.6%)	0 (0.0%)	2 (4.9%)	31 (75.6%)
Total		6 (5.5%)	17 (15.6%)	2 (1.8%)	30 (27.5%)	54 (49.5%)

Table 9. Reflexives in 19th-century Basque (1).

Text	Year	DO	IO	Subj	Other	Intrans
Peru Abarka	1802	13 (44.8%)	4 (13.8%)	0 (0.0%)	4 (13.8%)	8 (27.6%)
Olgueeta	1816	3 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (50.0%)
Prediku	1821	85 (47.2%)	19 (10.6%)	0 (0.0%)	9 (5.0%)	67 (37.2%)
Othoitce	1823	5 (38.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	8 (61.5%)
Marechala	1831	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Kaniko	1848	1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (80.0%)
Eracusaldi	1850	53 (55.8%)	10 (10.5%)	1 (1.1%)	15 (15.8%)	16 (16.8%)
Baztango	1862	8 (57.1%)	1 (7.1%)	0 (0.0%)	1 (7.1%)	4 (28.6%)
Dotrina	1869	3 (30.0%)	1 (10.0%)	0 (0.0%)	1 (10.0%)	5 (50.0%)
Liliak	1885	3 (50.0%)	0 (0.0%)	0 (0.0%)	1 (16.7%)	2 (33.3%)

Text	Year	DO	IO	Subj	Other	Intrans
Gabon gau	1889	2 (66.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (33.3%)
Kredo	1891	12 (21.1%)	9 (15.8%)	0 (0.0%)	15 (26.3%)	21 (36.8%)
Total		188 (44.9%)	44 (10.5%)	1 (0.2%)	46 (11.0%)	140 (33.4%)

Table 10. Reflexives in 19th-century Basque (2).

Text	Year	Modified	Conj	Not-refl	Not-agr	Weak
Peru Abarka	1802	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)
Olgueeta	1816	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Prediku	1821	8 (25.8%)	4 (12.9%)	0 (0.0%)	8 (25.8%)	11 (35.5%)
Othoitce	1823	0 (0.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	2 (66.7%)
Marechala	1831	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Kaniko	1848	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Eracusaldi	1850	1 (2.5%)	14 (35.0%)	2 (5.0%)	1 (2.5%)	22 (55.0%)
Baztango	1862	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Dotrina	1869	0 (0.0%)	2 (50.0%)	0 (0.0%)	1 (25.0%)	1 (25.0%)
Liliak	1885	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)
Gabon gau	1889	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Kredo	1891	0 (0.0%)	4 (25.0%)	0 (0.0%)	6 (37.5%)	6 (37.5%)
Total		9 (9.1%)	26 (26.3%)	2 (2.0%)	17 (17.2%)	45 (45.5%)

Table 11. Reflexives in 20th-century Basque (1).

Text	Year	DO	IO	Subj	Other	Intrans
Kresala	1906	14 (56.0%)	4 (16.0%)	1 (4.0%)	2 (8.0%)	4 (16.0%)
Garbiñe	1916	8 (53.3%)	0 (0.0%)	0 (0.0%)	1 (6.7%)	6 (40.0%)
Yolanda	1921	3 (50.0%)	0 (0.0%)	0 (0.0%)	3 (50.0%)	0 (0.0%)
Santa Kruz	1929	14 (46.7%)	5 (16.7%)	0 (0.0%)	11 (36.7%)	0 (0.0%)
Itz-lauz	1934	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Istorio	1939	1 (16.7%)	0 (0.0%)	1 (16.7%)	4 (66.7%)	0 (0.0%)
Ipuiñak	1952	9 (90.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)	0 (0.0%)
Neronek	1964	4 (50.0%)	3 (37.5%)	0 (0.0%)	0 (0.0%)	1 (12.5%)
Nork bere	1980	6 (50.0%)	0 (0.0%)	0 (0.0%)	6 (50.0%)	0 (0.0%)
Lapur zuriak	1981	4 (50.0%)	1 (12.5%)	0 (0.0%)	2 (25.0%)	1 (12.5%)
Hegiko	1995	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)

Text	Year	DO	IO	Subj	Other	Intrans
Sara	1996	17 (60.7%)	3 (10.7%)	0 (0.0%)	6 (21.4%)	2 (7.1%)
Total		83 (54.6%)	16 (10.5%)	2 (1.3%)	37 (24.3%)	14 (9.2%)

Table 12. Reflexives in 20th-century Basque (2).

Text	Year	Modified	Conj	Not-refl	Not-agr	Weak
Kresala	1906	1 (14.3%)	0 (0.0%)	1 (14.3%)	3 (42.8%)	2 (28.6%)
Garbiñe	1916	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Yolanda	1921	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Santa Kruz	1929	0 (0.0%)	1 (33.3%)	2 (66.7%)	0 (0.0%)	0 (0.0%)
Itz-lauz	1934	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Istorio	1939	1 (14.3%)	0 (0.0%)	2 (28.6%)	0 (0.0%)	4 (57.1%)
Ipuiñak	1952	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Neronek	1964	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nork bere	1980	0 (0.0%)	1 (33.3%)	0 (0.0%)	2 (66.7%)	0 (0.0%)
Lapur zuriak	1981	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (50.0%)
Hegiko	1995	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (100%)
Sara	1996	0 (0.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	2 (66.7%)
Total		2 (7.1%)	5 (17.9%)	5 (17.9%)	5 (17.9%)	11 (39.3%)

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