

Natalia Evseeva and Iker Salaberri¹

Grammaticalization of nouns meaning ‘head’ into reflexive markers: a cross-linguistic study

Abstract

Studies on the grammaticalization of body-part nouns into reflexives have often formulated cross-linguistic generalizations, but have mostly failed to provide detailed analyses of similar developments attested in unrelated languages. As a consequence, valuable insights have sometimes been overlooked. The purpose of this paper is twofold: on the one hand, it identifies a higher number of languages using ‘head’-reflexives than previous accounts. On the other hand, its purpose is to analyze the diachronic evolution of nouns denoting ‘head’ into reflexive markers in three unrelated language groups (Basque, Berber and Kartvelian) and to show how ‘head’-reflexives synchronically and diachronically interact with secondary reflexivization strategies, such as detransitivization. The results suggest that the areal factor has a considerable impact on the emergence of ‘head’-reflexives; they also show that none of the languages analyzed reflects all grammaticalization stages put forward in the literature. Accordingly, it is argued that the grammaticalization stages are optional, and that the correlation between formal and semantic change is not obligatory.

Keywords: grammaticalization, reflexive marker, body-part noun, head, areality

1. Introduction: literature, scope and aims of the study

Studies on language change and grammaticalization² theory occasionally focus on the diachronic development and typology of reflexive markers across languages (Heine 1999: 1-29; König and Siemund 2000: 41-74; Schladt 2000: 103-124; Lehmann 2002: 37-43). Several pervasive sources for reflexive markers have been identified, such as

¹ Corresponding authors: Natalia Evseeva [nə'talʲə jef'sʲevə], independent researcher, E-mail: nataliko9@gmail.com. Iker Salaberri ['iker ɣa'laβe,ri], Department of Language and Literature, Public University of Navarre, Campus of Arrosadía, 31006 Pamplona/Iruñea, Navarre, Spain, E-mail: ikersalaberri@gmail.com.

² 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 and Traugott 2003: 2).

body-part terms (henceforth, BPTs), oblique personal pronouns and locative adpositions, among others (Heine and Kuteva 2002: 57-60, 168-169, 227-228). However, little has been done to compare at length the development of similar reflexive constructions in unrelated languages.

Bearing this state of affairs in mind, the aims of this study are the following: (1) to produce a list of as many of the currently known languages as possible that use the noun ‘head’ as a reflexive marker; (2) to observe and compare the synchronic status of reflexivity in a number of such languages, as well as the cross-linguistic grammaticalization path of ‘head’-nouns into reflexive markers; (3) to contrast the data with Haspelmath’s (1990: 42-46), Heine’s (1999: 7-10), König and Siemund’s (2000: 41-74), Schladt’s (2000: 103-124) and Lehmann’s (2002: 37-43) claims on the grammaticalization paths of nouns denoting body parts into reflexive markers; and (4) to analyze the impact of contact as well as of language-specific constraints on the emergence of reflexive nouns and pronouns denoting ‘head’.

The implementation of these goals presents a number of difficulties: first of all, language grammars, which form the basis of this study, do not always contain detailed information on relevant issues—in this case, body-part reflexives—. Therefore, the findings are limited by descriptive quality and availability of data. An attempt has been made to compensate for this limitation by directly drawing primary data from grammaticality judgments, based on the authors’ own linguistic knowledge (in the case of Basque and Georgian), questionnaires (Basque, Megrelian and Tamazight) and databases (pidgin and creole languages, from Michaelis et al. (2013)). The choice of these languages was conditioned by (i) access to native speakers and (ii) availability of grammatical descriptions which contain relevant information concerning the diachronic development of reflexive markers. For one language of each group—Basque, Tamazight for Berber and Megrelian for Kartvelian—the data collected from grammatical descriptions was compared to the data gathered from one native speaker of each these languages. A shortened version of Safir’s (2012: 5-6, 9-10) questionnaire was used for this purpose.

Secondly, terms that denote different grammatical categories such as ‘middle’ and ‘reflexive’ are often used interchangeably in the literature, which can lead to confusion. An attempt has been made to avoid this confusion by providing a detailed definition of these concepts in the lines of Benveniste (1966) and Kemmer (1993). A precise formulation of ‘middle’ and ‘reflexive’ is also used to avoid a third problem, namely the

difficulty to decide whether in most languages one is dealing with polysemy or homonymy when analyzing reflexive, reciprocal, middle and passive markers.

According to Heine (1999: 6-8), cross-linguistic data from African languages suggests that the grammatical meanings associated with reflexivity can be arranged along a scale, both in synchronic and in diachronic terms. The criteria the synchronic scale is based on differs, however, from the criteria the diachronic scale draws upon; see section 2.2 for more details. In addition to this, according to Schladt (2000: 116) cases of polysemy in the use of reflexive markers can best be explained on the basis of the grammaticalization of BPTs to reflexive markers, which suggests that the synchronic and diachronic dimensions of reflexivity are distinct, but related. These facts motivate, in the authors' view, a separate analysis of the synchronic and the diachronic dimension of reflexive markers.

This study is structured as follows: section 2 discusses the most relevant theoretical concepts used throughout this paper. In section 3 the synchronic data are presented, followed in section 4 by an analysis of the grammaticalization of 'head'-reflexives in the languages under study. Section 5 presents the conclusions that can be drawn from the data.

2. Theoretical background

2.1. Reflexivity: definition, types and related categories

This study draws on a usage-based view of grammar along the lines of Heine (1999), Schladt (2000) and König (2007). Therefore, formal studies on reflexivity such as Everaert (1986) and Reinhart and Reuland (2002), among others, have not been taken into consideration. A broad definition will be adopted here for all reflexivity-related grammatical phenomena: 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 which is a human agent or experiencer and the other a patient. Crucially, both arguments have the same referent, and they may be overtly or covertly realized. In line with widespread use in the literature, one of these arguments will be called 'reflexive marker' and the other 'antecedent' (Faltz 1977: 21, Kemmer 1993: 44).

A number of typologies of reflexive markers have been proposed in the literature in recent decades (Faltz 1977: 15-109, Genušienė 1987: 237-354, Kemmer 1993: 42-93, Kazenin 2001: 916-927, Amiridze and Leuschner 2002: 264-266, Lehmann 2002: 38, Ljutikova 2002: 93-146, König 2007: 107-124). One of the most basic distinctions seems to be that between verbal reflexives, i.e. reflexives encoded by means of verbal elements such as affixes and conjugation, and nominal reflexives, i.e. reflexives encoded by means of nouns and pronouns (Genušienė 1987: 238, Ljutikova 2002: 95). An example of verbal reflexive is the prefix *yay-* in Ainu (Isolate, Japan and Russia) (1a, König 2001: 107), whereas a nominal reflexive is illustrated by the pronoun *ziji* in Mandarin Chinese (1b, Huang et al. 2009: 119):

- (1) a. *yay-rayke-an* (Ainu)
REFL-kill-1SG
“I kill myself”
- b. *Zhangsan_i shuo Lisi_j da-le ziji_j* (Mandarin Chinese)
Zhangsan say Lisi hit-PFVREFL
“Zhangsan said Lisi hit himself”

Regarding nominal reflexives, three major types have been proposed in the literature: (i) reflexive pronouns such as Japanese *zibun* (2a); (ii) head reflexives, which have the syntactic behavior of a noun or full noun phrase, such as Turkish *kendi* (2b); and (iii) adjunct reflexives, which consist of a pronoun and a reflexive marker, such as the Irish construction [pronoun + *fein*] (2c, Faltz 1977: 2, 30, König 2007: 106-107):

- (2) a. *John wa kagamide zibun o mita* (Japanese)
John TOP mirror LOC REFL ACC see.PST
“John saw himself in the mirror”
- b. *Hasan kendi-ni ayna-da gör-dü* (Turkish)
Hasan.NOM REFL-ACC mirror-LOC see-PST
“Hasan saw himself in the mirror”
- c. *ghortaigh Seán é fein* (Irish)
hurt.PST Sean 3SG.DAT REFL
“Sean hurt himself”

The latter two reflexive strategies are sometimes grouped together under the label ‘compound reflexives’ (Faltz 1977: 49). It should also be pointed out that languages may have more than one reflexive strategy. In this sense, the synchronic coexistence of two or more reflexive strategies in the same language can sometimes reveal tendencies regarding their use: examples of this are the emergence of detransitivization as a recent reflexive device in Basque (see section 4.1) and reflexive uses of the pronoun *ža* in Svan (see section 4.3). Accordingly, a comprehensive analysis of reflexivity should bear in mind all extant strategies. In sum, verbal reflexives, on the one hand, and reflexive pronouns, head reflexives and adjunct reflexives, on the other, constitute the four major cross-linguistic reflexive strategies (König 2007: 108).

Concerning the categories that are related to reflexivity, one should first mention so-called ‘intensifiers’ (Moravcsik 1972; König 2001, 2007), ‘emphatic pronouns’ (Heine 1999, Schladt 2000) or ‘secondary reflexives’³ (Faltz 1977). The main difference between intensifiers and reflexives lies in their syntactic behavior: while intensifiers function as adjuncts of noun and verb phrases, reflexive pronouns occur in argument positions (König and Siemund 2000: 43, 50). In many languages emphatic and reflexive pronouns also have different diachronic origins and a different syntactic distribution, which motivates distinguishing between the two (König and Siemund 2000: 41). A typology of intensifiers and their relationship with reflexive markers can be found in Ljutikova (2002).

Another category associated with reflexivity is the middle voice. The ‘middle’ voice owes its name to the fact that, in the ancient Greek grammatical tradition, it was perceived to stand in between the active and passive voice (Benveniste 1966: 69). As pointed out by Kemmer (1993: 1), currently there is no generally accepted definition of middle voice, since this term has been used to refer to various grammatical phenomena. According to Benveniste, the term ‘middle voice’ can only be defined in opposition 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 voice denotes an event whereby the subject constitutes the site in which the said event develops. Accordingly, in the middle voice, unlike in the active, the subject is internal to the action (Benveniste 1966: 172).

³ The term ‘secondary reflexive’ is henceforth used not in Faltz’ (1977: 21) sense (= intensifier/emphatic pronoun) but in the meaning ‘alternative, less common reflexive strategy available to a language’.

Markers of the middle voice are thus used to denote events in which the subject is the site of the action, such as grooming (‘to comb’, ‘to wash’), change of body posture (‘to stand up’, ‘to sit down’), translational motion (‘to place’), emotional reaction (‘to be angry’), among others (Benveniste 1966: 172, Kemmer 1993: 16). Since both reflexivity and middle voice involve ‘intrinsic coreference’ (Heine 1999: 4), it should not be surprising that in many languages both grammatical categories are expressed by the same formal means.

Despite the fact that reflexivity and middle voice sometimes overlap semantically and formally, the former should not be regarded as a subtype of the latter, or vice versa. Evidence that these are two close yet distinct grammatical categories stems from the number of semantic roles invoked by each: “[w]hereas the reflexive invokes two separate semantic roles inhering in the event concerned, it can be argued that there is only one semantic role in the case of the middle” (Heine 1999: 4). Accordingly, in some languages reflexive and middle are expressed by different formal means, and may therefore be argued to constitute two different categories. This is the case of Tzutujil (Mayan, Guatemala), where the middle marker is an infix *-j-* or *-ʔ-* (3a), whereas the reflexive/reciprocal marker is a noun *-iiʔ* ‘self, each other’ (3b, Dayley 1981: 464-465, 476):

- (3) a. *pa-ʔ-x-eem* (Tzutujil)
 break-MID-break-INF
 “To break, split”
- b. *inin x-in-tzyaquj na w-iiʔ chiutz* (Tzutujil)
 1SG COMP-1SG.ERG-dress NEC 1SG-REFL well
 “I had to dress myself well”

In short, then, intensifiers and middle voice are known to strongly interact and sometimes even overlap with reflexive markers cross-linguistically. In addition to the cross-linguistic variability found in the use of reflexive markers and in their relationship to other grammatical categories, it should be pointed out that in different languages reflexives are sensitive to different contextual factors: these include, for example, the semantics of the predicate, the binding domain, the grammatical function of the reflexive marker, type of antecedent and interaction with person (Faltz 1977: 76-77, 152-154, König and Siemund 2000: 62-63, König 2001: 758).

To summarize, even though cross-linguistic reflexive strategies can be reduced to a small number, reflexives are often sensitive to language-specific rules related to contextual factors. This can be considered to be one of the reasons behind the cross-linguistic variety concerning the properties of reflexives (Haspelmath 2008: 44-59).

2.2. Reflexivity and grammaticalization

Two important aspects need to be pointed out with respect to grammaticalization paths: on the one hand the unidirectionality hypothesis is relevant, a fundamental principle within grammaticalization theory that predicts the sequence of language changes (Bybee et al. 1994: 12; Hopper and Traugott 2003: 16). A significant number of counterexamples has been found, nonetheless, to the changes predicted by the unidirectionality hypothesis, 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), while others, such as Campbell (2001: 127-141) and Newmeyer (2001: 205) find that they falsify the unidirectionality hypothesis.

On the other hand, the mechanism of metonymy seems to have a considerable influence on the use of body parts as markers of spatial and grammatical relations (Heine 1997: 8). This may be related to the following matter: apparently, the human body is perceived as being divided into a few prototypical parts, such as ‘leg’, ‘back’, ‘head’ or ‘eye’. This fact corresponds to the principle of prototypicality of Natural Semantics, conceived of as a reflection of the properties of human cognition (Geeraerts 1985: 127, though see Schladt 2000: 112). Accordingly, body parts that are perceived to be prototypical will be more prone than non-prototypical parts to encode, via synecdoche, the body as a whole. This explains why words denoting non-prototypical body parts, such as ‘knee’ or ‘ear’, are less prone to grammaticalize into reflexive markers.

Of the 148 languages analyzed by Schladt (2000: 120-124), 89 (60.1%) have reflexives originating in BPTs. The same author points out the importance of the areal factor, since, for example, Africa has BPTs as the dominant source of reflexives; Europe is the only region where emphatic pronouns are one of the main reflexive strategies, and Australian languages and the languages of Oceania often grammaticalize words with a ‘return’ meaning, which is quite uncommon in other continents. Therefore, BPTs have a

different degree of importance depending on the area (Genušienė 1987: 303, Heine 1999: 9, Schladt 2000: 112). According to Schladt (2000: 107-108), this is because the mechanism of ‘calquing’, i.e. “a borrowing process between different peoples settling in the same or adjacent area caused through a massive socio-cultural and linguistic interaction”, plays a considerable role in the emergence and extension of reflexive strategies world-wide.

Following Heine and Kuteva (2005: 182) and Heine (2011: 42), the concept of ‘area’ is here understood in relation to grammaticalization. For the present purposes the definition of ‘grammaticalization area’ proposed by these authors is, however, problematic. The reason for this is that it excludes the possibility that genetically related languages can also undergo common grammaticalization processes as a result of contact. Thus a variant of the definition by Heine and Kuteva (2005: 182) and Heine (2011: 42) will be adopted: a ‘grammaticalization area’ will be identified as such whenever contiguous related or unrelated languages are involved, as long as the common grammaticalization process can be shown not to have been the product of chance or common inheritance.

Regarding the specific stages in the grammaticalization of reflexives, various parameters have been proposed in order to describe this development according to grammaticalization theory. Following Heine and Kuteva (2002), four interrelated mechanisms will be mentioned here: desemanticization or semantic bleaching (the form loses its meaning content), extension or context generalization (the form starts to be used in new contexts), decategorialization (the form loses its morphosyntactic properties) and erosion or phonetic reduction (the form loses its phonetic substance). As far as the grammaticalization of reflexive markers is concerned, several stages can be distinguished both in semantic change (desemanticization and extension) (4a-c) and in the formal one (decategorialization and erosion) (5a-d, Schladt 2000: 113-116):

Semantic change

- (4) 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

- (5) 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 co-referential 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.

The reflexive strategies portrayed in section 2.1 are presumably arranged on this grammaticalization scale: reflexive markers have been claimed to arise as head reflexives and then become progressively grammaticalized until they merge morphologically with the verb, thus becoming verbal reflexives (Lehmann 2002: 41). If the existence of this path of change is admitted, then the scale proposed by Schladt (2000: 113-116) can be used to test the degree of grammaticalization of BPT-reflexives. However, some of the properties proposed by Schladt as a diagnosis of grammaticalization are problematic for the languages under study: in Berber, for example, both nouns and pronouns trigger number agreement on the verb, and not all nouns take overt case (Kossmann 2012: 65-72). Therefore, in Berber varieties number agreement and case marking cannot be used to test, for example, the degree to which a reflexive noun has grammaticalized into a reflexive pronoun. As opposed to this, other criteria such as the range of uses of the BPT and modification by demonstratives and adjectives do seem to be valid as cross-linguistic tests.

In view of this, in section 4 below the following diagnostics will be used to determine the degree of grammaticalization of ‘head’-reflexives: (i) the range of possible uses — literal, metaphoric, reflexive— of the BPT and (ii) the degree to which modification of the BPT by demonstratives and adjectives is acceptable. ‘Head’-terms that can have

literal and reflexive uses and can be modified by demonstratives and adjectives will be considered to behave as full noun phrases; ‘head’-terms that can only be used in a reflexive sense and may not be modified will be considered to behave as pronouns.

Occasionally reflexive markers derived from BPTs undergo further changes and start marking additional grammatical categories such as reciprocity, the middle voice and the passive voice, all of which are semantically close to reflexivity —see the discussion in section 2.1—. Heine (1999: 7), who relies on extensive material from African languages, suggests the following grammaticalization path:⁴

- (6) Nominal > Emphatic > Reflexive > Reciprocal > Middle > Passive

Haspelmath (1990: 54) and Kemmer (1993: 197) present a similar pattern:

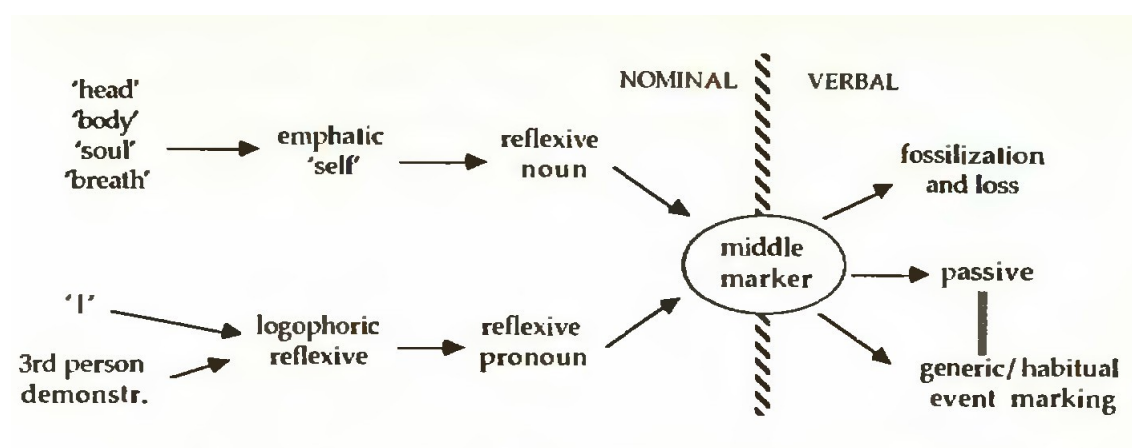


Figure #1: Reflexive to middle marker and associated developments, from Kemmer (1993: 197).

Similar to the process of grammaticalization of BPTs into reflexives, the evolution of reflexive markers into markers of related categories is accompanied by the mechanisms

⁴ Heine’s (1999: 7) grammaticalization cline is problematic for a number of reasons. Firstly, it is doubtful whether every element that starts as a nominal and eventually develops into a reflexive marker must necessarily pass through an ‘emphatic stage’: Lehmann (2002: 37-43) provides no examples of a stage “where a reflexive pronoun stemming from a reflexive noun can no longer be apposed to a noun to emphasize the identity of reference” (Lehmann 2002: 40). Taking into account the fact that so-called intensifiers, or emphatic pronouns, fall into Lehmann’s category of reflexive nouns, one can observe that in a range of languages intensifiers and reflexive pronouns are derived from different sources (see, for example, the maps provided by König and Siemund 2005: 196-197). This suggests that the change ‘intensifier’ > ‘reflexive pronoun’ does not occur pervasively, although cases such as Old English *selfne* ‘self’ do show that intensifiers can indeed become reflexive markers. Accordingly, the emphatic noun stage should be regarded as an optional one, as König and Siemund (2000: 56) do. Secondly, the ‘reciprocal stage’ does not seem to be certain either: in many Turkic languages reflexive markers acquire middle/passive functions even though the reciprocal meaning is expressed by a different (dedicated) marker. This is the case, for example, with the Chuvash reflexive/middle/passive marker *-an* (Krueger 1961: 180) and the Bashkir reflexive/passive marker *-(Θ)n* (Dmitriev 1948: 181).

of desemanticization, extension, decategorialization and erosion (Heine 1999: 7). During the process of grammaticalization of reflexives into related categories the lexical item in question often preserves its original meaning, so that one can at least in some cases speak of polysemy (Heine 1999: 15). In fact, there seem to be no languages where a verbal affix used to encode reflexivity does not encode other categories as well (Kazenin 2001: 917). Moreover, verbal reflexives rarely occur as the only reflexivization strategy of a given language: this seems to be the case only in a number of polysynthetic languages (Kazenin 2001: 926). The polyfunctionality of reflexive markers will also be shown in the discussion of the data.

3. Synchronic overview of languages with ‘head’-reflexives

As stated in section 1, one of the goals of this study is to identify as many of the world’s languages with ‘head’-reflexives as possible. The main source of our data consisted of grammatical descriptions, as these tend to provide information about the etymology of reflexive markers. This has, however, an impact on the selection of the sources: the sample used for this study is, strictly speaking, not a representative sample (Rijkhoff and Bakker 1998: 264), because instead of including a determined number of languages for each language group, languages were taken into consideration whenever there was a grammatical description available. This implies that the sample is bibliographically biased. The total amounts to 123 linguistic families (including isolates, pidgins and creoles), for which 1150 grammatical descriptions of 950 languages were studied in order to collect relevant information on reflexive markers. For pidgins and creoles, data from the APiCS (Michaelis et al. 2013) were also used.

Previous studies that mention languages which use a noun denoting ‘head’ or a derived construction as a reflexive marker are based on more reduced samples. Heine (1999: 9, 2011: 50), who deals with reflexivity in African languages, comes to a count of 7/62 (11.3%) and 6/46 (13%) languages, respectively. Schladt (2000: 112) gives information about 13/148 (8.8%) languages that share this property. Finally, König and Siemund (2005: 195) count up to 12/62 (19.4%). In this study the count amounts to 77/950 (8.1%) languages that use ‘head’ as a reflexive marker, which from a proportional perspective is the lowest frequency found so far. For an overview of the languages and their reflexivization strategies, see the appendix, which is meant to aid in the identification of possible grammaticalization areas that share ‘head’-reflexives. The

appendix has been parametrized on the basis of (i) the name of each language according to Glottolog (Hammarström et al. 2017), (ii) the form of the respective reflexive ‘head’-marker, (iii) the grammatical status of the marker, (iv) possible alternative reflexive strategies, (v) the form of the ‘head’-item reconstructed for the proto-language (if any) and (vi) the general linguistic area in which the language is spoken. The following Figures #2 and #3 show the locations of these languages:

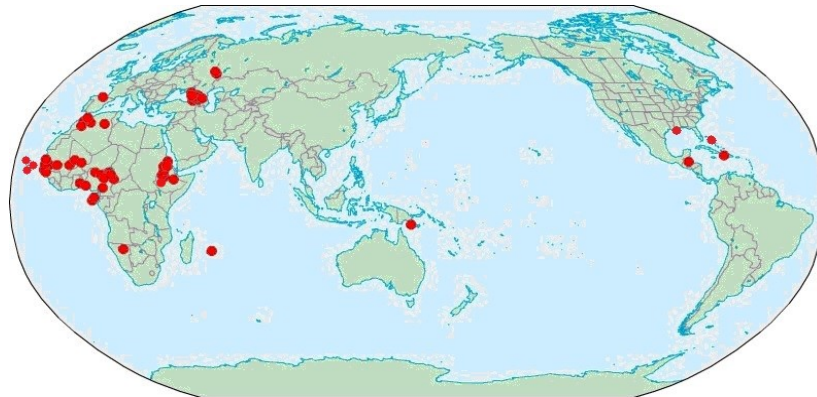


Figure #2: World map of languages that use ‘head’ as a reflexive marker.

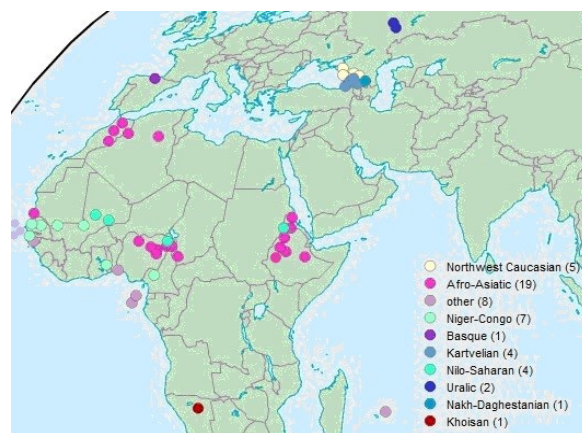


Figure #3: Map of languages that use ‘head’ as a reflexive marker in Africa and Eurasia.

The figures indicate that, in addition to the Caucasus, West-Central Africa and the Ethiopian Highlands, which have already been identified as grammaticalization areas where languages tend to use ‘head’-reflexives (Heine 1999: 9-10, 2011: 58, Schladt 2000: 107-108), at least one more region should be identified as a grammaticalization area: Northwest Africa, where a number of closely related Berber varieties, on the one hand, and Arabic varieties, on the other, share ‘head’-reflexives (Harrell 1962: 136,

Yeou 2016: 6). In general, then, Africa seems to be the continent in which ‘head’-reflexives are most widespread: 56/77 (72.7%) of the languages mentioned are spoken in this part of the world. By way of comparison, according to Ethnologue (Simons and Fennig 2018) 7,097 languages are spoken world-wide, of which 2,143 (30.2%) are found in Africa. According to Schladt’s (2000: 110) study, 60/89 (67.4%) of languages with BPT-reflexives belong to this area, and 60/71 (84.5%) of the African languages in the study have BPT-reflexives.

At this point, the question arises whether these figures are a by-product of the fact that reflexives in African languages have a higher ratio of markers with clear sources of grammaticalization than reflexives in other parts of the world. If so, it may be that ‘head’-reflexives constitute an equally probable source of grammaticalization in Africa and elsewhere. If not, this would imply that African languages show the highest rate of ‘head’-reflexives. Studying the frequencies of markers with clear sources of grammaticalization in linguistic areas other than Africa and Eurasia is, unfortunately, beyond the scope of this paper, and the authors can only refer the reader to the results of this and previous studies. At the very least, the numbers suggest that, within Africa, BPT-reflexives in general and ‘head’-reflexives in particular make up a considerable proportion of the total. This is in line with the prevalence of BPT-reflexives in African languages observed in the literature (Heine 1999: 9-10; Schladt 2000: 107-108).

The Caribbean is likewise a potential candidate for a grammaticalization area, although in this case only Indo-European-based pidgins and creoles present ‘head’-reflexives: Bahamian Creole, Haitian Creole French, Louisiana Creole French and Nicaraguan Creole English. In fact, pidgins and creoles —whether spoken in the Caribbean or elsewhere— seem to have a high tendency of developing BPT-reflexives in general and ‘head’-reflexives in particular: 13/77 (16.9%) of languages with ‘head’-reflexives belong to this group. This same tendency is pointed out in the literature on reflexives in pidgins and creoles, such as Heine (2005: 221-222).

4. Diachronic overview of languages with ‘head’-reflexives

4.1. Basque

The principal means of coding reflexivity in Basque is by using the noun *buru* ‘head’, which combines with a possessive pronoun and a definite article (7a, de Rijk 2008:

365). This has arguably been the main reflexive strategy of the language since the earliest extensive texts written in Archaic Basque (ca. 1400-1600 CE) and Old Basque (ca. 1600-1750 CE) (7b, Mitxelena 1987: 673):

- (7) a. *ezagu-tzen al d-u-zu zeu-re*
 know-IPFV Q 3.PRES.O-be.TR-2SG.S 2SG.INT-GEN
buru-a? (Present-day Basque)
 head-DEF.ABS
 “Do you know yourself?”
- b. *bere burhu-a ezau-te-a d-a*
 3SG.GEN head-DEF.ABS know-NMLZ-DEF.ABS 3.PRES.O-be.INTR
jaqui-te-a (Old Basque)
 know-NMLZ-DEF
 “To know oneself is to possess knowledge” (1596 CE; Euskara Institutua 2013)

It should be pointed out that the possessive pronouns which modify *buru* and are attested in older stages of the language in the majority of cases present so-called ‘intensive’ forms, i.e. emphatic counterparts of ordinary personal pronouns.⁵ The distribution of intensive vs. regular personal pronouns in the early literature written in the Lapurdian dialect of Archaic and Old Basque can be explained in terms of the Aresti-Linschmann Law (Sarasola 1979: 431; Trask 1997: 239; Hualde and Ortiz de Urbina 2003: 624-625). According to this rule, intensive possessives are only used in cases of coreference with another full noun phrase in the same clause (Sarasola 1979: 433):

- (8) *ni n-aiz artzain on-a, eta eçagu-tzen*
 1SG 1SG-be.INTR shepherd good-DEF and know-IPFV
d-it-u-t neu-re ardi-a-c (Old Basque)

⁵ The forms used as 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 and Ortiz de Urbina 2003: 159). Regarding their intensive forms, these apparently arose by adding the demonstrative form (*h*)*au(r)* ‘this’ to personal pronouns (Trask 1997: 97). In the 3rd person Basque distinguishes between regular personal pronouns, which are identical to demonstratives, and intensive pronouns, which are based on the root *ber-* ‘same, self’ and can function as intensifiers (Trask 1997: 97).

3.PRES.O-PL-be.TR-1.S 1SG.INT-GEN sheep-DEF-PL.ABS

“I am a good shepherd, and I know my own sheep” (1571 CE; Euskara Institutua 2013)

The restriction that intensive pronouns can only co-occur with a full coreferential noun phrase in the same clause explains why ordinary possessive pronouns are not found next to *buru* in Archaic and Old Basque. On the other hand, most present-day dialects do not obey the Aresti-Linschmann Law, since only eastern varieties preserve this rule for 3rd person pronouns (Hualde and Ortiz de Urbina 2003: 626). Western dialects allow the non-presence of the antecedent of *bere(n)* in the same clause, resulting in the fact that these pronouns have been reanalyzed as ordinary possessives (Hualde and Ortiz de Urbina 2003: 626).

These changes in the use of possessives then affected the reflexive construction involving *buru*, so that nowadays not only intensive, but also regular possessive pronouns co-occur with this reflexive marker (de Rijk 2008: 364). Even though the use of possessive pronouns with *buru* is practically obligatory in present-day Basque (ca. 1968 CE-present), there is a significant number of examples where the possessive has been omitted, in eastern as well as in western varieties. A tendency towards the omission of possessives in reflexive constructions can, however, hardly be claimed to exist here (Mitxelena 1987: 673). In general, regular possessives occur less often than intensives, and their use is more common in eastern varieties: earlier texts written in the Lapurdian dialect show that only regular possessive pronouns occur with *buru* (Lafitte 1962: 62). In any case, unlike in the 1st and 2nd person one does not find 3rd-person regular possessives in reflexive constructions, since the only 3rd-person forms used are intensive *bere* (singular, for all varieties) and *bere(n)*, *beure(n)* or *euren* (plural), the former being preferred by speakers of eastern varieties (Lafitte 1962: 93; Mitxelena 1987: 743) and the latter by speakers of western Basque (Mitxelena 1987: 560).

The increased restriction of possessives in reflexive constructions seems to indicate that the *buru*-construction is progressively becoming grammaticalized. Another feature that points in this direction is the increasingly restricted acceptability of modifiers to the left (relativization) and to the right (adjectives, demonstratives) of the reflexive construction. In the latter case, in present-day Basque only some evaluative adjectives can modify the reflexive pronoun (9a), whereas in the former relativized reflexives are uncommon (9b). Not all speakers find such constructions grammatical (#) (Hualde and

Ortiz de Urbina 2003: 622; de Rijk 2008: 365). In semantic terms, *buru* can be used not only with a reflexive meaning, but also in a literal (9c) and metaphoric (9d) sense (Ibarretxe-Antuñano 2002: 481):

- (9) a. *#neu-re buru triste hau* (Present-day Basque)
 1SG.INT-GEN head sad this.ABS
 “This sad self of mine”
- b. *#zer-gatik kalte egi-ten d-i-o-zu*
 what-CAUS harm.ABS do-IPFV 3.PRES.O-TR-3.IO-2SG.S
hain maite d-u-zu-n zu-re
 so love 3.PRES.DO-be.TR-2SG.S-REL 2SG-GEN
buru-a-ri? (Present-day Basque)
 head-DEF-DAT
 “Why do you do harm to yourself, whom you so love?”
- c. *pentsa-tze-a-k buru-ko min-a*
 think-NMLZ-DEF-ERG head-LOC.GEN ache-DEF.ABS
ema-ten d-i-zu (Present-day Basque)
 give-IPFV 3.PRES.O-TR-2SG.S
 “Thinking gives you a headache”
- d. *ate-buru-a-n karteltxo bat*
 door-head-DEF-LOC notice one.ABS
d-ago (Present-day Basque)
 3.PRES.O-be
 “There is a notice on the lintel (lit. on the doorhead)”

The relative acceptability of relativization and adjective/demonstrative modification, on the one hand, and the possibility to have literal and metaphoric uses, on the other, indicate that the *buru*-construction behaves as a full-fledged noun phrase. Another indication that this reflexive construction behaves as a regular noun phrase but is losing some regular noun phrase properties is number agreement, both verbal and nominal: in old texts *buru* appears in both the singular and the plural, which is more frequent and always triggers number agreement in the verbal form (Mitzelena 1987: 673). In the

modern language, plural reflexives (10b) are still acceptable, but singular ones (10a) are preferred (de Rijk 2008: 365):⁶

- (10) a. *geu-re buru-a engaina-tzen*
 1SG-GEN head-DEF.ABS deceive-IPFV
d-u-gu (Present-day Basque)
 3.PRES.O-be.TR-1PL.S
- b. *geu-re buru-a-k engaina-tzen*
 1SG-GEN head-DEF.ABS-PL deceive-IPFV
d-it-u-gu (Present-day Basque)
 3.PRES.O-PL-be.TR-1PL.S
 “We deceive ourselves”

As a last note on the use of the construction involving *buru*, it should be pointed out that in Archaic and Old Basque there were contexts where *buru* was used anaphorically, but was not an argument of the same predicate as the antecedent (was not a reflexive pronoun). In some of these cases *buru* can act as a subject (11a, Ibarretxe-Antuñano 2002: 484), but more frequently *buru* is found as a direct object of a transitive verb (11b, Mitxelena 1987: 362):

- (11) a. *hebe-tic ioan gabe ene buru-ya eguin*
 here-ABL go without my head-DEF.ABS do
vehar d-u-çu ene nahi-a (Archaic Basque)
 must 3.PRES.O-be.TR-2SG.S my will-DEF.ABS
 “Before I leave this place you must do my will (lit. before my head leaves this place you must do my will)” (1545 CE; Euskara Institutua 2013)
- b. *ene bekhatu-ek iragan eta erdiratu*
 my sin-ERG.PL pierced and torn
d-u-te ene buru-a (Archaic Basque)

⁶ The reason why the possessive pronoun *geure* ‘our’ is unmarked for number in both (10a) and (10b) is that, in Basque, number is marked only once at the end of every noun phrase, and possessive pronouns and possesses form a single noun phrase. Accordingly, number marking of these reflexive constructions is in the following manner: [*geure buru*]-a-Ø = [*our head*]-DEF-SG ‘our head/self’ in (10a); [*geure buru*]-a-k = [*our head*]-DEF-PL ‘our heads/selves’ in (10b).

3.PRES.O-be.TR-3PL.S my head-DEF.ABS
 “My sins have pierced and torn me (lit. have pierced and torn my head)”
 (1643 CE; Euskara Institutua 2013)

An important fact about these early non-reflexive uses is that in present-day Basque they would be grammatically odd (#), which seems to be an additional indication of the progressive grammaticalization of the *buru*-construction. Furthermore, some examples in which *buru* is used either as a direct or an indirect object of transitive verbs deserve special attention. These are cases where the presence of *buru* appears to be the result of a morphological constraint existing in Basque: when the subject controls the reflexive construction, same-person markers of the subject and any of the objects cannot be overtly realized in the verbal form (Albizu 1997: 1). This so-called ‘person-case constraint’ only affects verbal forms with 1st- and 2nd-person markers (12a-b), since 3rd-person subject markers are realized as zero. Moreover, a predicate with a 3rd-person subject and direct object without the *buru*-construction lacks a reflexive meaning (12c):

- (12) a. **ikusi n-au-t* (Present-day Basque)
 see 1SG.O-be.TR-1SG.S
 “I have seen myself” (S)
- b. **ikusi z-au-zu* (Present-day Basque)
 see 2SG.O-be.TR-2SG.S
 “You have seen yourself” (S)
- c. *ikusi d-u-Ø* (Present-day Basque)
 see 3.PRES.O-be.TR-3SG.S
 “She/he/it has seen her/him/it” (S)

A way to avoid violating this constraint is to use the *buru*-construction, which is indexed on the verb as a 3rd-person singular direct or indirect object (13a-b, Hualde and Ortiz de Urbina 2003: 623):

- (13) a. *geu-re buru-a aipatu*
 1PL.INT-GEN head-DEF.ABS mention
 d-u-gu (Present-day Basque)
 3.PRES.O-be.TR-1PL.S

“We have mentioned ourselves”

- b. *gu-re* *buru-a-ri* *mezu-a* *bidali*
1PL-GEN head-DEF-DAT message-DEF.ABS send

d-i-o-gu (Present-day Basque)

3.PRES.O-TR-3.IO-1PL.S

“We have sent ourselves a message”

Avoidance of the person-case constraint might be a factor that explains the existence of the reflexive *buru*-construction in Basque. Nevertheless, it should not be assumed that the reflexive *buru*-construction originated as a by-product of this constraint, since the direction of causation is not clear: the morphological restriction on overt same-person markers of the subject and any of the objects under subject control could have emerged as a result of the reflexive *buru*-strategy, or vice versa. In fact, historical records written in Basque do not aid in clarifying this question, as both the person-case constraint and the ‘head’-reflexive seem to be extant since the earliest texts.

Reflexivity can also be expressed in Basque by detransitivizing the auxiliary verb **edun*, which is replaced by the intransitive *izan*.⁷ For verbs that allow for both the detransitivization (14a) and reflexive pronoun (14b) strategies, using the latter adds an intentional meaning:

- (14) a. *Jon* *ebaki* *d-a* (Present-day Basque)

Jon.ABS cut 3SG.PRES.S-be.INTR

“Jon cut himself (accidentally)” (S)

- b. *Jon-ek* *bere* *buru-a* *ebaki*

Jon-ERG 3SG.GEN head-DEF.ABS cut

d-u (Present-day Basque)

3.PRES.S-be.TR

“Jon cut himself (intentionally)” (S)

⁷ The detransitivization strategy is not available to all predicates: this is the case of verbs such as *maite izan* ‘to love’ and *ezagutu* ‘to know’, among various stative verbs. Other predicates such as *goraipatu* ‘to praise’ and *babestu* ‘to protect’ can reflexivize either through detransitivization or through use of the reflexive pronoun (Hualde and Ortiz de Urbina 2003: 381-382). Still other predicates such as *apaindu* ‘to make up, dress up’ and *jantzi* ‘to dress’ only admit detransitivization, most of which belong to a semantic class that in many languages shows middle morphology, namely verbs of grooming and body care (Kemmer 1993: 16).

This example reflects the correlation mentioned at the beginning of this section between verbal and nominal reflexivization strategies (König 2001: 758): *ebaki* ‘to cut’ is a typical instance of usually other-directed action, especially if intended. Therefore, the choice of the *buru*-reflexivization strategy is expected when there is subject-object coreference. One last note on the interplay in Basque between the two reflexivization strategies concerns the tendency of many present-day speakers to prefer detransitivization over the BPT-structure. This preference can be observed with all types of verbs mentioned above, and is probably due to the influence of neighboring Romance languages (Mitzelena 1987: 674).

Summing up, the reflexive construction consisting of a possessive pronoun and a BPT is still found at an early stage of grammaticalization, although a number of changes can be observed which point toward grammaticalization in progress: (a) anaphoric, non-reflexive uses of the *buru*-construction have become odd in standard Basque; (b) the opposition between intensive and regular possessive pronouns used with the BPT-reflexive is lost; (c) there is a reduced acceptability of reflexive modification; (d) number agreement between *buru* and its governing subject has become more rare. There is no evidence of *buru* having developed additional meanings described in the introduction (reciprocal, middle, etc.). According to Schladt’s (2000: 113-116) grammaticalization path, the Basque ‘head’-reflexive could thus be said to stand at stage 2 of semantic change and in transition from stage 1 to stage 2 of formal change. On the other hand, the alternative reflexivization strategy, detransitivization, has not only a reflexive meaning, but is also used to express the middle and the passive voice. Its use as a verbal reflexive is not possible for all types of predicates, although a tendency can be observed in modern Basque toward a wider use of this strategy.

4.2. Berber

In many languages belonging to the Berber group the main reflexive strategy consists of using the noun *imàn* ‘self, soul’ accompanied by a possessive pronoun. This is the case in the southern and eastern Berber varieties, such as Awjila Berber (Awjilah-Foqaha, Libya) (15a), Tamasheq (Tuareg, Algeria and Mali) (15b), and in early 20th-century attestations of Tarifiyt (Zenatic, Morocco) (15c, Hanoteau 1896: 82, Kossmann 2000: 95, van Putten 2013: 118). The noun *imàn* ‘self, soul’ also serves as the primary

reflexive strategy in some central-northern varieties, such as Kabyle (Kabyle, Algeria) (15d, Dallet 1982: 503):

- (15) a. *llumm-àt* *iman=nə-kim* *a=i-ssəʕad=kim*
gather.IMP-PL.M soul=GEN-2PL.M FUT=3SG.M-help=2PL.M
ɾəbbi (Awjila Berber)
God
“Gather yourselves and God will help you”
- b. *etkel-et* *iman=n-ouen* (Tamasheq)
prepare.IMP-PL.M soul=GEN-2PL.M
“Prepare yourselves!”
- c. *aɖ* *nɣəɣ* *iman* *inu* (Tarifiyt)
PRT kill.1SG.FUT soul 1SG.GEN
“I will kill myself”
- d. *i-xəddəm* *f* *y-iman-is* (Kabyle)
3SG.M-work.IPFV on EA.M-soul-3SG.GEN
“He works for himself”

As opposed to these reflexive and emphatic uses of *imən*, in most northern and western Berber varieties the main reflexive strategy consists of using a root meaning ‘head’, which is inherited from Proto-Berber.⁸ Thus in Tashelhiyt (Atlas Berber, Susiua dialect, Morocco), the noun *ixf* (singular), *ixfauun* (plural) ‘head’ is used in a reflexive sense (Applegate 1955: 85). The same is true for present-day Tarifiyt (Zenatic, Morocco) *ixef* (16a, Elouazizi 2000: 22), Tamazight (Atlas Berber, Morocco) *ixf*, (16b, Faltz 1977: 138) and Zenaga (Western Berber, Mauritania) *iʔf* (16c, Taine-Cheikh 2005a: 44-45):

- (16) a. *θ-nɣa* *ixef-ines* (Tarifiyt)

⁸ Orel and Stolbova (1995: 337) mention that this root is inherited from Proto-Berber **kaf-* ‘head’, which is itself inherited from Proto-Afro-Asiatic **kap-* ‘head, occiput’ —note, however, that there is no consensus concerning the reconstruction of this proto-language—. This root (i.e. Proto-Afro-Asiatic **kap-* > Proto-Berber **kaf-*) is the only one that seems to present a regular phonetic correspondence to the attested Berber ‘head’-roots such as Figuig *ixf*, Ouargla *iyef* and Tarifiyt *ixef*. More recent work proposes to reconstruct the Proto-Berber form **e-qāf*, **e-yāf* for ‘head’, from a previous Proto-Afro-Asiatic **a-qāf* (Kossmann 2013a: 171). This reconstruction is in accordance with the regular change **a-* > **e-* before a consonant followed by a short central vowel that affects nominal prefixes in Berber (van Putten 2016). Therefore, the attested Berber roots are certain to have inherited the meaning ‘head’.

3SG.F-kill.PFV head-3SG.F.GEN

“She killed herself”

- b. *i-wwet urba ixf-ns* (Tamazight)

3SG.M-hit.PFV boy head-3SG.M.GEN

“The boy hit himself”

- c. *yə-ʔnä iʔf-ənš* (Zenaga)

3SG.M-kill.PFV head-3SG.M.GEN

“He killed himself”

According to Bentolila (1981: 85), the use of ‘head’-reflexives in Aït Seghrouchen Berber —a variety of Tamazight— is motivated by the impossibility of having coreferent same-person markers of the subject and object in the verbal form. Consequently, sentences like (17a-b) yield ungrammaticality:

- (17) a. **zri-h=i* (Tamazight)

see.PRES-1SG.S=1SG.O

“I see myself” (S)

- b. **d-zri-d=š* (Tamazight)

2SG.S-see.PRES-2SG.S=2SG.O

“You see yourself” (S)

The impossibility of having coreferent same-person markers of the subject and object in the verbal form suggests that this constraint may be a motivating factor behind the existence of ‘head’-reflexives in Tamazight and, by extension, in other Berber varieties. The reason for this is that ‘head’-reflexives are a non-verbal reflexive strategy that allows the circumvention of this morphological restriction. As has been argued for Basque in section 4.1 above, however, this should not be understood as implying that the constraint on coreferent same-person markers of the subject and object in the verbal form is responsible for the emergence of ‘head’-reflexives, since, on the basis of available historical Berber data, the direction of causation could likewise have been the opposite (‘head’-reflexives → constraint).

Interestingly, ‘head’-reflexives are well attested in Maghrebi Arabic varieties as well, such as the reflexive use of *rāš* ‘head’ in Moroccan Arabic and Hassaniyya Arabic (18a-b, Harrell 1962: 136, de Prémare 1995: 12, Taine-Cheikh 2007: 340). On the other

hand, Arabic varieties outside of the Maghreb, such as Mardin Arabic (North Mesopotamian Arabic, Iraq and Turkey) use the word *rūḥ*, *ṛōḥ* ‘soul’ as a reflexive noun (18c, Grigore 2007: 246). In Classical Arabic reflexives are encoded by means of the reflexive noun *nafs* ‘soul’ accompanied by the corresponding possessive suffix (18d, Fischer 1972: 127):

- (18) a. *dertha* *l-ṛaṣ-i* (Moroccan Arabic)
do.1SG.PST for-head-1SG.GEN
“I did it for myself”
- b. *ktəl* *ṛāṣ-u* (Hassaniyya Arabic)
kill.3SG.PST head-3SG.M.GEN
“He killed himself”
- c. *štaraytu* *lə-ṛōḥ-i* *qarawaṭa* (Mardin Arabic)
take.1SG.PST for-soul-1SG.GEN tie
“I took a tie for myself”
- d. *qāla* *li-nafs-ihī* (Classical Arabic)
say.3SG.PST to-soul-3SG.M.GEN
“He said to himself”

These facts suggest that the presence of ‘head’-reflexives in Maghrebi Arabic varieties, as opposed to Classical Arabic and modern varieties spoken in other areas, may have been an innovation due to contact with Berber varieties. According to Taine-Cheikh (2005a: 44), in those Berber varieties that use them, ‘head’-reflexives sometimes coexist with verbal reflexives construed on the basis of the polyfunctional nasal prefix *m-/n-*. Examples of the polyfunctionality of this prefix are reciprocal uses, such as Tamazight *m-ərḍal* ‘to make each other fall’ (Kossmann 2012: 37) and Tamasheq *ənm-æḍḍæs* ‘to touch each other’ (< *m-* + *VdVs* ‘to touch’) (Heath 2005: 477), middle voice in predicates of change in body posture, such as Tashelhiyt *n-kr* ‘to get up, lift oneself up’ (El Mountassir 1999: 45), passive voice, such as Ghadames (Ghadames, Libya and Tunisia) *əmm-ənn* ‘to be killed’ (< *m-* + *ənn* ‘to kill’) (Kossmann 2012: 37), and also reflexive, such as Zenaga *yit’äf* ‘to liberate’ vs. *yännit’äf* ‘to liberate oneself’ (Taine-Cheikh 2005a: 44, f. 10). This polyfunctional nasal prefix thus represents a verbal reflexive strategy that is an alternative to the nominal ‘head’- and ‘soul’-reflexives in Berber. The nasal prefix does not, however, provide the verb with a

middle or reflexive meaning in a regular manner (Taine-Cheikh 2005b: 398), and should thus rather be regarded as a secondary strategy.

The reflexive meaning of the noun ‘head’ in Berber can be traced at least as far back as the early 18th-century poem *Baħr ad-Dumū* ‘The Ocean of Tears’ by Muħammad ibn ‘Alī Ibrāhīm al-Hawzālī (19a, van den Boogert 1997: 335, 401). Reflexive uses of the noun ‘head’ are also attested in a number of the earliest (i.e. late-19th and early-20th century) grammatical descriptions of some Berber varieties. This is the case, for example, of Tashelhiyt (19b, Stumme 1899: 101) and Tarifiyt (19c, Sarrionandia 1925: 392). In the case of Ouargli (Zenatic, Algeria), cases are attested where the *ix(e)f*-construction behaves anaphorically but does not have a reflexive meaning (19d, Biarnay 1908: 313):

- (19) a. *lāejb* *ad* *zriġ* *ġ* *ihf* *inu* (Tashelhiyt)
 something.wonderful be seen in head 1SG.GEN
 “Something that is amazing I have seen in myself” (1714 CE, al-Hawzālī’s *Ocean of Tears*, 439a)
- b. *i-nġä* *ihf-ěns* (Tashelhiyt)
 3SG.M-kill.PFV head-3SG.M.GEN
 “He killed himself”
- c. *siredh* *ixf-inex* (Tarifiyt)
 wash.IMP head-2SG.GEN
 “Wash yourself!”
- d. *ixef-es* *d* *lbgur* (Ouargli)
 head-3SG.M.GEN AFFIRM idiot
 “He is an idiot (lit. his head is an idiot)”

Concerning the syntactic behavior of the *ix(e)f*-construction in those Berber languages with ‘head’-reflexives, being modified by adjectives (20a) and demonstratives (20b) seems to be a possibility in Tamazight. In the latter case, adding a demonstrative eliminates, however, the possibility of having a possessive pronoun next to *ixf* ‘head’:

- (20) a. *zri-h* *ixf=inu* *ifulki* (Tamazight)
 see.PRES-1SG.S head=1SG.GEN beautiful

“I see my beautiful self”

- b. *ar t-iri-h* *ixf a-d* (Tamazight)
 1SG.S IPFV-love-1SG.S head this-PROX
 “I love this self (of mine)”

The fact that *ixf*-reflexives allow for adjective and demonstrative modification in Tamazight indicates that this construction is at an early stage of grammaticalization. This may also be the case of other Berber varieties with ‘head’-reflexives, for which the authors could not, however, find such examples. As opposed to this, at the semantic level the grammaticalization of nouns meaning ‘head’ into reflexives does not seem to have occurred evenly in all Berber varieties that have undergone this process. This can be seen by the fact that, at the same time as the ‘head’-noun (*ixef*, *ixf*, *iʔf* etc.) took on a reflexive meaning, the original word for ‘head’ was replaced in some languages, such as Tashelhiyt, by a new term *agaiu* (singular), *iguia* (plural) (Applegate 1955: 67). In other languages, such as Ouargli, Tamazight and Zenaga, *ixf*, *iʔf* preserves a non-reflexive (literal, metaphoric) meaning of ‘head’ next to the reflexive meaning (21a-c, Biarnay 1908: 313, Nicolas 1953: 38, Taïfi 1991: 278). Finally, in other languages such as Tarifiyt, *ixf* has both a ‘head’-meaning and a reflexive use, whereas the ‘head’-meaning as well as the metaphoric sense of ‘tip’ or ‘summit’ are more often expressed by another root, namely *azeḡif* (21d-e, Serhoual 2002: 207, 674):

- (21) a. *ixef n oufer* (Ouargli)
 head/tip of bird.wing
 “The tip of a bird’s wing”
- b. *iqqur-as ixf* (Tamazight)
 hard-3SG.M.GEN head
 “He is stubborn (lit. his head is hard)”
- c. *iʔf ən aʔaḏiʔh* (Zenaga)
 head of jackal
 “The head of a jackal”
- d. *ixf n wadrar* (Tarifiyt)
 head/tip of mountain
 “Mountain summit”
- e. *azeḡif-nnes iqseḡ* (Tarifiyt)

head-3SG.M.GEN hard
 “He is stubborn (lit. his head is hard)”

In those Berber varieties in which the word for ‘head’ has not taken on a reflexive meaning the root *ixf*, *ixef*, *iʔf*, *éyǎf* has not always been replaced with another root — such as *agaiu* in Tashelhiyt or *azeǧif* in Tarifiyt— to express a non-reflexive meaning. For example, in Kabyle (22a) and Ghadames (22b) the root *ixef*, *éyǎf* can be used to denote ‘head’, either in a literal or a metaphoric sense, i.e. ‘tip, summit’ (Dallet 1982: 248, Kossmann 2013b: 113). In Kabyle, however, the usual word for ‘head’ in the literal sense is *aqerru* (22c), whereas the use of *ixef* is largely restricted to more metaphoric contexts (Dallet 1982: 672). On the other hand, in Awjila Berber the word for ‘head’ is encoded by the root *tgili*, *tǧili* (22d, van Putten 2013: 132):

- (22) a. *ixef* *ggigig* (Kabyle)
 head carbuncle.GEN
 “The tip of a carbuncle”
- b. *i-kkót* *tazaqqa* *s* *éyǎf* *ənn-əs* (Ghadames)
 3SG.M-beat wall with head of-3SG
 “He beat the wall with his head”
- c. *yeqqur* *uqqerru-yis* (Kabyle)
 be.hard head-3SG.M.GEN
 “He is stubborn (lit. his head is hard)”
- d. *y-ərɣif=a* *af=tǧili-nn-əs* *əlḥəml zẓək* (Awjila Berber)
 3SG.M-lift=RES on=head-of-3SG load heavy.3SG.M
 “He carried a heavy load on his head”

In view of this state of affairs, then, it seems that some Berber varieties with ‘head’-reflexives have advanced more than others along Schladt’s (2000: 113-116) grammaticalization cline: in Tarifiyt and Tashelhiyt the non-reflexive meaning ‘head’ has been taken over by another root, which suggests that the word *ixf*, *ixef* increasingly functions only as a reflexive pronoun. Thus in these languages the ‘head’-reflexive may be claimed to be at stage 3 of semantic change. In Figuig, Ouargli, Tamazight (central and southern) and Zenaga, on the other hand, *ixf*, *ixef* preserves a literal meaning next to the reflexive one, and there has been no replacement by another root. Thus in these

languages the ‘head’-reflexive could be said to be at stage 2 of semantic change. In yet other Berber languages including Awjila Berber, Ghomara, Ghadames, Kabyle, Tahaggart Tamahaq, Tamasheq and Zuara the noun ‘head’ has not taken on a reflexive meaning and the noun *imàn* ‘soul’ is used for this purpose.

Concerning the extension of this reflexive strategy across the area, the fact that only northern and western varieties of Berber and Arabic possess ‘head’-reflexives, whereas central-northern, eastern and southern varieties use the noun *imàn* ‘soul’, seems to indicate that the BPT-reflexive has spread areally. The relatively brief attested history of the Berber languages provides, however, only limited insight into this matter.

4.3. Kartvelian

4.3.1. Georgian

The beginning of written Georgian post-dates the adoption of Christianity as the official religion in Georgia in the 4th century CE, which is why the first written texts are translations from Greek, Armenian and Aramaic. This may have conditioned the choice of a reflexive strategy, since Old Georgian *suli* ‘soul’ always corresponds to Armenian *andza* ‘soul’ and Greek *psychē* ‘soul’, all of which are used in the reflexive sense (Mart’irosovi 1964: 108). Nonetheless, the most common means of expressing reflexivity in Old Georgian is the use of *tavi* ‘head’. In fact, sometimes *suli* and *tavi* are found interchangeably (23a-b, Mart’irosovi 1964: 107-108):⁹

- (23) a. *nu* *Ø-zrunav-t* *tav-ta* *tkwen-ta-tvis* (Old Georgian)
 NEG 2.S-care-2PL.S head-PL.OBL 2PL.POSS-PL.OBL-for
 “Do not care for yourselves!” (897 CE, *Adiši Four Gospels, Matthew*
 6:25)
- b. *nu* *Ø-zrunav-t* *sul-ta* *tkwen-ta-tvis* (Old Georgian)
 NEG 2.S-care-2PL.S soul-PL.OBL 2PL.POSS-PL.OBL-for
 “Do not care for yourselves!” (10th century CE, Athanasius of
 Alexandria's *Life of Anthony*)

⁹ Case marking in Georgian is notoriously complex. As far as the Old, Middle and Modern Georgian examples provided in this paper are concerned, case marking of arguments of transitive verbs is as follows: in the present, prohibitive and imperfective the subject is marked nominative and the direct and indirect objects are marked dative. In the imperative and perfective, on the other hand, the subject is marked ergative, the direct object nominative and the indirect object dative.

twisi-t (Old Georgian)

REFL.POSS-INS

“Do not think or say by yourselves!” (*Adiši Four Gospels, Mark 3:9*)

Thus, the study of the Old Georgian BPT-reflexive construction and its morphosyntactic properties shows that this construction is found at stage 1 of formal change (4a) in Schladt's (2000: 114) grammaticalization chain: the use of the possessive modifier is obligatory and *tavi* behaves as a common noun. However, the emergence of the reflexive possessive pronoun *twisi* and its spread in use with *tavi* speak for a more advanced stage of grammaticalization of the reflexive construction.

Middle Georgian (12th-18th centuries CE) texts offer a picture very similar to Old Georgian: the possessive pronoun, which is always present, tends to follow the ‘head’-noun and agree in number and case with it (25a). The reflexive possessive pronoun *twisi* is also attested (25b):

- (25) a. *tav-i* *čem-i* *še-v-i-c'q'al-e* (Middle Georgian)
 head-NOM my-NOM PREV-1SG.S-SV-have.pity-PFV
 “I had pity on myself” (12th century CE, *The Knight in the Panther's Skin*, 271b)
- b. *gan-mzad-a* *tav-i* *twis-i* (Middle Georgian)
 PREV-make.ready-3SG.PFV head-NOM REFL.POSS-NOM
 “She/he made herself/himself ready” (12th-13th centuries CE, Basili Ezosmodzghvari's *The Life of Tamar*, 133, 10)

Modern Georgian continues using the *tavi*-construction as a reflexivization strategy, whereas the noun *suli* ‘soul’ is no longer used as a reflexive noun. Nevertheless, the *tavi*-construction has undergone several changes: (a) unlike case agreement, number agreement between the reflexive and the possessive pronoun has been lost (Boeder 2005: 16); (b) the pronoun *tavi* itself has lost all plural forms; (c) in the 3rd person, non-reflexive possessive pronouns are no longer allowed to co-occur with *tavi*.¹⁰ Regarding

¹⁰ Old Georgian *twisi*, *miši* and *mati* have been replaced by *tavisi* —which is a grammaticalized variant of an originally genitive case-marked form of *tavi* (Vogt 1988: 506)— in the singular and *taviant* —also related to *tavi*, but unattested in Old Georgian— in the plural. In addition, word order has changed to possessive pronoun-*tavi*. This is, however, part of a general change to modifier-head (Boeder 2005: 49-50). Accordingly, this change is not exclusive of the reflexive construction, and it has nothing to do with the grammaticalization of ‘head’ into a reflexive marker.

the syntactic behavior of the reflexive construction, in modern Georgian *tavi* can be modified by adjectives (26a, Gaguadze 2012: 10) as well as by demonstratives (26b). In semantic terms, *tavi* can have, in addition to reflexive uses, literal (26c) and metaphoric ones (26d) (Lagodeli 1974: 66):

- (26) a. *me* *briq'vul-ad* *ikve* *ga-v-q'id-e*
 1SG.ERG foolish-ADV right.there PREV-1SG.S-sell-PFV
čem-i *sulel-i* *tav-i* (Modern Georgian)
 my-NOM stupid-NOM head-NOM
 “I foolishly sold my stupid self right there”
- b. *me* *m-i-q'var-s* *es* *čem-i*
 1SG.DAT 1.O-OV-love-3SG.S this.NOM my-NOM
tav-i (Modern Georgian)
 head-NOM
 “I love this self of mine”
- c. *amit'om* *gorga-m* *tav-ze* *tetr-i* *bat'k'n-is*
 therefore Gorga-ERG head-on white-NOM lamb-GEN
kud-i *da-i-xur-a* (Modern Georgian)
 hat-NOM PREV-SV-put.on-3SG.PFV
 “Thus Gorga put on his head a white hat made of lamb (fur)”
- d. *i-žd-a* *k'ld-is* *tav-ze* (Modern Georgian)
 SV-sit-3SG.PFV rock-GEN head-on
 “She/he sat down on the top of the rock (lit. head of the rock)”

The acceptability of adjective and demonstrative modification and the possibility to have literal and metaphoric meanings of *tavi* suggest that the reflexive construction behaves like a full-fledged noun phrase. In addition, the possessive can be omitted

provided that *tavi* is coreferent with and controlled by the subject of the clause¹¹ (Amiridze and Leuschner 2002: 265):

- (27) a. (*is*) (*šen*) *šen-s* *tav-s*
 3SG.NOM 2SG.O.DAT 2SG.POSS-IO.DAT head-IO.DAT
 g-i-xat'-av-s (Modern Georgian)
 2.O-OV-draw-TS-3SG.S
 “(S)he draws you for *yourself*” (No subject control, omission
 impossible)
- b. (*is*) (*šen*) *tav-s*
 3SG.NOM 2SG.IO.DAT head-O.DAT
 g-i-xat'-av-s (Modern Georgian)
 2.O-OV-draw-TS-3SG.S
 “(S)he draws her/himself for you”/*“(S)he draws you for yourself”
 (Subject control, omission possible)

Examples such as (27a) seem to be motivated by a restriction on the structure of the verb: in Georgian direct and indirect object markers of the 1st and 2nd person are prefixes (the 3rd-person indirect object marker is zero), and two or more person-marking prefixes may not overtly co-occur in the verb. Boeder (2005: 28) formulates this rule in terms of his ‘prefix slot filling constraint’: “[t]here is one, and only one, morphological slot for objects”. In order to resolve this constraint, Georgian makes use of an external argument: the noun *tavi* accompanied by an appropriate possessive pronoun, which yields a verb form with only one 3rd-person object marker. If this rule is not observed, the result is ungrammatical (28a); if the rule is observed, then the result is acceptable (28b, Harris 1981: 48-49). As argued for Basque and Berber in the previous two sections, the existence of such a rule in Georgian does not necessarily

¹¹ In Georgian *tavi*-reflexives can be controlled by subjects, as in (27b), and direct objects, as in (27a). In (27a) the noun *tavi* can be understood both in its source meaning, i.e. as ‘head’ (‘(S)he draws your head for yourself’) as well as in its target meaning, i.e. as a reflexive (‘(S)he draws you for yourself’). This ambiguity indicates that in Modern Georgian the reflexive construction is at stage 2 of semantic change according to Schladt’s (2000: 114) grammaticalization path. On the other hand, example (27b) shows that *tavi* is usually coreferent with the subject of the clause. One can find instances in Modern Georgian, however, where the reflexive noun seems to mark coreference between the direct and indirect objects, as in (27a) (Amiridze and Leuschner 2002: 265). In any case, the use of *tavi* in (27a) seems to be mainly motivated not by an eventual need to indicate direct-indirect object coreference, but by the morpheme structure of the Georgian verb and its polypersonal nature.

mean, however, that it should be considered to be responsible for the emergence of ‘head’-reflexives in this language:

- (28) a. **vano* (*šen*) *Ø-g-adar-eb-s*
 Vano.NOM 2SG.O.DAT 3.IO-2.O-compare-TS-3SG.S
 givi-s (Modern Georgian)
 Givi-IO.DAT
 “Vano is comparing you to Givi”
- b. *vano* *šen-s* *tav-s*
 Vano.NOM 2SG.POSS-O.DAT head-O.DAT
 Ø-adar-eb-s *givi-s* (Modern Georgian)
 3.IO-compare-TS-3SG.S Givi-IO.DAT
 “Vano is comparing you to Givi”

Thus constructions such as (28b) present non-reflexive uses of *tavi*, where the noun phrase possessive + *tavi* is recruited to serve as a verb-external argument. This is, however, not the only use of this construction outside reflexivity since it can also provide an intensifier reading (29a-b, Amiridze and Leuschner 2002: 273, Boeder 2005: 56). Sentences (29a) and (29b) illustrate what Ljutikova (2002: 28-36) labels a “contrastive meaning” and an “independent meaning” of an adverbial intensifier, respectively:¹²

- (29) a. *čem-s* *tav-s* *v-u-k'rep* (Modern Georgian)
 my-DAT head-DAT 1.S-OV-pick
 “I pick it for *myself* (rather than for somebody else)” (Context: For whom do you pick the apple?)
- b. *čem-ma* *tav-ma* *m-aizul-a*
 my-ERG head-ERG 1.O-force-3SG.PFV
 me (Modern Georgian)
 1SG.NOM
 “It was me who forced myself (there was no other causer)”

¹² Note that Boeder (2005) does not single out the intensifier category, so according to this author both (29a) and (29b) should be labeled as ‘emphatic variants’ of personal pronouns. It should be pointed out as well that Modern Georgian has other intensifier pronouns: these are the indeclinable forms *tvit*, *tavad* and *tviton*, which are used more or less interchangeably and are diachronically related to *tavi* (Mart’irosovi 1964: 219-220).

On the other hand, the pronominal intensifiers *tvit*, *tavad* and *tviton* do not have a fixed position in Old Georgian, as they can appear either before or after the noun phrase (Mart'irosovi 1964: 361). This reflects an earlier stage of grammaticalization when compared to Modern Georgian, where these syntactic adjunct pronouns must obligatorily occupy the position immediately preceding the noun phrase. The question that arises is how such intensifiers are diachronically related to *tavi* 'head'. In view of the fact that *tavi* can sometimes act as an emphatic noun by itself (31a), it seems appropriate not to follow the path proposed in (6) above (nominal > emphatic > reflexive), but to suggest two independent parallel developments, as proposed by Amiridze and Leuschner (2002: 261): (a) nominal > intensifier; (b) nominal > reflexive.

To summarize so far, it is not possible to reconstruct for Modern Georgian the grammaticalization path of the 'head'-noun into different grammatical categories. Instead, parallel grammaticalizations of *tavi* into (a) reflexive pronoun, (b) reflexive possessive pronoun, (c) verb-external argument and (d) intensifier can be established. These four grammaticalization processes can be claimed to be related, since they all share common mechanisms of change, such as metonymic extension. In addition, different stages can be observed in the development of *tavi* into a reflexive marker. These stages are attested cross-linguistically and do not present any deviation from the outline envisaged by Schladt (2000: 113-116).

The *tavi*-construction is not the only means of marking reflexivity in Modern Georgian. All Kartvelian languages possess the grammatical category traditionally known as 'version' (*kceva* in Georgian), which is expressed by vowels preceding the verbal root.¹³ Version specifies the semantic role of the indirect object; for example, the objective version specifies the indirect object as a beneficiary or an experiencer, as in the following example (30a, Hewitt 1995: 177). The kind of version that is relevant to the present purposes is usually labeled as 'subjective' (Aronson 1982; Hewitt 1995: 170-184; Boeder 2005: 36) or 'benefactive' (Harris 1981: 89-92), whose marker is the preradical vowel *i-*. This version is used to indicate coreference between the subject and the indirect object (30b, Boeder 2005: 36):

- | | | | | |
|------|----|------------------|------------|------------|
| (30) | a. | <i>k'arada-s</i> | <i>mas</i> | <i>vin</i> |
| | | bookcase-DAT | 3SG.DAT | who |

¹³ Aronson (1982) defends the need to distinguish version as a separate grammatical category in Georgian.

u-k'et-eb-s? (Modern Georgian)

OV-make-TS-3SG.S

“Who is making a bookcase for her/him?” (Possible alternative reading: “Who is making her/his bookcase?”)

b. *v-i-k'rep vašl-s* (Modern Georgian)

1SG.S-SV-pick apple-DAT

“I pick an apple for myself”

The subjective version is not usually labeled as reflexive in Georgian linguistic tradition; one reason for this seems to be the fact that the vowel *i-* has more functions than the one shown above, such as passive. But if one recalls the studies on reflexivity discussed in section 2, one can see that verbal affixes that mark reflexivity are always polysemous, since they mark additional related grammatical categories. Therefore, in synchronic terms there is nothing unusual about the Georgian case. This implies that there are two reflexivization strategies in Georgian, one nominal (the *tavi*-construction) and one verbal (the subjective version).

The relationship between *tavi*-reflexives and verbal reflexives has been thoroughly studied by Amiridze (2006), who shows that these two types of reflexives sometimes interact: Amiridze proposes to synchronically regard possessive pronoun + *tavi* and bare *tavi* + *i-* as two different reflexivization strategies (2006: 102). The reason for this statement is the different behavior of the two strategies in two-argument verbs. As has been shown above, for three-argument verbs deletion of the possessive pronoun does not change the meaning or result in ungrammaticality. This is not true for two-argument verbs: simple omission of the modifier yields an ungrammatical sentence. Compare examples (31a-b); for the latter example to be grammatical, a verb form with the verbal reflexive marker *i-* (31c) would be necessary (Amiridze 2006: 97, 101):

- (31) a. *k'ac-ma tavis-i tav-i*
man-ERG 3SG.REFL-NOM head-NOM
ak-o (Modern Georgian)
praise-3SG.S.PFV
- b. **k'ac-ma tav-i ak-o* (Modern Georgian)
man-ERG head-NOM praise-3SG.S.PFV
- c. *k'ac-ma tav-i i-k-o* (Modern Georgian)

man-ERG head-NOM SV-praise-3SG.S.PFV
 “The man praised himself” (S)

Therefore, for two-argument verbs only the combination of *tavi* with the verbal reflexive *i-* is interchangeable with the possessive pronoun + *tavi*. It should be pointed out, though, that some groups of verbs do not allow both constructions. Amiridze (2006: 104-105) contends that transitive verbs of physical destruction or violence, i.e. those verbs denoting actions usually not realized on oneself, take the simple *tavi* pronoun, while the possessive + *tavi* option is not available (32a-b):

- (32) a. *k'ac-ma* *tav-i* *mo-i-k'l-a* (Modern Georgian)
 man-ERG head-NOM PREV-SV-kill-3SG.S.PFV
- b. **k'ac-ma* *tavis-i* *tav-i*
 man-ERG 3SG.REFL-NOM head-NOM
 mo-k'l-a (Modern Georgian)
 PREV-kill- 3SG.S.PFV
 “The man killed himself” (S)

As König (2001: 758) points out, cross-linguistically a more complex reflexivization strategy tends to be used for conventionally other-directed actions than for self-directed actions. In the case of Georgian, it is not obvious whether the combination of *i-* and *tavi* should be considered more complex than the construction possessive + *tavi*. But one could contend that combining a nominal and a verbal strategy (*tavi* and the verbal marker *i-*) may be seen as more complex than using only a nominal reflexive (possessive + *tavi*). A different situation can be observed in the case of two-argument intransitive verbs that take an indirect object. For such verbs omission of the possessive pronoun and concomitant insertion of the verbal reflexive marker *i-* is not possible.¹⁴ The following examples (33a-b) illustrate this (Amiridze 2006: 108):

- (33) a. *k'ac-i* *e-lap'arak'-eb-od-a* *tavis*
 man-NOM IO-talk-TS-IMPF-3SG.S.PST 3SG.REFL
 tav-s (Modern Georgian)

¹⁴ This kind of verb has a special marker for the indirect object of intransitive verbs, namely *e-* (Amiridze 2006: 19).

- head-DAT
- b. **k'ac-i* *i-lap'arak'-eb-od-a* *tav-s* (Modern Georgian)
 man-NOM SV-talk-TS-IMPF-3SG.S.PST head-DAT
 “The man was talking to himself”

To summarize, in Georgian grammaticalization of *tavi* and its loss of morphosyntactic properties can be observed: in the present-day language *tavi* is never marked for number and is gradually losing the possessive pronoun modifier. These are common developments widely attested cross-linguistically, but what is remarkable concerning Georgian is that in the latter process the nominal *tavi*-reflexivization strategy comes into interaction with the verbal reflexivization strategy, which involves the marker *i-*. Neither *tavi* without a modifier nor the *i-* prefix could be called reflexivization strategies on their own: as has been shown, the use of bare *tavi* is only possible for three-argument verbs and the *i-* marker without any supportive reflexive pronoun can only indicate coreference between the subject and the indirect object. For two-argument verbs, either possessive + *tavi* or bare *tavi* + *i-* is required, which is to say that simple omission of the modifier is not allowed and that a complex strategy is involved.

Recall that there is one verb class that does not use the simple strategy at all, namely verbs whose action is usually other-directed. If one regards the combination of *tavi* and the *i-* prefix as a complex reflexivization strategy, then there is nothing unusual about this fact: as mentioned above, there seems to be a widespread correlation between predicate meaning and choice of reflexivization strategy, according to which the more complex strategy is used with commonly other-directed predicates (König 2001: 758). Besides the grammaticalization of *tavi* as a reflexive pronoun two other independent derivations based on this word are attested, namely the reflexive possessive pronoun *tavisi* and the intensifiers *tvit*, *tavad* and *tviton*. However, none of these is used to express other grammatical categories such as reciprocity, middle or passive voice.

4.3.2. Other Kartvelian languages

Concerning languages of the Kartvelian family other than Georgian, Svan, Megrelian and Laz all share to some extent a reflexivization strategy involving the noun ‘head’. Nevertheless, for none of these languages is this the only reflexivization strategy. In

Svan the word *txwim*¹⁵ ‘head’ is used in reflexive constructions. *Txwim* is accompanied by a possessive pronoun and never appears in the plural, as in Georgian (34a-b, Harris 1985: 276; Boeder 2003: 88, 2005: 55):¹⁶

- (34) a. *č'q'int'* *miča* *txwim-s* *a-pšwd-i* (Svan)
 boy.NOM his head-DAT NV-praise-TS
 “The boy praises himself”
- b. *yertem* *m-ac'vēn-a-s* *švidebd* *isgwej*
 God.ERG 1SG.O-see-OPT-3SG.S peacefully your.PL
txwim (Svan)
 head.NOM
 “May God let me see you in peace!”

What is interesting about Svan when compared to Georgian is the occurrence of *txwim* within constructions that express reciprocity (Boeder 2005: 56). For this purpose, instead of the possessive pronoun modifier, the genitive form of the reciprocal pronoun *ušxwar* ‘each other’ is used (Boeder 2003: 87):

- (35) *māra-j* *māra* *ušxwāre* *txwim*
 man.DAT-and man.DAT each.other.GEN head.NOM
x-alt'-ēna-x (Svan)
 3.S-love-PFV-PL.S
 “People apparently liked each other”

Svan, like Georgian, makes use of the so-called subjective version marker *i-* (Tuite 1997: 26). The relationship between *i-* and *txwim* requires a separate analysis, but it seems that the pronominal construction is not as frequently used as the verbal reflexive when encoding reflexivity: as Mart'irosovi (1964: 109) points out, the possessive + *txwim* expression in Svan is not a genuine part of the language: its existence is due to calquing from Georgian. In view of the fact that Mart'irosovi does not provide any evidence to support this claim and that Svan does not possess written records of a

¹⁵ The Svan word for ‘head’ comes from the Proto-Kartvelian root **txem* ‘summit’ (Klimov and Khalilov 2003: 71; Fähnrich 2007: 207).

¹⁶ The latter example (34b) illustrates a non-reflexive use of the possessive + ‘head’ construction, where the use of *txwim* is motivated by Boeder's (2005: 28) ‘prefix slot filling constraint’: the 2nd-person direct object appears as an external argument because the prefix slot is occupied by the object morpheme *m-*.

considerable time depth, however, it is hardly possible to support with data the hypothesis that the reflexive construction possessive + *txwim* is a product of contact.

The last issue to be considered in the analysis of Svan is that this language presents reflexive uses of a pronoun that is unrelated to the noun denoting ‘head’. This is the pronoun *ža* (plural *min*), which is derived from the demonstrative pronoun *eža* ‘that’ (Boeder 2003: 84). Moreover, Mart’irosovi (1964: 221) reports intensifier uses of the borrowed Georgian pronouns *tviton* and *tvit* in Svan; another possibility to form the intensifier is the instrumental case-marked possessive + *txwim* construction, similar to Georgian *tavit* (Boeder 2003: 88, 90-91).

Therefore, in addition to sharing the verbal reflexive common to all Kartvelian languages, Svan has its own intensifier based on a demonstrative pronoun form.¹⁷ In spite of this, Svan has the possessive pronoun + ‘head’ strategy, presumably a calque of the analogue Georgian construction. With regard to intensifiers, one can observe both direct borrowing from Georgian and use of the possessive + *txwim* construction. Svan thus seems to have undergone the grammaticalization path of BPTs into reflexive markers in a manner different to Georgian: (i) unlike in Old Georgian, in the attested Svan examples no number agreement can be observed between *txwim* and its antecedent; (ii) no examples are attested of *txwim* without a possessive pronoun; (iii) in spite of this, unlike Georgian *tavi* the Svan ‘head’-reflexive *txwim* has developed reciprocal uses. In this sense, it is noteworthy that the acquisition of a new grammatical meaning (reciprocity) by *txwim* has not been accompanied by the loss of a nominal property (absence of a possessive pronoun). This suggests that Svan and Georgian are following slightly different paths of grammaticalization.

Concerning the two other members of the Kartvelian family, both Megrelian and Laz use nouns meaning ‘head’¹⁸ in order to mark reflexivity, though these occurrences are usually labeled as ‘sporadic’ (Mart’irosovi 1964: 109; Harris 1985: 277). In the case of Megrelian, the ‘head’-reflexive can be modified by a demonstrative (36a), although such uses are very infrequent. In semantic terms, *dudi* ‘head’ can have, in addition to the reflexive use, a literal one as well (36b) (Cxak’aia 1890: 330). These facts suggest that the ‘head’-reflexive behaves quite like a noun in Megrelian:

¹⁷ The use of demonstrative pronouns as reflexives is typologically quite common: the grammaticalization path proposed by Kemmer (1993: 197) includes a step ‘logophoric reflexive’, which is quite similar to what one can observe in the development of Svan *ža*.

¹⁸ The Laz word for ‘head’ is *ti*, which is derived from Proto-Kartvelian **taw-* ‘head, spike’ (Fähnrich 2007: 187), while the Megrelian one is *dudi*, which is reconstructed as Proto-Kartvelian **dud-* ‘summit, tip’ (Klimov and Khalilov 2003: 71; Fähnrich 2007: 137).

- (36) a. *tena čkim-i dud-i m-i-'or-s* (Megrelian)
 this my-NOM head-NOM 1.O-OV-love-3SG.S
 “I love this self of mine”
- b. *tic'k'ma me-k'vat-ə k'inaxona-t ndii-s*
 then 1.O-cut-3SG.PFV plow.handle-INSTR devi-DAT
 dud-i (Megrelian)
 head-NOM
 “Then she/he cut off the devi’s head with the plow handle”

Both Laz and Megrelian also have the subjective version with the same marker, but its use in Laz is to some degree different from Georgian. According to Boeder (2005: 36), in Laz the subjective version is restricted to body-part objects (37a). However, Lacroix, in his study of the Arhavi dialect of Laz, provides data that do not support Boeder’s claim, and comes to the conclusion that *i-* is, first of all, a middle marker: the examples given by this author fall into the category of ‘middle’ as defined here (37b, Lacroix 2009: 456, 2012: 193). This author also provides, nonetheless, examples where *i-* marks coreference between the subject and some indirect objects (37c, Lacroix 2009: 462):

- (37) a. *xe i-bon-um-s* (Laz)
 hand SV-wash-TS-3SG.S
 “‘She/he washes her/his hand”
- b. *bee-k i-bon-s do i-tsxon-s* (Laz)
 child-ERG SV-wash-3SG.S and SV-comb-3SG.S
 “‘The child washes and combs”
- c. *hemu-k oxoi i-k'od-um-s* (Laz)
 3SG-ERG house SV-build-TS-3SG.S
 “‘She/he builds a house for herself/himself”

There is also the opinion that the middle voice was the initial meaning of the subjective version in the Kartvelian languages (Klimov and Alekseev 2010: 158). If this is accepted, then one faces a direction of development from middle to reflexive, which is the opposite of what Kemmer (1993: 197) proposed. Apart from verbal markers,

Megrelian and Laz have their own pronominal means of expressing reflexivity, namely the pronoun *muk*, which is etymologically related to the interrogative pronoun *mu* ‘what’ (Mart’irosovi 1964: 188, Lacroix 2009: 158-159). In addition, in Megrelian the originally Georgian intensifier *tviton* is found, a direct borrowing like in the case of Svan.

To summarize, Megrelian and Laz possess an intrinsic verbal reflexivization strategy that involves the *i*- marker. In both languages a proper pronominal reflexive strategy is also available. According to Mart’irosovi (1964: 109), the ‘head’-constructions seem to be at the periphery of the reflexive systems of these languages, which may indicate that they are borrowed from Georgian. In addition, another non-Kartvelian minority language spoken in eastern Georgia, Batsbi/Tsova-Tush (Nakh-Daghestanian), uses a construction involving *kort*- ‘head’ to encode direct object reflexives (Holisky and Gagua 1994: 207):

- (38) *atx txajiⁿ kortm-i kebadi-n-atx* (Batsbi)
 1PL 1PL/REFL/GEN head-PL praise-AOR-1PL
 “We praised ourselves”

This suggests that Georgian has passed on its ‘head’-reflexive to all these languages by means of contact. If this is accepted, then the case of Georgian would support Heine’s (1999: 9-10) and Schladt’s (2000: 107-108) claims that reflexive strategies spread primarily through areal influence.

5. Conclusions and future research

An overview of reflexive strategies in a 950-language sample has shown that up to 77 (8.1%) linguistic systems make use of a specific BPT-reflexive strategy involving the term ‘head’, either as the only strategy or as an alternative one. From a proportional perspective, this study found the lowest frequency of ‘head’-reflexives in comparison to previous studies such as Heine (1999: 9, 2011: 50), Schladt (2000: 112) and König and Siemund (2005: 195), who found 7/62 (11.3%), 6/46 (13%), 13/148 (8.8%) and 12/62 (19.4%) such languages, respectively. The productivity of ‘head’-reflexives varies from language to language, depending, among other things, on the degree of grammaticalization of ‘head’ as a reflexive marker, which is why it makes sense to

speak of primary and secondary reflexivization strategies. The overview of ‘head’-reflexives has also aided in identifying one new grammaticalization area in which these constructions are widespread: Northwest Africa.

In addition, it is quite noteworthy that, in diachronic terms, none of the languages analyzed in this study reflect all grammaticalization stages proposed by Haspelmath (1990: 42-46), Kemmer (1993: 197), Heine (1999: 7, 11-13), König and Siemund (2000: 56), Schladt (2000: 114-116) and Lehmann (2002: 38-40), either at the semantic or at the formal level. More specifically, neither Basque nor languages belonging to the Berber and Kartvelian groups show all of the following phases: (i) an original stage where the ‘head’-noun has not acquired any grammatical (reflexive, reciprocal, middle, passive) meaning; (ii) an intermediate stage where the ‘head’-noun is ambiguous between its original meaning and a grammaticalized use; and (iii) a subsequent stage where the ‘head’-noun can no longer be used in its original meaning, and can optionally develop new —reciprocal, middle, or passive— uses. These languages likewise do not show all the stages where the ‘head’-noun originally “behaves like a full-fledged noun” (Heine 1999: 13) or “has the full, unconstrained morphosyntax of a combination ‘body part’ + a pronominal possessive modifier” (Schladt 2000: 114) and is ultimately “grammaticized into verbal reflexives” (Haspelmath 1990: 43) or “develop[s] a wide variety of other uses, the essential point being that these expressions are no longer used referentially (i.e., as reflexive anaphors)” (König and Siemund 2000: 59).

In Basque, for example, despite observing the disappearance of non-reflexive anaphoric uses of *buru*, some loss of subject-reflexive agreement and more restricted reflexive modification with respect to earlier stages of the language, all reflexive markers preserve the source ‘head’ meaning and retain noun phrase properties. Therefore, one may argue that the grammaticalization of these markers is at Schladt’s (2000: 113-116) stage 2 of semantic change (4b) and underway from stage 1 to stage 2 of formal change (5a).

The situation of Berber varieties with ‘head’-reflexives is also problematic for Schladt’s (2000: 113-116) grammaticalization chain: some languages, such as Tashelhiyt and Tarifiyt, seem to have reached stage 3 of semantic change (4c), where the ‘head’-noun seems to function only as a reflexive pronoun. This is, however, not the case of Figuig, Ouargli, Tamazight and Zenaga, where the ‘head’-noun preserves both its original and a reflexive meaning. In Tamazight the ‘head’-noun seems to possess all the qualities of a full noun phrase, i.e. it has not gone further than stage 1 of formal

change (5a). This implies a mismatch between the semantic and formal dimensions in the grammaticalization of reflexives in these languages.

Only in Georgian has the reflexive ‘head’-construction gone so far as to lose some noun phrase properties, although the source meaning is still preserved. Thus, Georgian may be claimed to be at stage 2 of semantic change (4b) and halfway between stages 2 and 3 (5b-c) of formal change. The other Kartvelian languages mirror the Georgian construction, Svan having even developed reciprocal uses of *txwim*, but it is unclear whether this is due to calquing or common development. The following table summarizes the results concerning the degree of grammaticalization of the languages under study:

Table #1: Degree of grammaticalization of ‘head’-reflexives in the languages under study
(A = adjective modification; D = demonstrative modification; L = literal use; M = metaphoric use; R = reflexive use).

Language	Diagnostics for grammaticalization		Grammaticalization stage according to Schladt’s (2000) scale	
	Semantic	Formal	Semantic	Formal
Basque	L, M, R	A + D not acceptable for all speakers	Stage 2	Transition from stage 1 to stage 2
Figuig	L, M, R	No data	Stage 2	Stage 1 (?)
Georgian (old)	L, M, R	A + D unattested	Stage 2	Stage 1
Georgian (modern)	L, M, R	A + D rare, but acceptable	Stage 2	Transition from stage 2 to stage 3
Laz	L, M, peripheral R	A + D unattested	Stage 2	Stage 1
Megrelian	L, M, peripheral R	A unattested; D infrequent	Stage 2	Stage 1
Ouargli	L, M, R	No data	Stage 2	Stage 1 (?)
Svan	L, M, peripheral R, Reciprocal	A + D unattested	Stage 2	Transition from stage 2 to stage 3
Tamazight (central)	L, M, R	A + D rare, but acceptable	Stage 2	Stage 1
Tamazight (southern)	L, M, R	No data	Stage 2	Stage 1 (?)
Tarifiyt	Only R possible	No data	Stage 3	Stage 1 (?)
Tashelhiyt	Only R	No data	Stage 3	Stage 1 (?)

	possible			
Zenaga	L, M, R	No data	Stage 2	Stage 1 (?)

The authors are unaware of any language in which all stages of Schladt's (2000: 113-116) grammaticalization cline, in particular the later ones, can be claimed to be attested. In view of this, two changes are proposed here: on the one hand, the stages in the grammaticalization chain should be considered to be optional. On the other hand, the correlation between the formal and semantic parts of the chain should not be considered obligatory. In addition, the existence in early Basque and Ouargli of examples like (11a-b) and (19d) suggests that 'head'-nouns may acquire anaphoric properties without necessarily becoming reflexive.

Finally, in view of the high incidence of 'head'-reflexives in Indo-European-based pidgins and creoles and in the African linguistic area in general, future studies should address the impact of African substrate influence on the development of 'head'-reflexives in pidgins and creoles with Indo-European lexifiers.

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Abbreviations: 1/2/3 = 1st/2nd/3rd person; ABL = ablative; ABS = absolutive; ACC = accusative; ADV = adverbial; AFFIRM = affirmative; AOR = aorist; BPT = body-part term; CAUS = causative; COMP = completive; DAT = dative; DEF = definite; EA = annexed state; ERG = ergative; F = feminine; FUT = future tense; GEN = genitive; IMP = imperative; IMPF = imperfect; IPFV = imperfective; INF = infinitive; INS = instrumental; INT = intensive; INTR = intransitive; IO = indirect object; LOC = locative; M (glosses) = masculine; MID = middle voice; NEC = necessitative; NEG = negation; NOM = nominative; NMLZ = nominalizer; NV = neutral version; O = direct object; OBL = oblique case; OPT = optative; OV = objective version; PFV = perfective; PL = plural; PM = paradigm marker; POSS = possessive; PRES = present tense; PREV = preverb; PROX =

proximative; PRT = particle; PST = past tense; Q = question particle; REFL = reflexive; REL = relative; RES = resultative; S (glosses) = subject; S (translations) = based on Safir's questionnaire; SG = singular; SV = subjective version; TOP = topic; TR = transitive; TS = thematic suffix.

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