

Negative existentials in Indo-European: a typological and diachronic overview

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The investigation of the Negative Existential Cycle (Croft 1991) has focused thus far on individual languages and small language (sub)families. The current paper serves as a starting point to analyze change in negative existentials and to establish the stability of the various attested construction types in a larger language family, Indo-European. Our ultimate objective is to conduct a quantitative phylogenetic study and this is only possible by consulting a large sample of related languages. Our first step is to present a typological and diachronic overview of negative existentials in 42 languages including Romance, Celtic, Germanic, Baltic, and the Indo-Iranian languages as well as Albanian, Modern Armenian and Greek. We find that the Romance languages in our sample are consistently Type A, while the Germanic languages are consistently Type A~B. Indo-Iranian is far more varied and the most promising branch of Indo-European in terms of providing evidence for relevant diachronic pathways. We speculate on the reasons for the stability of Romance's Type A and Germanic's Type A~B and conclude that further phylogenetic analysis of additional languages is needed from these branches as well as from Indo-Iranian. We present evidence for the coexistence of two distinct negative existential constructions in several Indo-Iranian languages and discuss how the interaction of two or more constructions may contribute to further change within the Negative Existential Cycle.

1. Introduction

This paper is an examination of the Negative Existential Cycle (NEC, Croft 1991) in a broad sample of 42 Indo-European languages. The NEC is a typological hypothesis on how special existential negators may arise and ultimately be used as standard verbal negators. Recent studies by Veselinova (2013, 2014, 2015, 2016) who has studied both a large sample of languages from around the world as well as a wide range of language (sub)families, show that when considering the actual processes through which the negators evolve, the NEC often does not take the form of a cycle. The six stages of the NEC are not necessarily consecutive, as languages can be split (that is, have different constructions for (existential) negation belonging to different types), and there is considerable variation in the stability of these stages. The NEC also interacts with other cycles and pathways through which negators arise, including Jespersen's Cycle (see van Gelderen, this volume). Existentials are closely related to locatives (Clark 1978, Creissels 2014), both conceptually and concerning the constructions used to encode them (see the introduction to this volume).

Cross-linguistic work on the NEC has been mostly limited to Croft's (1991) original study, to the articles by Veselinova (2013, 2014, 2015, 2016) and to more general work on

negation (Kahrel and Van den Berg 1994, Cyffer et al 2009, Budd 2010, Willis et al. 2013). The current volume addresses this gap by gathering information on the NEC in a wealth of different languages and families. Our contribution focuses on the Indo-European language family, with the aim to first provide an overview of the constructions that are used for negative existentials in the various sub-branches of the family, and second, to analyze the stability of some of these construction types. We hope that this article contributes to a comparative phylogenetic analysis in which we can more explicitly test the stability and direction of change.

Section 2 of this paper begins with a brief introduction to the NEC itself, using Indo-European illustrations from the current language sample, especially from languages that have not been considered in the literature thus far. In §3, we present and specify the motivation for the different methods that we used to collect our data as well as the definitions used in our operationalization of negative existential clauses. The fourth section is a detailed report on the different construction types that express a negative existential function across different branches of Indo-European. This is followed in §5 by some of the diachronic and theoretical considerations that the data analyzed here raises, and there we argue for also using evidence from phylogenies when testing pathways of morphosyntactic change. Finally, we present our conclusions and suggest several possible directions for future studies.

2. The Negative Existential Cycle in Indo-European

The Negative Existential Cycle (Croft 1991) is a hypothesis on how special existential negators may arise and may subsequently evolve into standard verbal negators. This cycle has six stages (Veselinova 2014) or language types (Croft 1991)¹, each with a different relationship between the expression of verbal negation and the expression of negative existentials:

1. Type A: The negative existential construction is the affirmative existential predicate accompanied by the ordinary verbal negator.
2. Type A~B: As Type A, but additionally one finds a special negative existential form, often a fusion of the regularly negated existential construction.
3. Type B: Only a special negative existential form exists.
4. Type B~C: The special negative existential form begins to be used for ordinary verbal negation.
5. Type C: The negative existential form is the same as the ordinary verbal negator
6. Type C~A: The negative existential form + verbal negator begins to be reanalyzed as only a negator, and is used as such in combination with an affirmative existential verb to form a negative existential

After the negative existential form + verbal negator in Type C~A is analyzed as a negator, Type A is reached again and the cycle is complete. The cycle, then, is attempts to make the typology of negative existential constructions more dynamic, providing a diachronic context for each construction type.

We now illustrate each of these types, beginning with Type A, where standard negation is used for both verbal and existential predicates. We illustrate this stage by citing data from Catalan (cat, Romance). Sentential negation in Catalan is expressed by *no* in the preverbal position:

¹ We adopt the term ‘stage’ when discussing the diachronic interpretation of the NEC, and ‘type’ when referring to the synchronic characterization of a language.

- (1) Catalan (Hualde 1992: 154)
en Joan no viu a Barcelona
 ART John NEG live.3SG in Barcelona
 ‘John does not live in Barcelona.’ (Hualde 1992: 154)

Existential clauses in Catalan are expressed by a special construction that uses *haver-hi* ‘there is’, literally ‘there has,’ where *hi* is a locative adverbial clitic. This construction is similar to other clauses in Catalan and is negated by a preverbal *no*:

- (2) Catalan (Wheeler et al. 1999: 460)
hi ha tres possibilitats.
 there have.PRS.3SG three possibility.PL
 ‘There are three possibilities.’
- (3) Catalan (Wheeler et al. 1999: 422)
No hi ha cap examen
 NEG there have.PRS.3SG any exam
on no enxampin algú copiant.
 where NEG catch.SBJ.3PL somebody copy.GER
 ‘There is no exam where they don’t catch somebody copying.’

In the second stage (Type A~B), a special negator is used for existential sentences that only occur in specific contexts (see the discussion below on details regarding the variation allowed in the usage of the special negator). An example of this type is Sivandi (siy, Central Iranian). The Sivandi standard negation marker is a *na(y)-* or *ne(y)-* prefix (Lecoq 1979:69). Sivandi negative existentials can be formed by *dār-* ‘be located, be at, have’ or the past tense copula *bi* as illustrated in (4). The existential markers can be negated by the standard preverbal negator *na-*, *ne-*, *ney-* as in (5):

- (4) Sivandi (Lecoq 1979:85)
ye pīrežen=i bi
 one old.woman=INDEF be.PST.3SG
 ‘There was an old woman.’
- (5) Sivandi (Lecoq 1979:89)
albatta barqa=m na=bi
 evidently electricity=TOP NEG=be.PST.3SG
 ‘(Someone lit a candle), evidently there was no electricity.’

Sivandi also has a special negative copula form, *nūnd*, which is historically composed of the negation marker *ne-* added to another element, the exact identity of which is still unclear. This is a negative copula form that is used as the negative counterpart of the Present tense copula:

- (6) Sivandi (Lecoq 1979:150)
vāllāh, me čī tū das=em nūnd
 by.god 1SG what in hand=1SG NEG.COP
 ‘By God, there’s nothing in my hand’

The existential predicates in the next construction type, Type B, are not negated by the standard negator, but only through a special strategy. One example of a Type B language is Kurmanji Kurdish [kmr]. In Kurmanji, a preverbal marker *na-*, *ne-*, considered to be either a prefix or clitic, is used for standard negation:

- (7) Kurmanji (Thackstone 2006:35-36)
ez na=tf-im doctor
 1SG NEG=go.PRS-1SG doctor
 ‘I am not going to the doctor.’

The affirmative existential construction consists of a single-figure constituent followed by the regular copula:

- (8) Kurmanji (Thackstone 2006:31)
Got-in-eke pêşiy-ên me heye.
 say-NMZ-cnst.INDEF ancestor-PL 1PL.OBL be.PRS.3SG
 ‘There is a saying of our ancestors.’

The negative existential does not take the form of a negated affirmative existential construction, but is formed by using the special verb *tun-*:

- (9) Kurmanji (Thackstone 2006:32)
Di vî warî da otorîtey-eke resmî tune.
 in DEM regard in authority-cnst.INDEF official COP.NEG.PRS.3SG
 ‘In this regard, there is no official authority.’

For Type B~C, the special existential negator is also used under certain conditions to negate some verbal predicates. In the current sample, Type B~C is attested in Oriya (ory, Eastern Indo-Aryan), but its description is slightly complicated. We will discuss this further in §4.1. Veselinova (2014) has described two other Type B~C Indo-European languages, Bulgarian [bul] and Macedonian [mkd]. Veselinova (2014: 1332-1333) offers the following examples and analysis for Bulgarian. The standard negator generally found in Slavic and specifically in Bulgarian is the pre-verbal particle *ne* (ex. 10 a-b). The existential negator, however, is *njama*, which is a reduction of the third person singular of the verb *imam* ‘to have’ (ex. 10c-d). The form *njama* is used in the future tense as a standard negator (ex. 10e-f), that is, only under specific conditions. That is, *njama* is not restricted to negative existentials.

- (10) Bulgarian (Veselinova 2014: 1332-1333)
 a. *Maria pee*
 Maria sing.3SG.PRS
 ‘Maria sings.’
 b. *Maria ne pee*
 Maria NEG sing.3SG.PRS
 ‘Maria does not sing.’
 c. *Ima div-i kotk-i*
 have.3SG.PRS wild-PL cat-PL
 ‘There are wild cats.’

- d. *Njama div-i kotk-i*
 not.have.3SG.PRS wild-PL cat-PL
 ‘There aren’t any wild cats.’
- e. *Dovečera shte xodja na kino*
 tonight FUT go.1SG.PRS to cinema
 ‘I will go to the movies tonight.’
- f. *Dovečera njama da xodja na kino*
 tonight not.have.3SG.PRS sub go.1SG.PRS to cinema
 ‘I will not go to the movies tonight.’

In the following stage, Type C, the special existential negator is commonly used for negative verbal predicates but replaces the affirmative existential marker rather than combining with it. There are several Type C negative existential constructions in Indo-European languages, particularly in Indo-Iranian languages, and this is illustrated more thoroughly in §4.1. Here, we demonstrate this pattern by citing examples from Kupia (key, Eastern Indo-Aryan), spoken in Northern Andhra Pradesh. In (11a) *nay* is used as the verbal negation marker. In (11b) *nay* is used as the negative existential copula:

(11) Kupia (Christmas & Christmas 1973b:38)

- a. *anne nig-e nay*
 and run-3SG NEG
 ‘(The tiger stood up) and didn’t run.’

Kupia (Christmas & Christmas 1973b:23)

- b. *i.ndʒa santa-yi ne dorku ja-t-i wastuwu nay*
 DEM market-LOC NEG available become-PRS-F goods NEG
 ‘There are no goods that aren’t available at the market.’

The final stage, Type C~A, represents a further step in that the special existential negator combines with the affirmative existential construction to form the negative existential construction, however the result is emphatically or pragmatically marked. Croft’s (1991) example of a Type C~A language is an Indo-Aryan language, Marathi [mar], where the negative existential form *nāhi* can function as the negative existential, but it also can combine with the positive existential *āhe*:

(12) Marathi (Croft 1991: 12, p.c. Madhav Deshpande, Croft’s glosses)

- a. *tithə koṇi āhe*
 there anyone EX
 ‘Is anyone there?’
- b. *koṇi tithə dzāt [əts] nāhi*
 anyone there goes [EMPH] NEG
 ‘Nobody goes there.’
- c. *tithə koṇi nāhi [āhe]*
 there anyone NEG [EX]
 ‘There isn’t anyone there.’

Croft (1991: 12) states that the negative existential construction that contains both *nāhi* and *āhe* is more emphatic than the construction with only *nāhi*, suggesting that the construction that combines the two is more recent. The Negative Existential Cycle is complete once the emphatic or pragmatic markedness of the combination of the former special existential negator and the affirmative existential wears off. We then return to Type A, where a standard negator is used for both verbal and existential predicates.

Croft (1991) analyzed a sample of 23 unrelated languages and drew on general diachronic processes to infer the directionality of change and to propose the Negative Existential Cycle (Croft 1991: 3-4, 13ff). This has since been investigated more directly by Veselinova (2013, 2014, 2015, 2016), who has analyzed a large sample of languages throughout the world as well as a large range of language (sub)families to determine the historical processes therein. The analyses by Croft and Veselinova of some negative existential construction types differ. For example, to describe stage A~B, Croft (1991: 6-12) emphasizes the existence of a construction with a special negative existential form in addition to a construction with the standard verbal negative marker. In contrast, Veselinova (2014: 1328) emphasizes that the special form is limited to specific contexts, depending on factors such as tense or aspect. Furthermore, Veselinova (2013: 136-138) argues that special negative existential markers (that is, those implicated in Type B constructions), can arise through multiple processes and only some of them are directly connected to Croft's cycle. These points highlight the differences between the three transitional construction types. While Type A~B requires the co-existence of two constructions, one of Type A and one of Type B, Types B~C and C~A are defined by the distinct uses of the negative existential marker, and therefore do not require the existence of two negative existential constructions.

The most important conclusions of Veselinova's investigations are summarized in Veselinova (2016: 170ff). First, the types identified in the Negative Existential Cycle are construction types rather than language types because we find that these types co-occur within the same language. Veselinova (2014: 1372-1373, 1343ff) first identifies these split languages in the Polynesian subfamily, and later notes that the most common split type is A~B/B~C (Veselinova 2016: 154). Below, we further identify such co-occurrences in Indo-European, offering additional support for Veselinova's findings.

Second, the six types of the Negative Existential Cycle do not necessarily present a diachronic sequence. Veselinova (2014: 1336-1337; see also Croft 1991: 22) demonstrates that while Bulgarian (see ex. 10 above) and Macedonian are excellent examples of the transitional Type B~C, whereas all other Slavic languages are either Type A or Type A~B, Bulgarian and Macedonian are not examples of the Negative Existential Cycle at work, as they have not gone through stage B. A similar story can explain changes in the distribution of the Russian special negator *net* (Veselinova 2014: 1335, 1337-1338). Aside from these 'gaps' in the Cycle, Veselinova (2013: 127) first observes that as an alternative route to the Negative Existential Cycle, special negative existential forms can change into standard negation markers when they are used as pro-sentences ('Are you at home?' 'No [, I am not at home]') and later on as general words for 'no' (see also Veselinova 2014: 1339). Subsequent analysis in Veselinova (2016: 155ff) reveals at least three other attested diachronic processes. This means that the Negative Existential Cycle is not the only diachronic process through which special negative existential forms can enter the domain of standard negation.

The third and last point is that an analysis of the Negative Existential Cycle that is based on a language family from a historical-comparative perspective has consequences for our understanding of the stability of the various construction types and the rate of change between them (Veselinova 2015: 577; 2016: 170). Through the course of her investigation, Veselinova (2016: 150) finds that the 'transitional' stages A~B and B~C are cross-linguistically more common than the 'non-transitional' stages of C and A. These

‘transitional’ stages can be maintained for extended periods of time, which also accounts for their synchronic dominance. Veselinova (2016) reports on an accumulation of findings on the Negative Existential Cycle in six language (sub)families, but only one of these (Polynesian) features all six types. The Polynesian subfamily has diverged only relatively recently (approximately 2,000 years ago). Veselinova (2016: 155) suggests that the type of subordination construction that several Polynesian languages used for negation has been conducive to frequent renewal and rapid change in this family. This stands in contrast to several other, older families – Berber, Dravidian, Uralic – where only a few types of the Negative Existential Cycle are attested (see Veselinova 2016: 147-149). Hence, changes that occur within the Negative Existential Cycle as well as through other processes that result in special negative existential forms expressing standard verbal negation, depend on the language or language family-specific characteristics (Veselinova 2016: 154; 2014: 1373). This position is in line with current research in typology that demonstrates that language families have their own lineage-specific trends, both regarding features that tend to be stable and correlated with each other (Dunn et al. 2011, Dediu & Levinson 2012, Bickel 2013).

The aim of the current paper is to present a first preliminary overview of the constructions that are used for negative existentials in the various sub-branches of the Indo-European language family. In the future, we intend to expand the dataset to conduct an analysis using phylogenetic comparative methods. As Veselinova (2013) has demonstrated in a worldwide sample of 95 languages, Western Europe is not a particularly exciting place to investigate negative existential constructions, as the Western-European branches of Indo-European are relatively uniform in terms of the construction types that express the negative existential domain.² Nevertheless, our objective is to contribute to the current set of family-based historical-comparative studies. We decided to investigate Indo-European languages despite the limited variation in Western Europe for three, specific reasons. First, this is a large family that has been widely and extensively documented, which unlocks the potential to discover the entire cycle. Additionally, while the Indo-European languages of Western Europe are not especially varied, the Indo-Iranian languages do display interesting variation. Finally, there is also potential for an analysis of the interactions between some Indo-European branches and Uralic and Dravidian language families, which have already been studied by Veselinova (2015, 2016) as well as the Semitic and Tibeto-Burman families.

3. Methodology

The negative existential, like other domains of nominal predication, tends to be under-reported in published grammatical descriptions, either in the form of full reference grammars or grammar sketches. To overcome this, this study uses a combination of data sources to increase the coverage in terms of languages and branches. We included languages from each major branch of Indo-European, based on the likelihood of materials and experts being available in an attempt to establish a wide genealogical and geographical coverage. For example, we include Indo-Aryan languages from the Eastern, Northern, and Southern Zones, as well as Central and Western Iranian languages. To obtain the broadest language sample possible at this time, our sources include reference and sketch grammars as well as data from an analysis of published textual material and data from a translation questionnaire.

The translation questionnaire was slightly adjusted from Veselinova (2014) (Veselinova 2014, Appendix C) and is included in Appendix A. Those experts and colleagues

² This is not an exceptional pattern, considering for instance clause alignment patterns, where Western European languages are uniformly accusative (Siewierska 2013), while the Indo-Iranian languages display considerable variation (Haig 2008, Verbeke 2013).

who have completed the translation questionnaire for their native language or their language of expertise are mentioned by name unless they preferred to remain anonymous. The questionnaire elicits translations of many different types of clauses, both affirmative and negative. Besides existential clauses, the questionnaire includes clauses that are expected to be completely verbal, such as “Marie sang.” or “Marie didn’t sing.”, and clauses which belong in the domain of nominal predication (as defined, for example, in Payne 1997: 111-128) such as “Tom is tall.” or “Tom isn’t tall.”. This allowed us to evaluate the similarities in the expression of negation across different functional and grammatical domains. We then typically asked follow-up questions and elicited further grammatical patterns that express negative existence. For example, having identified a specific pattern in the expression of negative existential in one language (such as an A~B split that is based on tense), we can probe whether similar patterns exist in other closely related languages.

The third data source we consulted consists of published naturalistic texts. We find that the direct use of texts aids us in analyzing many similarly ‘minor’ functions (such as other specific subdomains of nominal predication) or even ‘major’ functions such as discourse functions, which tend to not make their way to reference grammars. This is not a critique of grammar writing practices – good grammars are often long and sufficiently detailed. They cannot and should not be expected to cover all functional domains that future linguists may potentially inquire about. The fact that many reference grammars are sufficiently detailed to enable linguists to directly consult primary texts testifies to the superb quality of these grammatical descriptions.

The analysis of primary textual data from a variety of languages is rather the reality of researching constructions or functions that have not been thoroughly analyzed either in a typological or a descriptive sense. This is a labor-intensive task, but it is aided here by the fact that negative existence is often expressed by similar, even cognate, grammatical means, and that the grammatical patterns are similar to a large degree. The textual analysis also allows us to discern the common discourse situations that the negative existential constructions occur in, which often involve a change of location or a shift in the deictic center.

We do not see an *a priori* advantage to any of the three types of data sources used here. Yet the reality is that grammatical descriptions tend to not mention grammatical patterns that express the negative existential domain and negative existential clauses have a very low frequency in naturalistic texts. Thus, even when information from different sources was (at least potentially) available, we gave precedence to information from native speakers or language experts.

As demonstrated by Veselinova (2013: 112ff) and by her subsequent work, the type of negative existential construction is identified by comparing the negation strategies of existential constructions to that of standard verbal predicates. Of special importance here are locative sentences which are often encoded by very similar constructions but must be conceptually distinguished. This difference is found in the information status of the subject and the perspective on the figure-ground relationship between figure and the ground (p.c. Ljuba Veselinova, Creissels 2013):

- (13) predicate location: The book is on the table.
existence: There is a book (on the table).

The figure entity of a locative predicate tends to be given information or be identifiable in context, while the comparable entity of an existential predicate is indefinite, potentially indicating new information that is not usually mentioned or referred to in the text immediately preceding the clause. The locative predicate establishes the location of an entity

while the existential predicate is used to predicate the existence of an entity relative to a specific, often identifiable, location (Creissels 2013). Creissels' (2013) conceptualization of existentials avoids positing their semantics, that is, the notion that existential predicates assert or deny the existence of something, as their main defining property (Creissels 2013: 6ff). Nevertheless, in our search for existential predicates, we attempted to find and elicit as many examples as possible, both with and without an explicit location present ('on the table'), in an attempt to ensure that the two are considered separately in our analysis. When their encoding diverges, we are interested in existentials only and do not include details on locatives.

4. Typological overview

In this section, we survey negative existentials that occur in the major Indo-European branches, moving from East to West. We begin with Indo-Iranian and end with Celtic. This section does not feature all the languages we collected data on. In Appendix B, we present a full overview of all 42 languages we investigated and provide examples and source information in the same order of branches. For ease of presentation, given the large number of scripts involved, we use transcriptions or transliterations into the Latin script in all examples.

4.1 Indo-Iranian

This section surveys the different negative existential construction types attested in a sample of Indo-Iranian languages. The survey reveals that across Indo-Iranian, all six types of negative existential constructions in Croft's (1991) cycle occur and that different construction types co-exist in some languages: most notably A and B (essentially instances of Croft's Type A~B) or C and A (essentially instances of Croft's Type C~A), but also A & B~C or B & C. These results are summarized in Table 1 below. Considering the attested combinations of states, together with the combinations found in Polynesian languages (Veselinova 2014), we argue in §5 below that at least some of the unattested combinations thus far might be the result of the definitions of the different construction types.

Table 1. Overview of classification of Indo-Iranian languages

Language	Genealogical Affiliation	Isocode	Glottolog code	Classification	Source(s)
Old Persian	Old Iranian	peo	oldp1254	A	Primary texts (inscriptions)
Middle Persian	Western Middle Iranian	pal	pahl1241	A~B	Primary texts (Zoroastrian MP)
Tajik	Western Iranian	tgk	Taji1245	A~B	Own data, Perry 2005
New Persian	Western Iranian	pes	west2369	A~B	Own data
Sivandi	Central Iranian	siy	siva1239	A~B	Lecoq 1979
Gorani	Central Iranian	hac	gora1267	A~B	Mahmoudveysi et al. 2013
Gilaki	Central Iranian	glk	gila1241	A	Rastorgueva et al. 2012
Ziyarati	Central Iranian	mzn	maza1291	A	Shokri et al. 2015
Kurmanji	Central Iranian	kmr	nort2641	B	Thackston 2006a
Taleshi	Central Iranian	tly	taly1247	C~A	Paul 2010

Koroshi	Central Iranian	ktl	koro1296	A~B	Nourzaei et al. 2015
Hindi	Central Zone Indo-Aryan	hin	hind1269	C~A	Bashir 2006, <i>godaan</i> by Munshi Premchand
Odia	Eastern Zone Indo-Aryan	ory	oriy1255	A & B~C	Neukom & Patnaik 2003
Assamese	Eastern Zone Indo-Aryan	asm	assa1263	A~B	p.c Nihankara Dutta, Krishna Boro
Kupia	Eastern Zone Indo-Aryan	key	kupi1238	B & C	Christmas & Christmas 1973a, b
Marathi	Southern Zone Indo Aryan	mar	mara1378	C~A	Croft 1991
Nepali	Northern Zone Indo-Aryan	npi	nepa1254	A	p.c Sugam Singh

Many Indo-Iranian languages express the affirmative existential domain by a combination of a copular verb and a NP expressing the existing entity. This is illustrated by the clauses in examples (14) and (15), which are from Middle Persian (pal, Western Iranian, circa 3rd century CE - 9th century) and Assamese (asm, Eastern Indo-Aryan). The functional range of the copular verbs in these two clauses is not limited to clauses that express the existential domain but also includes other nominal predication domains.

- (14) Middle Persian (AWN 9.2)
ud mardōm bud hēnd
 and people be.PST be.PRS.3PL
 ‘And there were people (who were as bright as the sun).’

- (15) Assamese (p.c. Nihankara Dutta, Krishna Boro)
bonoria mekuri as-e
 wild cat COP-3SG.PRS
 ‘There are wild cats (in the world).’

Much of the variation in the expression of the negative existential in Indo-Iranian is the result of different types of interaction between some form of the verbal copula and a standard verbal negation marker. In many constructions across the Indo-Iranian languages, the standard verbal negation marker simply accompanies the copular verb. In other constructions, morphological reduction of the two leads to univerbation and to the emergence of innovative negative copulas or innovative verbal negation markers. Other factors that increase the crosslinguistic variation in this domain are the rise of innovative locative copulas, usually labeled as ‘stay,’ ‘exist (in)’ or ‘be at,’ and innovative negation markers. Rather than describing the different construction types attested in each language, the focus of this section is on examples that illustrate instances of each different construction type across the family.

In Old Persian [peo], the standard negation marker *naiy* is deployed in a preverbal position. The Old Persian affirmative existential is expressed by a copula accompanied by a NP expressing the existing entity, similar to the two clauses in examples (14) and (15) above. Clauses that express the negative existential in Old Persian, while apparently rare, are composed of a combination of the standard verbal negation marker *naiy* followed by the verbal copula. These two are accompanied by a NP that conveys the existing entity, as

illustrated by example (16). Negative existential clauses in Old Persian are therefore an instance of Croft's Type A construction.

(16) Old Persian (DB1:48-49)

naiy āha martiya naiy pārsa naiy māda ...
 NEG COP.PST.3SG man NEG persian NEG median
 'there was no man, not Persian, not Median, (... who dared to speak up)'

This situation is common across the Indo-Iranian languages, and it is responsible for many occurrences of Type A constructions. In the (a-b) pairs in examples (17-19) below, the clauses in (a) illustrate the standard verbal negation marker as it occurs in Middle Persian [peo], Sivandi [siv], and Ziyarati [maz] (Sivandi was also discussed in section 2). The clauses in (b) illustrate a negative existential construction in each language. Across these pairs, the verbal negation marker in (a) is the same negation marker deployed in (b). The straightforward difference between the Middle Persian affirmative existential in example (14) above, and the negative existential in example (17b) below, is the presence of the standard negation marker that occurs in a preverbal position.

(17) Middle Persian (DK6:50)

a. *wināh nē kun-ēd*
 sin NEG do.PRS-3SG
 'He will not sin.'

Middle Persian (PRDD:18a)

b. *agar ātaxš ī wahrām nē būd*
 if fire LNK Wahram NEG be.PST.3SG
 'If the fire of Wahram did not exist. (lit. if there was no fire of Wahram)'

(18) Sivandi (Lecoq 1979:90)

a. *ū bāy-gar-i mardem na=šu*
 3SG garden-PL-LNK people NEG=go.PST.3SG
 'He did not go into the gardens of those people.'

Sivandi (Lecoq 1979:89)

b. *albatta barqa=m na=bi*
 evidently electricity=TOP NEG=be.PST.3SG
 '(someone lit a candle), Evidently there was no electricity.'

(19) Ziyarat Mazandarani (Shorki et al. 2015:26)

a. *te harf=am na-it-i*
 2SG word=1SG NEG-get.PST-2SG
 'You did not understand my words.'

Ziyarat Mazandarani (Shokri et al. 2015:84)

b. *fupā da-ni-bu-in ...*
 watchman PRV-NEG-be.PST-3PL
 '(if) there are no watchmen'

Locative verbs, often understood to mean something like 'stay,' 'exist (in),' or 'be at', are usually negated by the standard negation marker. The (a) clauses in examples (20) and

(21) illustrate the standard verbal negation markers that occur in Assamese [asm] and Gilaki [glk], and their (b) counterparts show that this marker is used to negate locative verbs in the negative existential pattern. The Sivandi standard negation marker, a preverbal *na=*, as illustrated by (18a) above, also occurs in (22) in a negative existential clause, with an innovative locative verb.

(20) Assamese (p.c. Nihankara Dutta, Krishna Boro)

- a. *mohila-goraki(-e) gan na-ga-j*
 woman-CLF-(NOM) song NEG-sing-3SG
 ‘The woman didn’t sing.’

Assamese (p.c. Nihankara Dutta, Krishna Boro)

- b. *bonoria mekuri na-t^hak-e*
 wild cat NEG-stay-3SG.PRS
 ‘There are no wild cats.’

(21) Gilaki (Rastorgueva et al. 2012:125)

- a. *nə-kun-əm*
 NEG-do.PRS-1SG
 ‘I do not make’

Gilaki (Rastorgueva et al. 2012:326; their glosses and parsing)

- b. *mašin nə-ø-na-ø*
 car NEG-PRF-exist.PST-3SG.PST
 ‘There are no cars.’

(22) Sivandi (Lecoq 1979:150)

- ke bār na=dār-e*
 COMP grain NEG=be.at-3SG
 ‘(He closed his windmill down) because there was no grain.’

So far, the examples for Croft’s Type A constructions all involve preverbal negation markers, which are commonly found across Indo-Iranian languages. However, many Indo-Aryan languages underwent different historical processes that resulted in changes in the relative order of the negation marker and the negated verb. This is illustrated by example (23a) below from Nepali [npi], where the post-verbal negation marker is essentially suffixed to the verb³. The predicates in the negative existential clauses in examples (23b-c) differ in the type of copular verbs, but both are negated by the same marker used with finite verbs, as in example (23a):

(23) Nepali (p.c Sugam Singh)

- a. *yini mahilā-le jhyāl phoḍ-inan*
 DEM woman-ERG window break-NEG.PST.3SG
 ‘The woman didn’t break the window.’
- b. *bāri-mā birālo-haru chha-inan*
 garden-LOC cat-PL be-NEG.PST.3SG

³ This is a rather simplified picture of polarity in the Nepali verb, but other negation markers behave similarly with respect to the variables analyzed here.

‘(He is looking outside.) There are no cats in the garden.’

- c. *jāgali birālo-haru thi-enan*
 jungle cat-PL be.PST-NEG.PST.3SG
 ‘There were no wild cats (back in the day, before they were brought here).’

The negative existential clauses presented thus far differ in a number of variables that include the type of copula used and the syntax of the negation marker. Despite these dissimilarities, however, all of these constructions are instances of Croft’s Type A construction: The negation marker used to negate existential predicates is the standard negation marker, and the relative order of the negation marker and the existential predicate is identical to that of the negation marker and a finite verb. In some of the languages analyzed here, including Old Persian, Nepali, Gilaki, and Ziyarati, negative existential constructions of this type are the only ones attested in the analyzed material. In other languages, such as Middle Persian, Sivandi, and Assamese, constructions of this type co-exist with other types. The interaction between the standard verbal negation marker and the copula used in existential constructions sometimes results in a re-analysis of the two as a single entity, and this occasionally leads to a morpho-phonological reduction and the rise of an innovative negative copula.⁴

In Middle Persian, the Present tense 3SG copula, *ast*, is not attested with *nē*, the Middle Persian standard negation marker, preceding it.⁵ Instead, the two have been reanalyzed as an innovative negative copula, *nēst* (also transcribed as *nest*). This reduction is essentially limited to the copula, and the negation marker *nē* does not reduce before other *a*-initial (or vowel-initial) verbs. The negative copula *nēst*, in turn, is often treated as a lexical stem. For example, the abstract noun marker *-īh*, can follow it to form the word *nēstīh* ‘non-existence, nothing(ness)’ as opposed to *astīh* ‘existence’. The clause in (24) illustrates the use of this copula in a negative existential clause. The use of the Middle Persian negative copula is not limited to existential contexts, and it is also found negating clauses that express other nominal predication domains such as predicate adjective or proper inclusion.

- (24) Middle Persian (DK6:50)
az padīdīgīh rāh ī ō dušaxw nēst
 from repentance road LNK to hell NEG.COP.PRS
 ‘From repentance, there is no road to Hell.’

A similar situation is attested in Sivandi and Assamese, where the innovative negative copulas *nund* and *nai* are deployed by speakers in many types of clause constructions, including the negative existential. It seems safe to assume that the first phonological segment of both *nai* and *nund* is related to the synchronically standard verb negation marker in each of these languages, but the evolution of the remaining markers is difficult to ascertain.

- (25) Sivandi (Lecoq 1979:150)
vāllāh, me čī tū das=em nūnd
 by.god 1SG what in hand=1SG NEG.COP
 ‘God, there’s nothing in my hand’

⁴ As these copulas occur in clauses that express other nominal predication domains, such as the predicate adjective or proper inclusion, this reduction is likely to also be motivated by these more frequent domains.

⁵ In Parthian, another Middle Iranian language (circa 3rd century BCE - 3rd century CE), sequences of *nē* and *ast* do occur (see Skjærvø 2009a:216).

- (26) Assamese (p.c. Nihankara Dutta, Krishna Boro)
sotal-ot (eta-u) mekuri nai
 yard-LOC (one-ADD) cat NEG.EX
 ‘(He’s looking into the yard.) There are no cats in the yard.’

In Middle Persian, Sivandi, and Assamese, a special negative form of the copula occurs, which is used in many domains of negative nominal predication. This copula is also used in negative existential clauses, which leads to a construction of Croft’s Type B. In these three languages, these negative existential constructions co-exist together with constructions of Type A, as illustrated above. Thus, since these languages have constructions of Type A alongside constructions of Type B, they belong to Croft’s stage A~B.

Constructions of Type B are the only type of negative existential forms attested in some of the languages analyzed here. For example, in Kurmanji Kurdish [kmr], the standard verbal negation marker is a preverbal *na=*, and is illustrated in example (27a) (Kurmanji was also discussed in section 2). The affirmative existential domain is expressed in Kurmanji by combining the affirmative copula *hene* with a single NP that expresses the existing entity. The negative existential is nonetheless expressed by the negative (locative) copula, *tune*, which is accompanied by a single NP that expresses the non-existing entity, as illustrated in (27c).

- (27) Kurmanji (Thackstone 2006:35-36, our glosses and parsing)
- a. *ez na=tf-im doctor*
 1SG NEG=go.PRS-1SG doctor
 ‘I am not going to the doctor.’
 - b. *sedem-ê wê hene*
 reason-CNST.MSG 3FSG.OBL COP.3SG
 ‘There are reasons for it.’
 - c. *Madem.ku zimannivîs tune*
 as.long.as writer NEG.COP
 ‘as long as there are no writers’

Another language that has a special negative form of the copula in clauses that express the negative existential is Kupia [key], an Eastern Indo-Aryan language spoken in Andhra Pradesh (Kupia was also discussed in section 2). The standard verbal negation marker in this language is a post-verbal *nay*, illustrated by example (28a). The affirmative existential in Kupia is expressed by a combination of the affirmative copula *as* with a single NP, much like example (15) above from Assamese. The negative counterpart of the Kupia copular verb *as-* is *nenj-*. This is found in many clauses that express different types of nominal predication, including the negative existential. Example (28b) illustrates this instance of Croft’s Type B. In Kupia, however, the negative existential is also expressed by another construction, illustrated in (28c). The Kupia standard negation marker *nay* functions in this construction as the negative existential predicate.⁶ Thus, this is an instance of Croft’s Type C construction: the standard negation marker is identical to the negative existential marker.

⁶ This use of *nay* as a copula is not limited to negative existential constructions and is also attested in other domains of nominal predication.

(28) Kupia (Christmas & Christmas 1973a:309)

- a. *geeru band-i nay*
house build-1SG NEG
'I am not building / won't build a house.'

Kupia (Christmas & Christmas 1973b:31)

- b. *am-ci e:jansi-te saraiyayina da:kṭar-lu nenj-ili*
1SG-GEN agency-LOC fitting doctor-PL NEG.COP-PRF
'There weren't any fitting doctors in our agency.'

Kupia (Christmas & Christmas 1973b:83)

- c. *gerr-i ay-ile kicco nay.*
house-LOC come-TMP what NEG
'And when they came into the house, there was nothing in it.'

In Kupia, then, we find two distinct negative existential constructions. They are presented above in examples (28b) and (28c), which represent Type B and Type C, respectively. It is important to note, however, that Kupia cannot be considered to be an example of Croft's Type B~C. This type is defined as a situation in which the negative existential is identical to the standard negation marker in some constructions but not in others. That is, it occurs when finite verbs are negated by several negation markers. Some of these markers are identical to the negative existential marker, while others are not. Kupia has one major negation marker that is used with finite verbs, a post-verbal *nay*. Some remnants of other negation markers exist, such as a preverbal *ne-*, which has been found to be fossilized in some negative verbs, such as the negative copula *nenj-*, *netr-* 'be unable', or *neen-* 'be ignorant of, not know' (Christmas & Christmas 1973a:310). Thus, Kupia is an example of a language with both Type B and Type C negative existential constructions.

The analysis of some negative existential constructions as an instance of Croft's Type B~C requires the co-existence of several distinct standard verbal negation markers, as Veselinova (2014:1329) observes. This situation is attested in Standard Oriya [ory], a language that is closely related to Kupia and that has both a preverbal negation marker *nɔ* and a post-verbal negation marker *nahĩ*. The use of these markers is presented in examples (29a) and (29b).

(29) Oriya (Neukom & Patnaik 2003: 340-341)

- a. *se gɔl-a nahĩ*
3SG go.PST-3SG NEG
'He did not go.'
- b. *kintu bɔrttɔman se nɔ-j-ib-ɔ kahĩki*
but now 3SG NEG-go-FUT-3SG why
'But why shouldn't she go now?'

The affirmative existential in Standard Oriya is expressed by a combination of the verbal copulas *ɔch-* or *th-* and a NP expressing the (non-)existing entity. The negative existential is expressed by two different types of constructions. In example (30), *nahĩ* follows the single NP of the clause. The parsing and glossing of *nahĩ* that Neukom and Patnaik provide in their grammar reflects their understanding of the origin of this form as a negative verbal copula. Note, however, that it is identical to the verbal negation marker in example

(29a) above, which Neukom and Patnaik do not analyze. The form *nahĩ* is therefore used as the predicate in negative existential clauses, without any further expression of negation or any another existential copula. It is also used as the negation marker in verbal clauses such as example (29a) above. Since there are other verbal negation markers, such as the preverbal *nɔ*, the clause in (30) illustrates Croft's Type B~C.

- (30) Oriya (Neukom & Patnaik 2003: 72)
bɔɽɔ nah-ĩ choɽɔ di-ɔ
 big NEG.be-3SG small give-2PL.IMPR
 'There are no big ones – (costumer:) Give (me) a small one!'

In Standard Oriya, the existential domain can also be expressed by the preverbal negation marker *nɔ*- followed by the copular verb *th-*. This strategy is illustrated in example (31), where the first two clauses represent this type of negative existential clause. In other words, in Standard Oriya we find both Type A and Type B~C negative existential constructions.

- (31) Oriya (Neukom & Patnaik 2003: 195)
premika nɔ-th-ile birɔhɔ ʃɔntrɔŋo nɔ-tha-nt-a
 mistress NEG-be-COND.CV separation pain NEG-be-COND-3SG
ki kehi mɔdɔ pi-u-nɔ-tha-nt-e
 or anybody wine drink-IMPF-NEG-AUX-COND-3PL
 'If there were no girls, there would be no pain of separation nor would anybody drink alcohol.'

In conclusion, Kupia and Standard Oriya represent two closely related stages of Croft's cycle. Both languages use the verbal negation markers *nahĩ* or *nay* as negative existential predicates. However, Standard Oriya has also retained a second verbal negation marker, which introduces some variation to the negation patterns of finite verbs. A similar second marker was lost in Kupia (but was fossilized in a number of verbs). The loss of this second verbal negation marker in Kupia resulted in Kupia having Type C constructions instead of Type B~C constructions, as in standard Oriya.

Further, the co-existence of a Type B and a Type C negative existential constructions in one language creates a curious situation. According to Croft (1991), the next step in the cycle for Type B construction would be that the specialized negative existential would begin to act as a negation marker for verbs. Since another Type C construction already exists in the language, there would be two negative existential markers that are also used as standard negation markers. At this stage, then, there would be two distinct standard negation markers, and this development shifts the classification of the old Type C construction into Type B~C, in the reverse direction from the one Croft's cycle predicts. This suggests that two distinct Type C constructions, then, cannot co-exist in one language.

Finally, some Indo-Iranian languages have examples of the C~A stage of Croft's cycle. These languages include Hindi (hin, Bashir 2006) and Marathi (mar, Croft 1991), but this stage is illustrated here by data from Taleshi (tly, Paul 2010). In Taleshi, the standard verbal negation marker is a preverbal *ni-* or *nə-*, as shown in example (32a). The affirmative existential in Taleshi is expressed by a combination of a verbal copula and a NP, which is similar to the examples from other Indo-Iranian languages presented above. One type of negative existential that Taleshi has involves using the negation marker *ni* alone, which is shown in example (32b). In this example, *ni* is preceded by a NP and is not followed by a copula. In contrast, example (32c) shows that *ni* can be followed by a copula.

- (32) Taleshi (Paul 2011:255)
 a. *hic kas ni-a-š*
 none somebody NEG-PRS-go
 ‘No one is going.’

- Taleshi (Paul 2011:214)
 b. *câra=i ni magam əm ki bə-š-am*
 solution=INDEF NEG except DEM COMP SUBJ-go-1PL
 ‘There is no solution but that we go.’

- Taleshi (Paul 2011:422)
 c. *vin-ə sas=i ni=a*
 see-3SG voice=INDEF NEG=COP.3SG
 ‘She sees that there is no answer.’

The two constructions in examples (32b-c) above may be instances of Croft’s Type C~A constructions. The standard verbal negation marker can function as the negative existential predicate, as shown in (32c), but can also accompany a verbal copula, as it does in (32b). It is difficult to determine, however, whether combining the copula and the negative marker *ni* results in some pragmatic or emphatic effect as Croft (1991) and Veselinova (2014) seem to suggest.⁷

This section provided a rather brief overview of the different types of negative existential constructions attested in the Indo-Iranian languages surveyed for this paper. This overview provides evidence that all six stages of Croft’s cycle are present in the Indo-Iranian family. This section also showed that at least in some instances, two distinct negative existential construction types co-exist in the same language. The section did not cover the different language-specific historical processes of reanalysis and actualization that occurred in each of the languages. Indeed, the origins of some special negative existential markers, such as those in Sivandi and Kurmanji, remain unclear. The forms of other markers, such as the Hindi or the Standard Oriya *nahĩ*, have been the subject of debate in the literature (for Hindi, see the references in Bashir 2006).

4.2 Armenian, Albanian, Greek

This section offers a short overview of the negative existential constructions that occur in Modern Armenian [hye], Albanian [sqi], and Modern Greek [ell]. Even though these languages do not form a genealogical subgroup, they are discussed here for the sake of simplicity.

First, in Modern Eastern Armenian [hye], standard negation is expressed by the negative prefix *č’-* that attaches to most verb forms, except for imperatives (Dum-Tragut 2009: 522):

- (33) Armenian (Dum-Tragut 2009: 51)
 a. *Vardan-ě gnec’ girk’-ě.*
 Vardan.NOM-DEF buy.AOR.3SG book.NOM-DEF

⁷ It is somewhat unclear, at least to us, whether the Talishi negative existential *ni* was ever a component in a Type B negative existential construction, and if it was, what form did the standard verbal negation take at that time.

‘Vardan bought the book.’

- b. *Vardan-ě* *č’-gnec’* *gírk’-ě.*
 Vardan.NOM-DEF NEG-buy.AOR.3SG book.NOM-DEF
 ‘Vardan did not buy the book.’

The verb *em* ‘to be’ functions both as a copula and as an auxiliary (Dum-Tragut 2009: 215) but is not used for existentials. However, one verb is frequently used for both locatives and existentials: the defective verb *kam* ‘exist’ (Dum-Tragut 2009: 282). The following are examples of a locative existential and a ‘true’ existential, respectively:

- (34) Armenian (Dum-Tragut 2009: 104-105)
hamaynk’-i *lekavar-i* *t-an-ě*
 community-DAT leader-DAT house-DAT-DEF
heraxos *č’-k-a.*
 telephone.NOM NEG-exist-PRS.3SG
 ‘There is no telephone in the house of the leader of the community.’
- (35) Armenian (Dum-Tragut 2009: 693)
inč’u č’-k-an *barjrakarg* *ēk’skursavar-ner?*
 why NEG-exist-PRS.3PL high.quality tourist.guide-PL.NOM
 ‘Why there are no high-quality tourist guides?’ (headline)

Both *kam* ‘to exist’ and the copula *em* are used for locatives, while only *kam* can be used to predicate existence without overtly referring to a specific situation or location. Both *kam* and *em* are negated with the negative prefix *č’-*, similar to prototypical verbs, which classifies Modern Armenian as a Type A language.

Modern Greek [ell] exhibits similar characteristics.⁸ This language negates predicates by placing the negative morpheme *δεν*, *den* ‘not’ before the verb (Holton et al. 2012: 510). Another negator also exists and is used for sentences in the subjunctive mood, but that does not concern us here.

- (36) Modern Greek (Holton et al. 2012: 510)
Οι *συγγενείς του* *δεν θα του* *δώσουν καμιά βοήθεια*
oi *syngeneís tou* *den tha tou* *dosoun kamiá voítheia*
 DEF.PL relative.PL POSS.3SG NEG FUT 3SG.ACC give any aid
 ‘His relatives are not going to give him any help.’

Modern Greek is similar to Armenian in that it does not permit the use of the copula *είμαι* (*eímai* ‘to be’) in existential predicates. Instead, either *υπάρχω* (*ypárcho* ‘to exist’) or *έχω* (*écho* ‘to have’) are used:

- (37) Modern Greek (Holton et al. 2012: 493)
Δεν υπάρχει φάρμακο σ’αυτή *την* *αρρώστια*
den ypárchei fármako s’-aftí *tin* *arróstia*
 NEG exist medicine of-DEM.FEM.SG DEF.FEM.ACC illness

⁸ The history of negation in Greek is rife with innovations and renewals, especially when different dialectal varieties are considered (for example, see Kiparsky & Condoravdi 2006). We have only included data from one formal variety of Modern Greek here, and aim to include additional varieties in future research that uses phylogenetic methods to analyze Croft’s cycle.

‘There is no cure [lit. ‘medicine’] for this illness.’

- (38) Modern Greek (p.c. Eirini Skourtanioti)

Δεν έχει αδέσποτες γάτες
ðen éχει aðéspotés gátes
 NEG have.PRS.3SG stray cat.PL
 ‘There are no stray cats.’

Modern Greek uses the standard negator to negate existential sentences and we can therefore classify it as Type A.

Standard (Tosk) Albanian [sqi] has four negative morphemes, *nuk*, *s’*, *mos*, and *jo* (Turano 2000:82; for another negative morpheme, *as*, see Buchholz & Fiedler 1987: 172). *mos* is used to negate subjunctive, imperative and optative clauses as well as gerunds and infinitives (Turano 2000: 85), *jo* is referred to as a ‘constituent negator’ and its usage is restricted to nominals, adjectives, prepositional phrases, and adverbials (Turano 2000: 86). This means that only *nuk* and *s’* are relevant to the present discussion. Both *nuk* and *s’* are predominantly used in standard verbal negation and are interchangeable, although there are differences pertaining to stylistics and usage (Buchholz and Fiedler 1987: 172).

- (39) Albanian (Turano 2000: 82)

- a. *Nuk vajta (më) në bibliotekë.*
 NEG go.PST.1SG (anymore) in library
 ‘I didn’t go to the library (anymore).’
 b. *S’-vajta (më) në bibliotekë.*
 NEG-go.PST.1SG (anymore) in library
 ‘I didn’t go to the library (anymore).’

The verb used for existential predicates is *ka* ‘to have’, as Camaj (1984: 12), who explicitly glosses the third person singular form of the verb, *ka*, to mean ‘he, she has’ and ‘there is’, and its negated forms *nuk ka*, *s’ka* to mean ‘there is no’. Camaj’s (1984) grammar includes several examples of existential predicates and we have listed a negated one below:

- (40) Albanian (Camaj 1984: 12/257)

Në mulli ka drithë e miell
 in mill have.3SG grain and flour
 ‘In the mill there is grain and flour.’

- (41) Albanian (Camaj 1984: 70)

ndër ne s’-ka kundërshtime
 among 1PL.ACC NEG-have.3SG objection.PL
 ‘There are no conflicts among us.’

As *ka* ‘to have’ is negated in the same manner as any other verb, Albanian is classified as a Type A language.

4.3 Balto-Slavic

The standard negator in both Latvian [lav] and Lithuanian [lit] is the marker *ne*:

- (42) Latvian (Mathiassen 1997: 164)
Viņš ne-runā latviski
 3SG.MASC NEG-speak.PRS.3SG Latvian
 ‘He doesn’t speak Latvian.’
- (43) Lithuanian (Mathiassen 1996: 185)
aš ne-nusipirkau naujo dviračio
 1SG NEG-buy.PST.1SG new.GEN bicycle.GEN
 ‘I have not bought a new bicycle.’

The copula is used in both languages (Latvian *ir* ‘to be’ and Lithuanian *būti* ‘to be’) for a range of nonverbal predicate domains, including existentials. In Latvian, the negative present tense form of the copula has a special negated form, *nav*, as is evident in example (44b). In Lithuanian, the present tense negative form of the copula is a contraction of the negator *ne* and the non-negative form of the copula *yra*, which is written *nėra*, as example (45b) illustrates (Mathiassen 1996: 1976). In the past tense, both languages use the standard negator *ne* (examples 44d, 46).

- (44) Latvian (p.c. Sandra Grinberga)
- a. *Ir savvaļas kaķi*
 PRS.COP wild cat.PL.NOM
 ‘There are wild cats.’
 - b. *Nav savvaļas kaķu*
 NEG.PRS.COP wild cat.PL.GEN
 ‘There are no wild cats.’
 - c. *Bija savvaļas kaķi*
 PST.COP wild cat.PL.NOM
 ‘There were wild cats.’
 - d. *Ne-bija savvaļas kaķu*
 NEG-PST.COP wild cat.PL.GEN
 ‘There were no wild cats.’
- (45) Lithuanian (p.c. Algirdas Sabaliauskas)
- a. *Čia yra laukinių kačių*
 here be.PRS.3SG wild.GEN.MASC.PL cat.GEN.MASC.PL
 ‘There are wild cats.’
 - b. *Čia laukinių kačių nėra*
 here wild.GEN.MASC.PL cat.GEN.MASC.PL NEG.be.PRS.3SG
 ‘There are no wild cats.’
- (46) Lithuanian (Kalėdaitė 2008: 134)
Protestuoti dėl to ne-buvo kam.
 protest.INF because.of that NEG-be.PST.3SG who.DAT
 ‘There was no one who would protest about that.’

Both Latvian and Lithuanian have a special negative existential form that is restricted to the present tense and standard negation of the affirmative existential in the past tense, which classifies them both as Type A~B languages.

Veselinova (2014) has analyzed Slavic languages in detail. Table 2 below is her Table 2 from Appendix B and is reproduced to provide an overview of the characteristics of the Slavic languages.

Table 2. Overview of the standard and special negators in Slavic as reported in Veselinova (2014: 1378), see also Veselinova (2016: 176)

Group	Language	Isocode	Glottocode	Standard negator	Existential negator	Classification
East	Byelorussian	bel	bel1254	ne	<i>njama</i> ‘not exist, not.have’	A~B
	Russian	rus	russ1263	ne	<i>net</i> ‘not exist, not.have’	A~B
	Ukrainian	ukr	ukra1253	ne	<i>nema/nemae</i> ‘not exist, not.have’	A~B
South	Bulgarian	bul	bulg1262	ne	<i>njama</i> ‘not exist, not.have’	B~C
	Macedonian	mkd	mace1250	ne	<i>nema</i> ‘not exist, not.have’	B~C
	Serbian/Croatian	srp/hrv	serb1264/croa1245	ne	<i>nema</i> ‘not exist, not.have’	A~B
	Slovene	slv	slov1268	ne	<i>ne obstaja</i> ‘NEG exist’	A
	Czech	ces	czec1258	ne-	<i>ne-existujou</i> ‘NEG-exist.PL.PRS’	A
West	Slovak	slk	slov1269	ne-	<i>ne-jestvujú/existujú</i> ‘NEG-exist.PL.PRS’ (<i>nieto</i> ‘not exist’)	?A~B→A
	Kashubian	csb	kash1274	nie	<i>ni ma</i> ‘not.have’	A~B
	Polish	pol	poli1260	nie	<i>nie ma</i> ‘NEG have’	A~B
	Upper Sorbian	hsb	uppe1395	nie-	<i>nie-dawa</i> ‘NEG-give’ <i>nie-eksistuja</i> ‘NEG-exist.PL.PRS’	A
	Lower Sorbian	dsb	lowe1385	nie-	<i>nje-dajo</i> ‘NEG-give’ <i>nje-eksistěruju</i> ‘NEG-exist.PL.PRS’	A

4.4 Romance

The Romance languages that we have investigated thus far are identical in their treatment of negative existentials in that they are all Type A (see Table 3 below). This can be illustrated by citing data from Romanian [ron]. The standard negator in Romanian is the preverbal particle *nu* ‘not’:

- (47) Romanian (Gönczöl-Davies 2008: 56)
O fată face sport, cealaltă fată nu face.
 INDEF.F.SG girl make.PRS.3SG sport other.F.SG girl NEG make.PRS.3SG
 ‘One girl does sports, the other girl doesn’t.’

This same negator is used in negative existentials, which may be formed by using different verbs: *a se gasi* ‘to find themselves’, *a exista* ‘to exist’, and the copula *a fi* ‘to be’. The latter is not preferred and only occurs when the negated sentence is absolutely and universally true:

- (48) Romanian (p.c. Andreea Calude)
- a. *Se găsesc pisici sălbătice*
MID.3SG find cat.PL wild.PL
‘There are wild cats.’
 - b. *Nu se găsesc pisici sălbătice*
NEG MID.3SG find cat.PL wild.PL
‘There are no wild cats.’
 - c. *Nu există pisici sălbătice*
NEG exist cat.PL wild.PL
‘There are no wild cats.’
 - d. *Nu este viață eternă*
NEG be.PRS.3SG life eternal
‘There is no eternal life.’

The other Romance languages we have investigated thus far share this dispreference for the copula in existential sentences. Italian [ita] uses *esistere* ‘to exist’, Spanish [spa] uses the present indicative form *hay* of the verb *haber*, which means ‘there is, there are’, Catalan [cat] uses *haver-hi* ‘there is (lit. there has)’, and French [fra] uses *exister* ‘to exist’. In addition, French uses the verb *avoir* ‘to have’ in a set phrase *il y a* [3SG.M LOC have.3SG.PRS], ‘lit. he has to him’. This phrase is also negated by using the standard negator *ne ... pas*, as in the following example:

- (49) French (Offord 2006: 87)
- Il a voulu trouver un poste,*
3SG.M have.3SG.PRS try.PTCP find.INF INDEF job
mais il n-’y en avait pas
but 3SG.M NEG-LOC of.PL have.3SG.IMPF NEG
‘He tried to find a job, but there weren’t any.’

Table 3. Overview of the standard and special negators in the Romance dataset

Language	Isocode	Glottocode	Standard negator	Classification	Source(s)
Latin	lat	lati1261	non	A	p.c. Paul Hulsenboom, Greenough et al. (1903), Roby (1862 [2010])
Romanian	ron	roma1327	nu	A	p.c. Andreea Calude, Gönczöl-Davies (2008)
Spanish	spa	stan1288	no	A	Butt and Benjamin (1994)

Catalan	cat	stan1289	no	A	Hualde (1992), Wheeler et al. (1999)
French	fra	stan1290	(ne) pas	A	p.c. Raphaël Domange, Lang & Perez (2004), Offord (2006)
Italian	ita	ital1282	non	A	p.c. Francesca Di Garbo, Peyronnel & Higgins (2006)

4.5 Germanic

As Veselinova (2013: 114-115) noted in her discussion of Swedish [swe], Swedish, and to differing extents, all modern Germanic languages, have two strategies to form negative existentials. The pattern can be illustrated by data from Western Frisian [fry]. The most common sentential negator in Western Frisian is *net* ‘not’:

- (50) Western Frisian (Tiersma 1999: 91)
ik wit net oftsto wol taliten wurdst
 1SG know NEG whether indeed admit.INF become
 ‘I don’t know whether you will be admitted.’

The determiner *gjin* ‘no’, however, occurs in many non-verbal predicates, including existentials and possessives:

- (51) Western Frisian (p.c. Eric Hoekstra)
Der binne gjin wylde katten
 there be no wild cat.PL
 ‘There are no wild cats.’
- (52) Western Frisian (Tiersma 1999: 102)
hy hat gjin fyts
 3SG.MASC have no bike
 ‘He has no bicycle.’

Using *gjin* ‘no’ implies a categorical denial that wild cats exist, as in example (51). Furthermore, the standard negator *net* ‘not’ is used when the figure is quantified:

- (53) Western Frisian (p.c. Eric Hoekstra)
Der binne net folle wylde katten
 there be NEG many wild cat.PL
 ‘There are not many wild cats.’

This situation is paralleled in English [eng], where we find two strategies, one with the standard negator *not* and the other with the negative quantifier *no*:

- (54) English (own knowledge)
 a. *There are no tame zebras*
 b. *There aren’t any tame zebras. (There are not any tame zebras.)*

All Germanic languages included in our data use a negative quantifier to some extent (see Table 4 and Appendix B). The North Germanic languages – Swedish [swe], Norwegian [nob], Danish [dan], and Icelandic [isl] – allow greater variation in their use of the standard negator than the Western Germanic languages (English, Western Frisian, Dutch [ned], German [deu], and Eastern Frisian [frs, a Low German variety]). Bordal (2017) demonstrates that the two Swedish negative existential constructions do not vary freely, but their use correlates with conditional versus unconditional absence. However, it is currently unclear whether similar principles apply to the other North Germanic languages. In English, the negative quantifier can be used for other nominal predicates (‘Alice is no teacher.’), locatives (‘There is no cheese in the fridge.’), and predicative possession (‘Lisa has no bike.’), although the usage depends on cross-dialectal variation and pragmatic functions. The range seems similar for the Western Frisian *gjin* ‘no’, the Dutch *geen* ‘no’, and the German *kein* ‘no’, while for Eastern Frisian, comparable clauses allow the usage of both *kien* ‘no’ and the standard negator *neet* ‘not’.

The widespread usage of negative quantifiers next to or instead of standard negation marking for negative existentials in the Germanic languages suggests that this is a rather old strategy. In addition, several of these negative quantifiers are etymologically related: The negative quantifiers in Swedish, Norwegian, Danish, and Icelandic have a common origin in the Old Norse form [non] *engi* ‘none, no one, no’, while the origin of the Dutch and German markers can be traced back to a formation that means ‘not one’. Given that the Germanic subfamily is approximately 2,500 years old (Henriksen & van der Auwera 1994: 1), this particular construction may be both ancient and stable. Work by Jäger (2007) on Old High German and Middle German suggests that the origin of negative quantifier usage for the negation of nominal predicates may have its origin in so-called negative concord that also appeared in Old English. That said, additional Germanic languages, perhaps most importantly the Gothic language [got], should be investigated to determine whether there are any languages that deviate from the described pattern.

It is possible to conduct more extensive, in-depth research on the conditions for the use of the standard negation marker and the negative quantifier in each of these languages, as Bordal (2017) did for Swedish. Nonetheless, we restrict ourselves to stating that we classify these languages as Type A~B. The reason for this is that these languages form negative existentials by using both the standard negator (Type A) and using the negative quantifier (Type B). It has also been demonstrated that some of the Germanic languages use the two construction types to express different types of negative existential semantics. Since the deployment of one construction type and not the other in other Germanic languages might be motivated by similar semantic considerations, we classify all Germanic languages as Type A~B.

Classifying the Germanic languages as Type A~B, similar to several Indo-Iranian languages, blurs the differences in the synchronic morphosyntax used to express the negative existential in those branches, and eventually the fact that the patterns emerge from rather distinct historical processes. The Germanic languages have no special existential negators. This includes negators that appear to be mergers of the standard negator as we illustrated with an example from Middle Persian in §4.1, or diachronically opaque negators. This indicates that languages may arrive at stage A~B through different historical processes.

Table 4. Overview of the standard and special negators in the Germanic dataset

Language	Isocode	Glottocode	Standard negator	Negative quantifier	Classification	Source(s)
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English	eng	stan1293	not	no	A~B	own knowledge
Western Frisian	fry	west2354	net	gjin	A~B	p.c. Eric Hoekstra, Tiersma (1999)
Dutch	nld	dutc1256	niet	geen	A~B	own knowledge
German	deu	stan1295	nicht	kein	A~B	p.c. Anne-Maria Fehn
Eastern Frisian	frs	east2288	neet	kien	A~B	p.c. Temmo Bosse
Swedish	swe	swed1254	inte	ingen	A~B	Bordal (2017), p.c. Ljuba Veselinova
Norwegian	nob	norw1259	ikke	ingen	A~B	p.c. Benedicte Haraldstad Frøstad
Danish	dan	dani1285	ikke	ingen	A~B	p.c. Bjarne Ørnes
Icelandic	isl	icel1247	ekki	enginn	A~B	p.c. Elisabet Eir Cortes, Bjarnason (1998), Einarsson (1949), Wood (2012)

4.6 Celtic

The Celtic languages include examples of both Type A, Type A~B, and Type B (see Table 5 below for a complete overview). The most ancient language among them, Old Irish is a straightforward example of Type A. Old Irish [sga] has a verbal negator *ni*, which is a particle that attaches to the beginning of the verb:

(55) Old Irish (p.c. Cormac Anderson)

a. *can-aid máire*
sing-PRS.3SG Mary
‘Mary sings.’

b. *ni-cain máire*
NEG-sing.PRS.3SG Mary
‘Mary does not sing.’

Several Celtic languages express nonverbal predicates either through the copular verb or with what is called the substantive verb. Old Irish uses the latter (McCone 2005: 39ff); it behaves similarly to any verb and is negated with *ni*:-

(56) Old Irish (p.c. Cormac Anderson)

a. *at-taat fiad-chait and*
at-SUBST.PRS.3PL wild-cat.nom.PL in.3SG.NEUT

‘There are wild cats.’

- b. *ni-taat fiad-chait and*
 NEG-SUBST.PRS.3SG wild-cat.NOM.PL in.3SG.NEUT
 ‘There are no wild cats.’

In the examples in (56), *and* is the third person singular neuter form of the preposition *i* ‘in’. As it can be specified to refer to person and number, we can therefore analyze it as the inclusion preposition ‘in’, with its function roughly corresponding to English ‘there’. Modern Irish [gle] and Scottish Gaelic [gla] below also feature similar inflected prepositions.

Modern Irish negative existentials cannot be classified as Type A constructions, but rather as Type B. Standard negation in Irish is expressed by placing the negative particle, *ní*, in front of a verb, which causes lenition if the initial consonant of the verb can be lenited (Stenson 2008: 86):

(57) Modern Irish (Stenson 2008: 86)

- a. *Glanann sí a seomra*
 clean.PRS she POSS room
 ‘She cleans her room.’
- b. *Ní ghlanann Caitríona a seomra*
 NEG clean Caitríona POSS room
 ‘Caitríona doesn’t clean her room.’

Like Old Irish, Modern Irish uses what is referred to as the substantive verb for existential predicates. However, the substantive verb has a special negative form, and cannot be considered to be a standardly negated verb. Etymologically, the negative substantive verb appears to incorporate the standard negator along with some other element.

(58) Modern Irish (p.c. Cormac Anderson)

- a. *Tá cait fiáin ann*
 SUBST cat.PL wild in.3SG.MASC
 ‘There are wild cats.’
- b. *Níl cait fiáin ann*
 SUBST+NEG cat.PL wild in.3SG.MASC
 ‘There are no wild cats.’

Modern Irish can be contrasted with Scottish Gaelic, which continues to use standard negation for existential predicates and hence can be classified as Type A. The negators in Scottish Gaelic are the preverbal particles *cha(n)* and *nach* (Lamb 2001: 61). The following example illustrates their usage in a double negative construction:

(59) Scottish Gaelic (Lamb 2001: 61)

- cha chreid mi nach eil iad gu math*
 NEG believe.INDEF 1SG NEG.COMP be.PRS 3PL ADV good
 ‘I believe they are well.’ [Lit. I don’t believe that they are not well.]

Scottish Gaelic uses the verb *bi* ‘to be’ for existential predicates. This verb has two forms in the present tense, which are the independent form *tha*, and the dependent form *eil* (whose

form can be *bheil*, *beil*, or *eil*, ‘I, depending on the dialect, register and the grammatical context, Lamb 2001: 54). Approximately ten irregular verbs feature this independent-dependent split including *bi*. These verbs must use their dependent form after certain pre-verbal particles, including the two negators, interrogative clause marker, complementizers, and conditional clause markers (Lamb 2001: 50). The consequence of this is that the verb *bi* ‘to be’ appears to be very different in affirmative and negative existential predicates. This is not due to the negation strategy, but rather to the structure of the verbal system.

(60) Scottish Gaelic (p.c. William Lamb)

- a. *Tha cait fhiathaich ann*
 COP.PRS cat.PL wild in.3SG.MASC
 ‘There are wild cats.’
- b. *Chan eil cait fhiathaich (idir) ann*
 NEG COP.PRS.DEP cat.PL wild (at.all) in.3SG.MASC
 ‘There are no wild cats.’

Welsh is classified as Type A (for additional information on the historical development of negation strategies in Welsh and Breton, see Willis 2013). The last Celtic language to be discussed here, Breton [bre], is classified as Type A~B. Breton has a double negator, *ne ... ket*, which is located on both sides of the verb:

(61) Breton (Press 1986: 126)

- Ne ro ket al laeron a laezh da zen*
 NEG give.PRS NEG DEF robber.PL PREP milk to anyone
 ‘The robbers give no-one any milk.’

The copula *bezañ* (‘to be’) (Press 1986: 144ff) is used for a variety of nonverbal predicates, including nominals, locatives, and existentials. It has a set of negative forms in the present tense: “There is considerably more freedom where the verb is negative, the only strict rule being that (*a*) *zo* must be replaced by *n’eo ket*, *n’eus ket* or *n’eman ket*, etc. as appropriate. There is no form *ne zo ket*.” (Press 1986: 152). Below are two examples, one locative (62) and one existential (63). The special form of the negated copula is a Type B construction. Nevertheless, for the past tense, a regularly negated inflected form of the copula is used, which is evident in example (64). Breton thus uses both standard negation for existentials and special negative existential constructions that are both conditioned by tense, which results in it being categorized as Type A~B.

(62) Breton (Press 1986: 154-155)

- a. *Un draonienn a zo du-hont*
 ART valley VERB.PART COP.PRS to-there
 ‘There’s the/a valley over there.’
- b. *An draonienn n’emañ ket du-hont*
 ART valley NEG+COP NEG to-there
 ‘There’s no valley over there.’

(63) Breton (p.c. Marianna Donnart)

- a. *Kizhier gouez a zo*
 cat.PL wild VERB.PART COP.PRS

‘There are wild cats.’

- b. *N'eus ket kizhier gouez*
 NEG+COP NEG cat.PL wild
 ‘There are no wild cats.’

- (64) Breton (p.c. Marianna Donnart)
Ne oa ket kizhier gouez
 NEG COP.3SG.IMPF NEG cat.PL wild
 ‘There were no wild cats.’

Table 5. Overview of the standard negators and negative existentials in the Celtic dataset

Language	Isocode	Glottocode	Standard negator	Negative existential	Classification	Source(s)
Breton	bre	bret1244	ne ... ket	n' + NEG.COP + ket	A~B	p.c. Marianna Donnart, Press (1986)
Welsh	cym	wels1247	ddim	ddim + COP	A	p.c. David Willis, King (2003)
Old Irish	sga	oldi1245	ni-	ni-SUBST	A	p.c. Cormac Anderson, Stenson (1981, 2008)
Irish	gle	iris1253	ní	níl	B	p.c. Cormac Anderson, McCone (2005)
Scottish Gaelic	gla	scot1245	cha(n), nach	cha(n) + COP	A	p.c. William Lamb, Lamb (2001)

5. Diachronic and theoretical considerations

The overview of strategies used to express the negative existential predicate in 42 Indo-European languages presented above reveals that the subgroup that displays the most variation is Indo-Iranian, followed by the Balto-Slavic group, which was also reported by Veselinova 2014. Other major branches of the Indo-European family – Romance, Germanic, and Celtic – do not display considerable variation. Overall, we found 20 instances of Type A, 26 of Type A~B, 2 of Type B, 2 of Type B~C, and 3 of Type C~A. In addition, we found that Oriya is split between Type A and Type B~C and that Kupia is split between Type B and Type C. This is only partly consistent with the worldwide sample compiled by Veselinova (2016: 147), who reports that Type A and Type B are most common cross-linguistically, followed by Type B~C. In contrast, we only detected two examples of Type B~C. In Veselinova's (2016: 147ff) families, Types B, B~C, and A~B are most common, this is in line with the prevalence of Type A~B in our data.

However, as we are analyzing related languages, we cannot consider each instance of two constructions of the same type as diachronically independent due to common retentions. All the Romance languages investigated thus far appear to inherit their Type A negative existential construction from a common ancestor, just as all the Germanic languages seem to

have retained their split Type A~B constructions. The higher frequency of some construction types in Indo-European might therefore be the result of a single innovation which ends up being very stable in daughter languages. This suggests, then, that taking phylogenetic information into consideration when analyzing a pathway or a cycle might provide important clues to the scenarios that result in the emergence of the aggregate synchronic patterns. Figure 1, presented below, maps the classifications of the different negative existential constructions onto a phylogenetic tree depicting the Indo-European languages. Additionally, the states of the negative existential constructions are reconstructed at each ancestral node. This illustrates the changes in the construction types expressing the negative existential domain that are likely to have occurred across the Indo-European family.

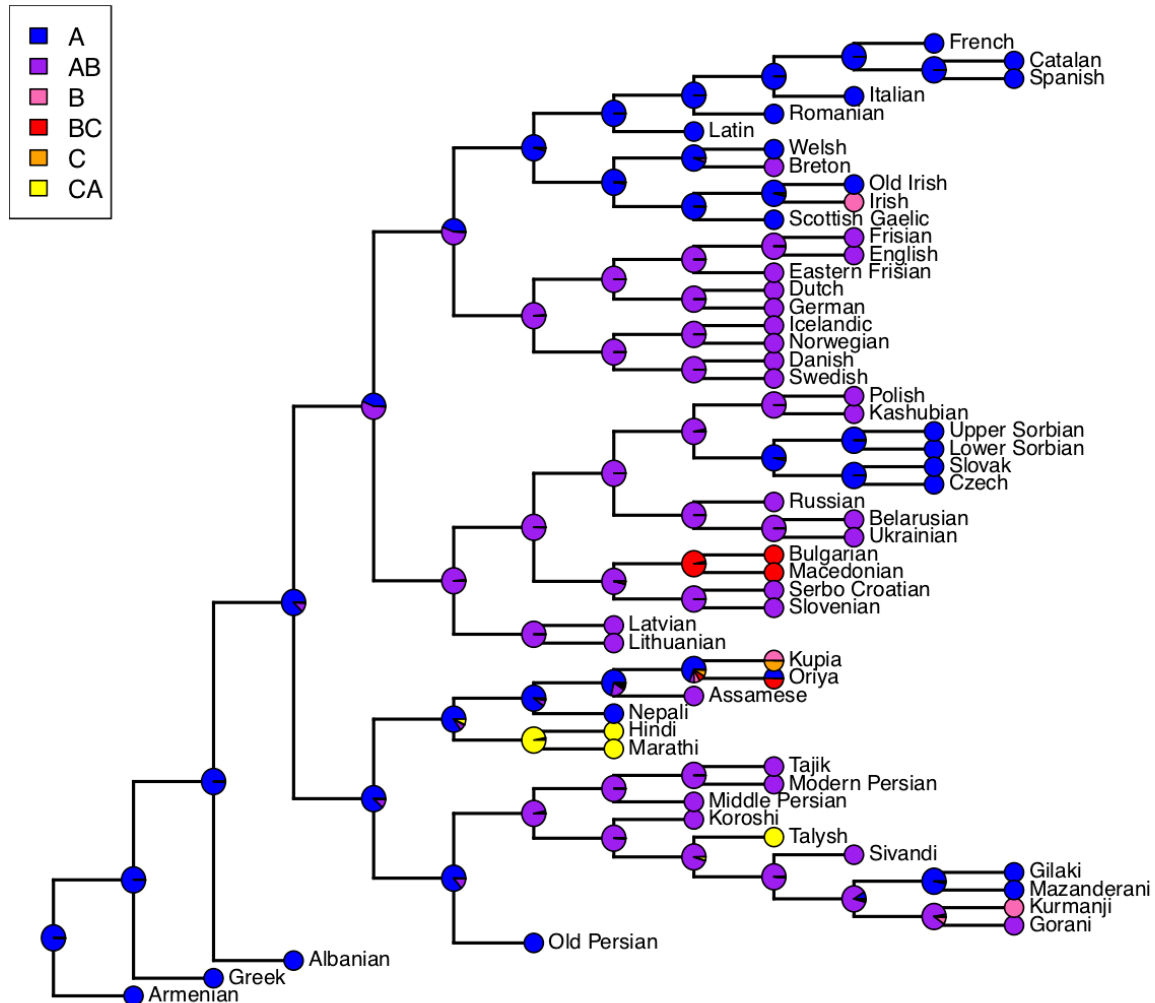


Figure 1: An overview of the current classifications of negative existential construction types overlaid on a modified Indo-European Glottolog tree (Hammarström et al. 2018). The Slavic classifications are based on Veselinova (2014). The colored circles at the end of the tree branches represent our classifications (as well as those of Veselinova 2014). The pie plots on the internal nodes represent marginal ancestral state reconstructions conducted in the R package corHHM (Beaulieu 2014, R Project). The R script for this plot is available here [to be updated later]. As this analysis requires a binary tree with branch lengths, the Glottolog tree was made binary by following Bouckaert et al. (2012) and a branch length of 1 was set for each branch. We do not imply that this is how the Indo-European languages actually evolved; this is simply one of many possibilities that we selected for display purposes only.

There are three reasons why we choose to display the classifications of the negative existentials in our sample on a phylogenetic tree: 1) this format may provide us with an insight into the validity of the NEC; 2) it helps us to estimate the stability of certain classifications over time; and 3) it contributes to our ultimate aim of conducting a phylogenetic comparative analysis of a larger dataset.

The first point is relevant, for example, for the status of Gilaki and Mazanderani. They ‘return’ to state A while their immediate ancestor, as most contemporary Iranian languages, was likely state A~B. This suggests an innovation and loss of type B constructions rather than a very rapid cycling through the NEC. This type of innovation can involve factors such as an emergent locative copula based on verbs such as ‘stay’ or ‘be at’. These types of innovative copulas tend to retain verbal negation patterns, which results in a Type A negative existential construction. A loss of a Type B construction which co-exists with a Type A construction, then, might seem like a “return” to Type A from Type A~B.

As for the second point, it is easy to use the format of the phylogenetic tree to determine the stability of some types over time. All the Romance languages investigated thus far, including Latin, are of type A. If we add the time that each of these languages has been independent from its sister languages, that is, the time elapsed since two sister languages separated from their common ancestor, then Type A appears to be a stable trait of this subfamily for thousands of years of evolution. Of course, we have only investigated 6 languages out of 80 Romance varieties, so this is only a preliminary suggestion at best.

A similar logic applies to the Germanic languages. Proto-Germanic reconstructs as state A~B in the current analysis. The data from the contemporary Germanic languages also suggest that Type B constructions, where negation is expressed by a negative quantifier, are quite old and were possibly a part of the Proto-Germanic inventory. Despite the variation in the usage of negative quantifiers in Type B constructions across the Germanic languages, these Type B constructions are 1) at least in part cognate terms and 2) relevant in the description of all the Germanic languages we examined thus far.

Another example of a relatively stable pattern is the prevalence of Type A(~B) constructions across Iranian. In Iranian, the Past tense copular verbs, which are cognates of Middle Persian *būd* ‘was’, were often retained in negative existential clauses. The combination of these copulas and the Iranian negative particle *ne* did not undergo reduction and univerbation, which was presumably also due to phonotactic constraints (unlike the Present tense copulas, see §4.1 above). Consequently, the negative existential with the Iranian Past tense copula is negated by the same marker that is used to negate prototypical verbs. The result is a conservative Type A negative existential construction. The reduction of the Present tense copula and the Iranian Negative particle resulted in a Type B construction, which leads to the classification of many Iranian languages as instances of Type A~B.

The third point is that we argue that phylogenetic comparative analyses are suitable to formally analyze the results of the Negative Existential Cycle within a single family. Thus far, we have conducted preliminary phylogenetic comparative analyses on the current dataset to test whether Croft’s NEC more adequately explains the attested cross-linguistic distribution of negative existential patterns than alternative models. The Negative Existential Cycle makes the following highly specific claim regarding the expected direction of changes in the negative existential domain:

$$A > A \sim B > B > B \sim C > C > C \sim A > A$$

These directional changes can easily be contrasted with alternative models, such as the reverse pattern of change:

$$A < A\sim B < B < B\sim C < C < C\sim A < A$$

Comparing the likelihood of pathways of change is possible even if not all construction types are attested in the dataset. Nevertheless, our preliminary testing suggests that our dataset is too limited to answer this question. Together with Veselinova's (2014) Slavic data, we have information on the negative existential constructions in 55 Indo-European languages. Yet for at least two groups, Romance and Germanic, our data is completely void of variation, and thus from an evolutionary perspective, the data are useless to determine which paths of change are likely and which are unlikely. Given the variation we discovered in Indo-Iranian languages, we aim to collect a larger dataset that includes many more languages of this subfamily, as well as additional Romance and Germanic languages.

The lack of special negative existential markers or constructions in the language families of Western Europe that was first noted by Veselinova (2013: 117) warrants further explanation, particularly now that we have essentially replicated this finding by consulting a larger language sample. First, the current dataset suggests that Type A is ancestral to the Indo-European language family. This is a very tentative conclusion – even though Albanian, Modern Greek, and Modern Armenian represent subfamilies that split off from the Indo-European family first (at least in Bouckaert et al. 2012), each has been evolving for thousands of years and the different components attested in their negative existential constructions are not always cognate. As a consequence, despite their seeming uniformity, it is unclear at this point whether the ancestors of these languages were also Type A. Another focus for a larger dataset should thus be to collect data from a larger set of ancient languages. However, for the time being, we must acknowledge that when addressing the dominance of Type A in Western Europe, we are most likely discussing a stable, inherited state (see Croft 1991: 19) and not a number of independent changes towards Type A.

An explanation for the lack of special negative existential constructions in Western Europe is likely to be dependent on the inheritance or expansion of specific constructions, as noted by Veselinova (2014: 1330) for Slavic. The question is why the Romance languages, at least those featured in the current paper, do not change to Type A~B given their tentative ancestral Type A classification, while at least some Slavic and most Indo-Iranian languages do.⁹ And why do negators and verbs in Germanic not merge to form special negative existential constructions? We suggest that an explanation must at least partly involve the morpho-phonology of the standard negation marker. Dryer (2013) reports that the negation in the Indo-European languages of Europe is marked by negative particles rather than negative affixes (with few exceptions in Eastern Europe, including Lithuanian, Latvian, Czech, and Sorbian). Presumably one of the most common pathways to Type A~B, merging the negator with an existential verb, is less likely due to the phonotactic, prosodic, and word order environments in the Western European languages. The morphological distance between the standard negation marker and the verb could therefore prohibit a reduction, which would have then led to the emergence of Type A~B in Western Europe. This is similar to the suggestion made above regarding the lack of reduction of the negation marker and the Past tense copula in Iranian. We do not posit the reluctance of a merger of the negation marker and the verb as the only or even the most important factor. The frequent use of the negative quantifier in Germanic may certainly likewise play a role. The central position of the Germanic and Romance languages in the Standard Average European Sprachbund (van der Auwera 2011) may also have been significant in the stability of the Romance Type A construction and the Germanic specific Type A~B constructions. Recent work by Drinka

⁹ It should be noted that spoken French is moving towards stage A~B. The fixed expression *il n'y pas* 'there is/are no' is essentially a phonologically reduced, single lexical unit (p.c. Ljuba Veselinova).

(2017) on perfect constructions also demonstrates the workings of areal influence in European languages.

Our study also supports Veselinova's finding (Veselinova 2014:1343-1366), which was also noted by Croft, that some languages have two distinct negative existential construction types, each potentially belonging to a different stage of Croft's cycle. Our data includes some similar scenarios in the Indo-Iranian languages and to a lesser extent in the Germanic languages. Acknowledging that multiple types of negative existential constructions may co-exist in the same language necessitates that we reconsider: 1) which types of constructions *do* co-exist, and which *cannot* co-exist, and 2) when two construction types co-exist, what effects will a change to one construction have on the classification of the other, and will these effects be in the same direction as Croft's (1991) cycle? That is, if a combination of construction types does not occur, can we therefore argue that it is because it cannot emerge during language change or is it because of how the different negative existential construction types are defined?

Veselinova (2014) demonstrates in her Polynesian data that Type B constructions can co-exist with Type B~C constructions (as in Kapingamarangi), and that constructions of Type B can co-exist with constructions of Type C (as in Tahitian). We presented above the same patterns of co-existence in Kupia and Standard Oriya, which are both Eastern Indo-Aryan languages. Furthermore, nothing appears to prohibit a language from having multiple constructions of Type A (that is, two distinct negation markers, both also used to negate existential predicates), or multiple constructions of Type B (such as two special negative existential markers).

There seems to be, however, some restrictions to the co-existence of Type C constructions and other types of constructions. First, it appears that two Type C constructions cannot co-exist. Such a situation would entail that two distinct negation markers be used both as negative existential predicates and to negate verbs (under some different conditions, presumably). By definition, in this context, some variation occurs in the expression of verbal negation. Each of the two negative existential markers, then, is used to negate verbs only under some conditions, which means that the two negative existential constructions should be classified as instances of Type B~C. Another combination which seems impossible is two non-cognate constructions of Type A and Type C. Again, this situation has two distinct (and potentially non-cognate) verbal negation markers, which means that the verbal negation marker which doubles as a negative existential marker is used to negate verbs only under some conditions, and hence should be classified as an instance of Type B~C.

The logical impossibility of some combinations of the construction types defined by Croft (1991) and Veselinova (2014) means that at least in some scenarios where a language has two distinct negative existential constructions, a change in one entails a change in the second as well. Such a possibility was mentioned in §4.1 above for languages with a Type B and a Type C construction, such as Kupia or Tahitian. In these languages, an extension of the Type B negative existential marker to be used for verbal negation (such as Type B > Type B~C) would lead to variation in verbal negation. Thus, the status of the older Type C construction would move 'backwards' on Croft's (1991) cycle to be Type B~C (i.e., Type C > Type B~C). This would lead to two B~C type constructions co-existing in the same language. In this situation, in turn, neither construction can move into the domain of Type C constructions without a loss of the other. In other words, as long as both Type B~C constructions co-exist, there is some variation in the domain of verbal negation. Thus, only a loss of this variation, that is, a loss of one of the Type B~C construction, would lead to a change in the status of the other to a Type C construction.

6. Conclusions

This paper offers an overview of the constructions that express negative existential functions in 42 Indo-European languages, which combined with Veselinova's (2014) analysis of Slavic languages, results in data for 55 Indo-European languages. While this constitutes a rather small sample, we hope to expand this number to create a larger sample that may be used to conduct a comprehensive phylogenetic comparative analysis. Thus far, we detected distinct patterns of variation, with the Romance languages uniformly classified as Type A, the Germanic languages as uniformly Type A~B, while the Indo-Iranian language family is far more varied and with further study, may resemble Polynesian in that it contains all six types of the Negative Existential Cycle. The reason for these patterns of variation may be different patterns of morphosyntax and morpho-phonology in the different sub-branches of Indo-European, a hypothesis that would need to be tested in future work. We concluded by discussing the theoretical considerations that emerge when languages need to be classified as having two distinct negative existential constructions, when each may belong to a different type of the NEC. How these distinct negative existential constructions may interact has consequences for the expected diachronic changes within the Cycle. Hence, describing how negative existentials and standard negation interact has yet again become slightly more complicated, which is a good sign for the prospective study on this topic.

7. References

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Appendix A

The translation questionnaire that was used to elicit data for many languages in the current sample

Negation questionnaire

The context descriptions are given in square brackets; further clarifications about the example sentences come in between parentheses. Neither the contexts, nor the clarifications are to be translated. Please translate only the **bold face text**.

Please provide a morpheme to morpheme translation for all of the translated examples below. Should it turn out that the English examples/situations are in any way culturally inappropriate, e.g. take up topics or objects that are taboo or simply do not exist in your culture/language, feel free to substitute them with sentences that fit better your language.

1. Language info

1.1. Language name

1.2. Genealogical affiliation

1.3. Where is it spoken? Or where did you study it?

2. Are you a native speaker? If not, how did you gain knowledge of this language?

3. Verbal sentences

(1) Example

Mary sings

(2) Example

Mary does not sing

(3) Example

Mary likes movies

(4) Example

Mary does not like movies

The answers to 3.1 below and sub-questions can be very short or just references to other sources.

3.1. Can you think of any tense-aspect categories where the negator used in 1 through 4 cannot be used? If 'yes':

3.1.1. Please name these categories. It would be helpful to give examples too if possible (a pointer would be fine too, see above);

3.1.1.1. What negator is used with them? Again, examples or references are welcome.

4. Non-verbal sentences

4.1. Equational predicates

(5) Example

[Introducing a guest to the family]: **This is my friend Tom**

(6) Example

[A family gathering plus a guest]

Your mom [looking at the guest]: Is this Tom?

Speaker B: **This is not Tom, it's Jake.**

4.2. Descriptive (property ascribing) predicates

(7) Example

[Two people who met recently are talking about a common acquaintance] Speaker A: What does Tom do?

Speaker B: **Tom is a teacher.**

(8) Example

[Same context as in (7)]

Speaker A: Is Tom a teacher?

Speaker B: **Tom is not a teacher, he is a doctor.**

(9) Example

[Talking about the appearance of a somebody I just met] **Tom is tall.**

(10) Example

[Same context as in (9)] **Tom is not tall.**

(11) Example

[Tom just heard some really good news] **Tom is happy.**

(12) Example

[Tom is waiting for some news that's long delayed] **Tom is not happy.**

4.3. Locative and locative-presentative predicates

(13) Example [Somebody comes to your house, looking for your brother] (Yes, wait a minute), **Tom/he is here.**

(14) Example [Same context as in (13)] (Sorry), **Tom/he is not here.**

(15) Example [Same context as in (13)] (Sorry), **Tom/he is not here, he is in town.**

(16) Example [Hearing trashing and noise, looking through the window] **There are some wild cats in the garden.**

(17) Example [Same context as in (16)] Speaker A: Do you think there are any wild cats in the garden? Speaker B: **There aren't any wild cats in the garden.**

4.4. *Clauses where only existence is predicated*

(18) Example [The teacher, in a zoology/natural sciences class] **There are wild cats** (in Africa or somewhere else; there is such a thing as wild cats).

(19) Example [Same context as in (18)] **There are no wild cats** (in Africa or anywhere, there is no such thing as wild cats).

(20) Example [Same context as in (18)] **Wild cats exist** (The sense is the same as for 4.15; this is basically to check whether the language has an intransitive existential verb as the English *exist*, French *exister*, Modern Greek *ipárho*, Russian *sushtestvovat*’.)

(21) Example [Same context as in (18)] **Wild cats do not exist.**

4.5 *Predicative possession*

(22) Example
[Talking about helping somebody to move]
(Tom can help), **Tom/he has a car.**

(23) Example
[Same context as in (22)]
(Tom cannot help), **Tom/he does not have a car.**

Appendix B

1. *Indo-Iranian*

Old Persian (based on Skjærvø 2009b and Bisitun inscription, Schmitt 1991)

Verbal negation: Preverbal *naiy*-

Affirmative existential: the copular verb expresses existence (Skjærvø 2009b:134).

Negative existential: consists of a combination of the verbal negation marker and the affirmative existential.

- (1) *naiy āha martiya naiy pārsa naiy māda ...*
 NEG COP.PST.3SG man NEG persian NEG median
 ‘There was no man, not Persian, not Median, (... who dared to speak up).’ (DB1:48-49)

Summary: A

Middle Persian (editions of primary texts used in the paper are cited above; see also Skjærvø 2009a for overview of Western Middle Iranian).

Verbal negation: preverbal *ne-* / *nē-* (different philologists have different interpretations of the vowel length).

Affirmative existential: expressed by clauses with a copular verb: *būd-* for past and *ast* for present.

Negative existential: with a past tense copula and its present tense counterpart *baw-*, the standard verbal negation marker *nē-* is found.

- (2) *agar ātaxš ī wahrām nē būd*
 if fire LNK Wahram NEG be.PST.3SG
 ‘If the fire of Wahram did not exist (lit. if there was no fire of Wahram)’ (PRDD:18)

The form *ast* is negated by *nēst* (or *nest*; depending on vowel length interpretation). This negation marker is clearly an amalgam of *nē-* and *ast*, but there are good reasons to consider it as a unique marker.

- (3) *az padīdīgīh rāh ī ō dušaxw nest*
 from repentance road LNK to hell NEG.COP
 ‘From repentance, there is no road to Hell.’ (DK6:50)

Summary: with the past tense, the negative existential is expressed by the copula preceded by the standard verbal negation marker, **hence: Type A**. In the present tense, a specific negative form of the copula is used, *nēst*, therefore **Type B. Hence: Type A~B**

Sivandi (Data from Lecoq 1979)

Standard verbal negation: preverbal *na-*, *ne-*, *ney-*

Affirmative existential: figure + (ground) + copular verb

- (4) *ye šāh-i bi*
one king-INDEF be.PST.3SG
'There was a king.' (Lecoq 1979:107)

- (5) *ye čašme-y en*
one fountain-INDEF be.PRS.3SG
'There is a fountain.' (Lecoq 1979:127)

Negative existential:

1. The locative verb *dār-* 'be located', 'be.at', 'have' + standard verbal negation marker

- (6) *ke bār na=dār-e*
COMP grain NEG=be.at-3SG
'(He closed his windmill down) because there was no grain.' (Lecoq 1979:150)

2. The past tense copulas + the standard verbal negation marker:

- (7) *albatta barqa=m na=bi*
evidently electricity=TOP NEG-be.PST.3SG
'(Someone lit a candle), evidently there was no electricity.' (Lecoq 1979:89)

3. *Nūnd*, a negative copula.

- (8) *Kasi dege ba goft=eš nūnd*
Someone other to say=3SG NEG.COP
'No one else answered his appeals.' (Lecoq 1979:95)

- (9) *vāllāh, me či tū das=em nūnd*
by.god 1SG what in hand=1SG NEG.COP
'By God, there's nothing in my hand' (Lecoq 1979:150)

- (10) *xolāse hīč goftegūi az pīrežen-e nūnd*
and.finally NEG question from old.woman-DEF COP.NEG
'And at the end, there were no questions from the old woman.' (Lecoq 1979:108)

Summary: with two existential copulas, the past tense copula and the locative verb, are negated by the standard negation form. **Hence: Type A.** The present tense negative existential is expressed using a negative copula *nūnd*. **Hence: Type B.**

Hence: Type A~B.

New Persian / Tajik (own knowledge; p.c. Cormac Anderson; see also Perry 2005, Perry & Windfuhr 2009)

New Persian and Tajik exhibit remarkably similar behavior. Verbal negation in both is expressed by the preverbal *ne-*, *ni-*.

The affirmative existential is expressed by a combination of the figure (NP), optional ground (PP, NP), and a copular verb:

- (11) *dar in ōtaq do panjere hast* (New Persian)
dar in xona du tireza hast (Tajik)
 in DEM room two window EX.3SG
 ‘There are two windows in this room.’ (Parry & Windfuhr 2009:450)

Negative existentials are formed by replacing the affirmative existential copula *hast* with its negative counterpart *nest*:

- (12) *Dar in xona tireza nest*
 in DEM house window NEG.COP.PRS.3SG
 ‘There are no windows in this house.’ (Tajik, Perry 2005: 202)

Past tense copulas are negated by *ne-*, *ni-* in this construction. Furthermore, in New Persian, *daftan* ‘have’ is used in the negative existential as well.

- (13) *gurba-ye vafi na-dar-ad*
 cat-LNK wild NEG-have-3SG
 ‘There are no wild cats.’ (p.c. Cormac Anderson)

Summary: Type A~B

Gorani (Data from Mahmoudveysi et al. 2013.)

Verbal negation: prefixed / procliticized *ne-* / *na-* / *niy-* (Mahmoudveysi et al. 2013:25)

Affirmative existentials are expressed by a copular verb that is preceded by the figure argument (with an optional ground argument).

- (14) *ya dāya kaywānū ma-w-u*
 one mother old.lady IND-be.PRS.3SG
 ‘There is an old lady.’ (Mahmoudveysi et al. 2013: 15)
- (15) *čünka nwār-aka hē*
 because cassette-DEF exist.3SG
 ‘because there are cassettes’ (Mahmoudveysi et al. 2013: 34)

Negative existentials are formed by *nīya* or *naw* that Mahmoudveysi et al. interpret as a negative copula.

- (16) *falā-ka-y mwāy ay wā nīya*
 farmer-DEF-? IND.say.PRS.3SG well wind not.exist.3SG
 ‘The farmer says: “Well, there’s no wind.”’ (Mahmoudveysi et al. 2013: 61)
- (17) *masan yā barq naw*
 for.example one electricity NEG.COP
 ‘(when,) For example, there is no electricity.’ (Mahmoudveysi et al. 2013: 159)

Summary: Type A~B.

Gilaki (Rastorgueva et. al 2012)

Verbal negation is expressed by a preverbal *ne-*, *na-*, *n-*. The exact form is determined by phonotactics.

Affirmative existential:

- (18) *ustatər utəy=ə xəli nah-a*
over.there room=LNK empty exist.PRS.3SG
'Over there, there is an empty room.' (Rastorgueva et al. 2012: 310)

- (19) *ita rə nah-a*
one road exist-3SG
'There is one road.' (Rastorgueva et al. 2012: 318)

- (20) *miz=ə=ru du=ta kitəb dərə*
table=LNK=on two=CLF book be.located.3SG
'There are two books on the table.' (Rastorgueva et al. 2012: 134)

- (21) *əxər dīn=u məzhāb=u xudə ki is-ə*
after.all religion=and faith=and god COMP be.PRS.3SG
'After all, there is religion, faith and God.' (Rastorgueva et al. 2012: 275)

Negative existential: expressed by the verbal negation marker that is attached to one of the copulas used in the affirmative existential forms.

- (22) *u bələyə ki dər dunyə nə-na bi*
and misfortune REL in world NEG-exist be.PST
'whatever misfortune that existed in the world' (Rastorgueva et al. 2012: 263)

- (23) *mašin nə-ə-na-ə*
car NEG-PFV-exist.PST-3SG.PST
'There are no cars.' (Rastorgueva et al. 2012: 326, their glosses and zeroes)

- (24) *ame xənə hitf kəs n-es-ə*
1PL house NEG somebody NEG-be.PRS-3SG
'There is nobody at home.' (Rastorgueva et al. 2012: 133)

Summary: Type A.

Ziyarati (Shokri et al. 2013)

Verbal negation: expressed by *ne-* or *na-* prefix / proclitic.

Affirmative existential: expressed by the copular verb or by the locative copula *dār-* 'be.at' or 'be located'.

- (25) *jānevar dar-e, xu dar-e*
wild.animals be.at.PRS-3SG boar be.at.PRS-3SG

‘(Why (do) we need a night watchman?) There are wild animals; there are boars.’
(Shokri et al. 2013: 84)

- (26) *messe alān ye jāmeā=i hasse ke ...*
for.example now one shirt=INDEF be.PRS.3SG COMP
‘There is a shirt that (has buttons all the way up).’ (Shokri et al. 2013: 153)

- (27) *esā in rasmā ā-bee*
nowadays DEM ceremony-PL PRV-be.PST.3PL
‘Nowadays there are ceremonies ...’ (Shokri et al. 2013: 80)

Negative existential: expressed by one of the copulas above preceded by a verbal negation marker.

- (28) *fupā da-ni-bu-in ...*
watchman PRV-NEG-be.PST-3PL
‘(if) there are no watchmen’ (Shokri et al. 2013: 84)

- (29) *ammā dige age na=bu ke ...*
but PRT if NEG=be.PST.3SG COMP ...
‘but if there is no one who (want to buy our goods)’ (Shokri et al. 2013: 82)

- (30) *zemestān o bāhār o payiz o tābestān ne=dāft-e*
winter and spring and autumn and summer NEG-be.at.PST-3SG
‘There was no winter, spring, autumn, and summer (i.e., where we live there is no difference between the seasons).’ (Shokri et al. 2013: 65)

Summary: Type A.

Kurmanji (Thackstone 2006, our glosses and parsing)

Verbal negation: *na, ne*.

Affirmative existential: formed with the usual copulas preceded by a single figure constituent.

- (31) *Got-in-eke pêşiy-ên me heye.*
say-NMZ-INDEF ancestor-PL 1PL.OBL be.PRS.3SG
‘There is a saying of our ancestors.’ (Thackstone 2006: 31)

Negative existential: expressed by *tun-*

- (32) *Di vî warî da otorîtey-eke resmî tune.*
in DEM regard in authority-INDEF official COP.NEG.PRS.3SG
‘In this regard, there is no official authority.’ (Thackstone 2006: 32)

- (33) *Madem ku zimannivîs tune*
as.long.as COMP writer COP.NEG.PRS.3SG
‘as long as there are no writers’ (Thackstone 2006: 32)

- (34) *Ger xwendevan-ên kurdî tunebin*
 if reader-PL Kurdish COP.NEG.PST
 ‘if there are not readers of Kurdish’ (Thackstone 2006: 31)

Summary: Type B.

Taleshi (Paul 2011).

Verbal negation: The standard verbal negation is a *nə-*, *ni-*.

Affirmative existential:

- (35) *vind=əş=e də gəla əmsafa hest-e*
 see=3SG=TRS two CLF then exist-3SG
 ‘He saw that there are two baskets.’ (Paul 2011: 358)

- (36) *vin-ən kə bale, vâş b-a*
 see-3PL COMP yes grass be-3SG
 ‘They see that yes, there’s grass.’ (Paul 2011: 210)

- (37) *iâ rama=i dari=a*
 here flock=INDEF exist=COP.3SG
 ‘There is a flock here.’ (Paul 2011: 243)

Negative existential: The standard verbal negation is often used:

- (38) *ğeir az xudâ hikas ne-bu*
 apart from god nobody NEG-be.3SG
 ‘Apart from God, there’s nobody.’ (Paul 2011: 176)

- (39) *vin-ə sas=i ni=a*
 see-3SG voice=INDEF NEG=COP.3SG
 ‘She sees that there is no answer.’ (Paul 2011: 422)

Rarely in the data presented in Paul 2011 *ni* is used alone in negative existentials:

- (40) *câra=i ni magam əm ki bə-ş-am*
 solution=INDEF NEG except DEM COMP SUJB-go-1PL
 ‘There is no solution but that we go.’ (Paul 2011: 214)

Summary: Type C~A

Koroshi (Nourzaei et al. 2015)

Verbal negation: expressed by a preverbal *na-*, *nā-* *nay-*.

Affirmative existential: expressed by the copula preceded by a single-figure constituent (and an optional ground constituent).

- (41) *ye ādam=e bīčāra=en*

one person=LNK poor=COP.NPST.3SG
 ‘There is a poor fellow.’ (Nourzaei et al. 2015: 31)

- (42) *yek dāzan=ē bod-a=∅*
 one woman=INDEF become.PST-PP=COP.NPST.3SG
 ‘There is (lit. has been) a woman.’ (Nourzaei et al. 2015: 90)

Negative existential: expressed by a copula preceded by the verbal negation marker:

- (43) *gayr az xodā hīčka nay-at-∅*
 except from god nobody NEG-COP.PST-3SG
 ‘Except for God, there was no one.’ (Nourzaei et al. 2015: 123; formula)

Occasionally found expressed by *nē*, which is not mentioned in the grammar sketch by Nourzaei et al., but is glossed by them as a non-past tense copula.

- (44) *bāk=ē nē*
 fear=INDEF NEG.be.NPST.3SG
 ‘(And I said:) No problem!’ (Nourzaei et al. 2015: 149)
- (45) *be.xātere.ke ay dar=ī fāyeda nē*
 because from in=PC.3SG use NEG.be.NPST.3SG
 ‘because there was nothing to gain (lit. there is no use)’ (Nourzaei et al. 2015: 114)

Summary: A~B

Hindi (see Bashir 2006)

Odia (Neukom & Patnaik 2003)

Verbal negation: The most common verbal negation marker is a post-verbal *nahĩ*. The copula *th-* (often referred to as a locative but used for other functions as well) is negated by a preverbal *nɔ-* and this negative marker is occasionally also found on other, lexically heavy verbs. This occurs when an old *th-* auxiliary is involved in the creation of the form, but it is also found in other circumstances.

- (46) *se gɔl-a nahĩ*
 3SG go.PST-3SG NEG
 ‘He did not go.’ (Neukom & Patnaik 2003: 340)
- (47) *se muŋdɔ hɔla-i nahĩ kɔr-iba-ru ɔnyɔ jɔŋɔ-kɔ kɔh-il-a*
 3SG head shake-CV NEG do-INF-ABL other CLF-DEF say-PST-3SG
 ‘since she shook her head and said no, the other one said...’ (Neukom & Patnaik 2003: 43)
- (48) *khe[-u-nɔ-th-il-a]*
 play-IPFV-NEG-AUX-PST-1SG
 ‘I was not playing.’ (Neukom & Patnaik 2003: 340)
- (49) *kintu bɔrttɔman se nɔ-j-ib-ɔ kahiki*

but now 3SG NEG-go-FUT-3SG why
 ‘But why shouldn’t she go now?’ (Neukom & Patnaik 2003: 341)

- (50) *ta-ku sɔtɔrkɔ kɔr-a-i-de-b-e puɔ jemiti*
 3MSG-DAT careful do-CAUS-CV-give-FUT-2PL boy in.order
istri nɔ-chũ-ẽ
 iron NEG-touch-3SG.HAB
 ‘Warn her that the boy should not touch the iron.’ (Neukom & Patnaik 2003: 155)

Affirmative existential: The usual verbal copulas *ɔch-* and *th-* are used here.

- (51) *eṭhi kete-gurie saikel ɔch-i*
 here some-PL bicycle be-3SG
 ‘There are some bicycles here.’ (Neukom & Patnaik 2003: 47)
- (52) *tumɔ laibreri-re bɔngɔla bɔhi ɔch-i? hɔ̃ kete-khɔŋdɔ ɔch-i*
 2SG library-LOC Bangla book be-3SG yes some-CLF be-3SG
 ‘Are there Bengali books in your library? Yes, there are some.’ (Neukom & Patnaik 2003: 118)
- (53) *e bɔs-re purusɔ o stri-manɔ-nkɔ-rɔ bɔs-iba jaga ɔch-i*
 DEM bus-LOC man and woman-PL-OBL-GEN sit-INF place be-3SG
 ‘In this bus there are seats for gentlemen and (seats) for ladies.’ (Neukom & Patnaik 2003 :38)

Negative existential: The post-verbal negation marker *nahĩ* is used without a copula (B~C, because there is another SN). Neukom and Patnaik parse this marker as a negative copula and a third person singular bound person marker. As *th-* is negated with a preverbal *nɔ-*, it is also negated in this manner when it functions as the existential copula. This negation marker is also used with prototypical action verbs (not only when *th-* is an auxiliary).

- (54) *deuɔ bhitɔr-e kie ɔch-i ki? na, kehi nah-ĩ*
 temple inside-LOC someone be-3SG INT no anyone NEG.be-3SG
 ‘Is there someone in the temple? No, there isn’t anyone.’ (Neukom & Patnaik 2003: 100)
- (55) *bɔɔ nah-ĩ choɔ di-ɔ*
 big NEG.be-3SG small give-2PL.IMPR
 ‘There are no big (ones); give me small (ones).’ (Neukom & Patnaik 2003: 72)
- (56) *premika nɔ-th-ile birɔhɔ jɔntrɔŋo nɔ-tha-nt-a*
 mistress NEG-be-COND.CV separation pain NEG-be-COND-3SG
ki kehi mɔdɔ pi-u-nɔ-tha-nt-e
 or anybody wine drink-IPFV-NEG-AUX-COND-3PL
 ‘If there were no girls, there would be no pain of separation nor would anybody drink alcohol.’ (Neukom & Patnaik 2003: 195)

Summary: Type A & Type B~C

Nepali (p.c. Sugam Singh, with the help of Marie-Caroline Pons)

Verbal negation: *-dina* and *-in(a)n* verbal suffixes; both can be further parsed, but this is not essential to illustrate the point here.

- (57) *yini mahilā git gāũ-dina-n*
DEM woman song sing-NEG.PRS.3SG
'The woman doesn't sing.' (p.c. Sugam Singh)
- (58) *yini mahilā-le git gā-inan*
DEM woman-ERG song sing-NEG.PST.3SG
'The woman didn't sing.' (p.c. Sugam Singh)
- (59) *yini mahilā jhyal phoḍ-dinan*
DEM woman window break-NEG.PRS.3SG
'The woman didn't break the window.' (p.c. Sugam Singh)
- (60) *yini mahilā-le jhyāl phoḍ-inan*
DEM woman-ERG window break-NEG.PST.3SG
'The woman didn't break the window.' (p.c. Sugam Singh)

Affirmative existential: with the usual verbal copulas.

- (61) *bāri-mā birālo-haru chha-n*
garden-LOC cat-PL be-3SG
'(When he looked outside) there were cats in the garden.' (p.c. Sugam Singh)
- (62) *bāri-mā birālo-haru thi-e*
garden-LOC cat-PL be.PST-3SG
'(When he looked) there were no cats in the garden.' (p.c. Sugam Singh)

Negative existential: The usual verbal negation markers are used here regardless of tense/aspect.

- (63) *bāri-mā birālo-haru chha-inan*
garden-LOC cat-PL be-NEG.PRS.3SG
'(He is looking outside) There are no cats in the garden.' (p.c. Sugam Singh)
- (64) *bāri-mā birālo-haru thi-enan*
garden-LOC cat-PL be-NEG.PST.3SG
'(he looked outside) There were no cats in the garden.' (p.c. Sugam Singh)
- (65) *jāgali birālo-haru hũ-deinan*
jungle cat-PL be.PRS-NEG.PRS.3SG
'There are no wild cats' (also given for 'wild cats don't exist'). (p.c. Sugam Singh)
- (66) *jāgali birālo-haru thi-enan*
jungle cat-PL be.PST-NEG.PST.3SG
'There were no wild cats (back in the day, before they were brought here).' (p.c. Sugam Singh)

Summary: Type A.

Assamese (p.c. Krishna Boro and Nihankara Dutta).

Verbal negation: Verbs are negated by a *ni-* prefix or by a *nasil* negative auxiliary. The negative auxiliary is probably historically *ni-* + *as* COP + *il* PST, and are parsed here in this manner. Whether this parsing is a synchronic reality in the minds of speakers is questionable (we would like to thank Krishna Boro for this point).

- (67) *Mohila-goraki(-e) gan na-ga-j*
Woman-CLF(-NOM) song NEG-sing-3SG
'The woman didn't sing.' (p.c. Krishna Boro and Nihankara Dutta)
(some experts consider the optional *-e* an Ergative marker)

- (68) *mohila-goraki(-e) gan go-a n-as-il-e*
woman-CLF(-NOM) song sing-PTCP NEG-COP-PST-3SG
'The woman didn't sing.' (p.c. Krishna Boro and Nihankara Dutta)

Affirmative existential: The usual verbal copulas *as-* or *t^hak-* are used here. The later is often referred to as a "locative" existential in the (Eastern) Indo-Aryan literature, but it can be found also in other types of nominal predication domains.

- (69) *sotal-ot keitaman mekuri as-e*
yard-LOC some cat COP-3SG.PRS
'(Hearing noise from outside) there are some cats in the yard' (p.c. Krishna Boro and Nihankara Dutta)

- (70) *sotal-ot keitaman mekuri as-il*
yard-LOC some cat COP-PST
'(When he looked to the yard) there were some cats in the yard.' (p.c. Krishna Boro and Nihankara Dutta)

- (71) *bonoria mekuri t^hak-e / as-e*
wild cat stay-3SG.PRS / COP-3SG.PRS
'There are wild cats.' (p.c. Krishna Boro and Nihankara Dutta)

Negative existential: A special negative existential *nai* is used (hence: Type B), but also *na-* and *nasil* are found (hence Type A). There seems to be a tense/aspect interaction with regards to the distribution of these markers.

- (72) *sotal-ot (eta-u) mekuri nai*
yard-LOC (one-ADD) cat NEG.EX
'(He's looking into the yard) there are no cats in the yard.' (p.c. Krishna Boro and Nihankara Dutta)

- (73) *sotal-ot (eta-u) mekuri n-as-il*
yard-LOC one-ADD cat NEG-be-PST
'(When he looked into the yard) there were no wild cats in the yard.' (p.c. Krishna Boro and Nihankara Dutta)

- (74) *bonoria mekuri na-t^hak-e*
 wild cat NEG-stay-3SG
 ‘There are no wild cats.’ (p.c. Krishna Boro and Nihakara Dutta) (the verb in this clause means ‘stay, be at, exist’)
- (75) *bonoria mekuri n-as-il*
 wild cat NEG-be-PST
 ‘There were no wild cats (back in the day, before they were brought here).’ (p.c. Krishna Boro and Nihakara Dutta)

Summary: Type A~B

Kupia (Christmas & Christmas 1973a,b; we will not repeat examples from the paper here)

Verbal negation: Is expressed by a post verbal *nay* (see the example in our article).

Affirmative existential: Copular verb + NP expressing the figure + optional NP / PP expressing the ground.

Negative existential: There are two construction types. In both, the copula is replaced completely by a different marker. Construction type one is of type B, and a special negative form of the copula (*nenj-*) replaces the copular verb used in the affirmative. The second is of type C and the Verbal negation marker is used as a special negative existential marker.

Summary: Type B and Type C.

2. Albanian, Armenian, Greek

Albanian

Standard (Tosk) Albanian has four negative morphemes, *nuk*, *s’*, *mos* and *jo* (Turano 2000:82), see Buchholz and Fiedler (1987: 172) for another negative morpheme, *as*. *mos* is used to negate subjunctive, imperative and optative clauses as well as gerunds and infinitives (Turano 2000: 85). *jo* often referred to as a ‘constituent negator’ and is restricted to use with nominals, adjectives, prepositional phrases, and adverbials (Turano 2000: 86). Only *nuk* and *s’* are relevant for the present discussion. They are interchangeable even though they are used differently (Buchholz and Fiedler 1987: 172). Both occur in standard negation:

- (76) *Nuk vajta (më) në bibliotekë.*
 NEG go.PST.1SG (anymore) in library
 ‘I didn’t go to the library (anymore).’ (Turano 2000: 82)
- (77) *S’-vajta (më) në bibliotekë.*
 NEG-go.PST.1SG (anymore) in library
 ‘I didn’t go to the library (anymore).’ (Turano 2000: 82)

The verb used for existential predicates is *ka* ‘to have’, as indicated by Camaj (1984: 12), who explicitly glosses the third person singular form of the verb, *ka*, to mean ‘he, she has; there is’, and its negated form is *nuk ka*, *s’ka* with ‘there is no’.

Camaj’s (1984) grammar includes several examples of existential predicates. The examples below illustrate the use of the affirmative and negated existential predicates:

- (78) *Në mulli ka drithë e miell*
 in mill have.3SG grain and flour
 ‘In the mill there is grain and flour.’ (Camaj 1984: 12/257)

- (79) *ndër ne s’ka kundërshtime*
 among 1PL.ACC NEG+have.3SG objection.PL
 ‘There are no conflicts among us.’ (Camaj 1984: 70)

As *ka* ‘to have’ is negated as any other verb, Albanian is classified as a type A language.

Armenian

Modern (Eastern) Armenian has the negative prefix *č’-* for standard negation and this prefix attaches to most verb forms, except for imperatives (Dum-Tragut 2009: 522):

- (80) *Vardan-ě gnec’ gírk’-ě.*
 Vardan.NOM-DEF buy.AOR.3SG book.NOM-DEF
 ‘Vardan bought the book.’ (Dum-Tragut 2009: 51)
- (81) *Vardan-ě č’-gnec’ gírk’-ě.*
 Vardan.NOM-DEF NEG-buy.AOR.3SG book.NOM-DEF
 ‘Vardan did not buy the book.’ (Dum-Tragut 2009: 51)

Modern Armenian *em* ‘to be’ expresses copular meaning and also functions as an auxiliary (Dum-Tragut 2009: 215):

- (82) *Anuš-ě gelec’ik aljik ē.*
 Anuš.NOM-DEF beautiful girl.NOM is.3SG
 ‘Anuš is a beautiful girl.’ (Dum-Tragut 2009: 215)
- (83) *Anuš-ě gelec’ik aljik č’-ē.*
 Anuš.NOM-DEF beautiful girl.NOM NEG-is.3SG
 ‘Anuš is not a beautiful girl.’ (Dum-Tragut 2009: 215)

The copula is used for locatives in the following:

- (84) *Im hayr-ě Ani hyuranoc’-um ē.*
 my father.NOM-DEF Ani.NOM hotel-LOC be.3SG
 ‘My father is in the Hotel Ani.’ (Dum-Tragut 2009: 382)

However, another verb that is frequently used for both locative and true existentials is the defective verb *kam* ‘to exist’ (Dum-Tragut 2009: 282). The following are examples of a locative existential and a true existential:

- (85) *hamaynk'-i lekavar-i t-an-ě*
 community-DAT leader-DAT house-DAT-DEF
heřaxos ě'-ka.
 telephone.NOM NEG-exist-PRS.3SG
 'There is no telephone in the house of the leader of the community.'
 (Dum-Tragut 2009: 104-105)
- (86) *inč'u ě'-k-an barjrakarg ěk'skursavar-ner?*
 why NEG-exist-PRS.3PL high.quality tourist guide-PL.NOM
 'Why there are no high-quality tourist guides?' (headline) (Dum-Tragut 2009: 693)

It seems that both *kam* 'to exist' and the copula *em* are used for locatives, while only *kam* alone can be used to predicate existence, without reference to a specific situation or location. Both *kam* and *em* are negated with the negative prefix *ě'-*, classifying Modern Armenian as a type A language.

Modern Greek

In Modern Greek, the negative morpheme *δεν* (*den*) 'not' is placed before the verb to form a negative indicative statement (Holton et al. 2012: 510). Another negator exists for sentences in the subjunctive mood, but this is not addressed here.

- (87) *Οι συγγενείς του δεν θα του δώσουν καμιά βοήθεια*
Oi syngeneís tou den tha tou dósoun kamiá voítheia
 DEF.PL relative.PL POSS.3SG NEG FUT 3SG.ACC give any aid
 'His relatives are not going to give him any help.' (Holton et al. 2012: 510)

It is possible to use the *δεν* (*den*) 'not' in combination with the copula *είμαι* (*eímai*) for many non-verbal predicates, including locatives:

- (88) *Δεν είναι καμιά αδέσποτη γάτα στον κήπο*
den eínai kamiá adéspoti gáta ston kípō
 NEG be.3SG none stray cat in.DEF garden
 'There isn't any wild cat in the garden.' (p.c. Eirini Skourtanioti)

Nonetheless, for existential predicates, *υπάρχω* (*ypárcho*) 'to exist' or *έχω* (*écho*) 'to have' must be used rather than the copula:

- (89) *Δεν υπάρχει φάρμακο σ'αυτή την αρρώστια*
den ypárchei fármako s'-aftí tin arróstia
 NEG exist medicine of-DEM.FSG DEF.ACC illness
 'There is no cure [lit. 'medicine'] for this illness.' (Holton et al. 2012: 493)
- (90) *Στην Ολλανδια, με νόμο του 1976 απαγορεύεται να ανοίγουν τα καταστήματα τις Κυριακές, ...*
...ενώ αντιθέτως στην Πολωνια δεν υπάρχουν πλέον περιορισμοί.
...enó antiθέtos stin Polonia den ypárchoun pléon periorismoí.
 while instead in.DEF Poland NEG exist much restriction.PL

‘In the Netherlands, a 1976 law prohibited opening shops on Sundays, whereas in Poland, there are no such restrictions anymore.’ (Puigdollers 2015: 483)

- (91) *Δεν έχει φωτα στο σπίτι τους.*
den echei fota sto spiti tous.
 NEG have.PRS.3SG light.PL on.DEF house POSS.3PL
 ‘There are no lights in their house.’ (Holton et al. 2004: 199)
- (92) *Δεν έχει αδέσποτες γάτες*
den échei adéspotés gátes
 NEG have.PRS.3SG stray cat.PL
 ‘There are no stray cats.’ (p.c. Eirini Skourtanioti)

While the copula cannot be used, Modern Greek is a clear instance of Type A because it uses the standard negator for negative existentials. For a similar analysis of Modern Greek, see also Veselinova (2013: 115-116). For more information regarding diachronic change in Greek negation, see Kiparsky & Condoravdi (2006).

3. Baltic

Latvian

Standard negation in Latvian is expressed through the preverbal particle *ne*:

- (93) *Marija dzied*
 Mary sing.PRS.3SG
 ‘Mary sings.’ (p.c. Sandra Grinberga)
- (94) *Marija ne dzied*
 Mary NEG sing.PRS.3SG
 ‘Mary does not sing.’ (p.c. Sandra Grinberga)
- (95) *Viņš ne-runā latviski*
 3SG.MASC NEG-speak.PRS.3SG Latvian
 ‘He doesn’t speak Latvian.’ (Mathiassen 1997: 164)

In negative existentials, as in many other contexts where the copula is used, the negated form of the copula *ir* ‘to be’ in the present tense has the form *nav*:

- (96) *Afrikā ir lauvas*
 Africa COP lion.PL.NOM
 ‘In Africa there are lions.’ (Mathiassen 1997: 164)
- (97) *Latvijā nav lauvu*
 Latvia NEG.COP lion.PL.GEN
 ‘In Latvia there are no lions.’ (Mathiassen 1997: 164)
- (98) a. *Ir savvaļas kaķi*
 COP wild cat.PL.NOM
 ‘There are wild cats.’ (p.c. Sandra Grinberga)

- b. *Nav savvaļas kaķu*
 NEG.COP wild cat.PL.GEN
 ‘There are no wild cats.’ (p.c. Sandra Grinberga)

In contrast, in the past tense, a regularly negated form of the copula is used:

- (99) a. *Bija savvaļas kaķi*
 pst.cop wild cat.pl.nom
 ‘There were wild cats.’ (p.c. Sandra Grinberga)
- b. *Ne-bija savvaļas kaķu*
 NEG-pst.COP wild cat.pl.gen
 ‘There were no wild cats.’ (p.c. Sandra Grinberga)

The copula *ir* ‘to be’ is used in this manner for all the non-verbal sentences we investigated in our questionnaire, including equational predicates, descriptive predicates, locative predicates (see above, examples 96 and 97), and negative existentials. Hence, we classify Latvian as Type A~B, as a special negative existential construction exists but its usage is dependent on TAM.

Lithuanian

Mathiassen (1996: 176-177) states that the most important verbal negator in Lithuanian is *ne*, which can be a prefix for verbs and other word classes:

- (100) *aš nusipirkau naują dviratį*
 1SG buy.PST.1SG new.ACC bicycle.ACC
 ‘I have bought a new bicycle.’ (Mathiassen 1996: 185)
- (101) *aš ne-nusipirkau naujo dviračio*
 1SG NEG-buy.PST.1SG new.GEN bicycle.GEN
 ‘I have not bought a new bicycle.’ (Mathiassen 1996: 185)

For non-verbal predicates, one option is to delete the copula *būti* ‘to be’; these are then negated by inserting *ne*:

- (102) *jis studentas*
 3SG.MASC.NOM student.NOM.MASC.SG
 ‘He is a student.’ (Mathiassen 1996: 176)
- (103) *jis ne studentas*
 3SG.MASC.SG NEG student.NOM.MASC.SG
 ‘He is not a student.’ (Mathiassen 1996: 176)

In most cases, however, the copula is present. For the present tense, the negative form of the copula is a contraction of the negator *ne* and the non-negative form of the copula *yra*, which is written *nėra* (Mathiassen 1996: 1976):

- (104) *Čia yra laukinių kačių*

here be.PRS.3SG wild.GEN.MASC.PL cat.GEN.MASC.PL
 ‘There are wild cats.’ (p.c. Algirdas Sabaliauskas)

- (105) *Čia laukinių kačių nėra*
 here wild.GEN.MASC.PL cat.GEN.MASC.PL NEG.be.PRS.3SG
 ‘There are no wild cats.’ (p.c. Algirdas Sabaliauskas)

We analyze this contracted form as a special negative existential marker. In the past tense, a regularly negated form of the copula is used to form the negative existential:

- (106) *Protestuoti dėl to ne-buvo kam.*
 protest.INF because.of that NEG-be.PST.3SG who.DAT
 ‘There was no one who would protest about that.’ (Kalėdaitė 2008: 134)

As the negative existential in Lithuanian has both a special negative existential construction (in the present tense) and the standard negation construction (in the past tense), we can classify it as Type A~B.

4. Romance

French

Negation in French is formed through the double negation *ne ... pas* ‘not’, but the first element is often omitted in informal speech (Lang & Perez 2004: 219).

- (107) *Si les Dupont ne sont pas là maintenant,*
 if DEF.ART.PL Duponts NEG be.PRS.3PL NEG here now
 ‘If the Duponts are not here now, (it’s because they won’t be coming.)’ (Lang & Perez 2004: 219)

Locatives can make use of the construction *il y a* ‘there is/are’ to stipulate the presence or absence of a particular entity in a specific situation or location. This construction is negated by *ne ... pas* ‘not’ as usual.

- (108) *Il y a au moins dix coffrets de portables parmi lesquels choisir*
 3SG there have.PRS at least ten case.PL of mobile.PL among which.PL choose.INF
 ‘There are at least ten mobile holders to choose from.’ (Offord 2006: 274)
- (109) *Il n’y a pas de centre équivalent en Belgique*
 3SG NEG-there have.PRS NEG of center equivalent in Belgium
 ‘There isn’t an equivalent center in Belgium.’ (Offord 2006: 208)

For negative existentials, when the existence of an entity is negated altogether, French has to make use of the verb *exister* ‘to exist’:

- (110) *Les chats sauvages (n’-)existent pas*
 DEF.ART.PL cat.PL wild.PL (NEG)-exist.PRS.3PL NEG
 ‘There are (no) wild cats.’ (p.c. Raphaël Domange)

French is therefore an example of a Type A language.

Italian

In Italian, sentential negation is formed by the marker *non* ‘not’:

- (111) *Non parlo italiano*
NEG speak.PRS.1SG Italian
‘I don’t speak Italian.’ (Peyronnel & Higgins 2006: 41)

Similar to French *il y a* ‘there is/are’, Italian has a fixed construction involving *essere* ‘to be’ to introduce the presence or absence of an entity, *c’è* ‘there is’ and *ci sono* ‘there are’. While no specific context or location need be mentioned, these statements are implicitly or explicitly situated in particular situations. They are negated by using *non* ‘not’, as any predicate is.

- (112) *Nel negozio ci sono molti clienti.*
in.DEF shop there be.PRS.PL many customer.PL
‘There are a lot of customers in the shop.’ Peyronnel & Higgins (2006: 32)

- (113) *Non ci sono clienti.*
NEG there be.PRS.PL customer.PL
‘There aren’t any customers.’ Peyronnel & Higgins (2006: 33)

However, *c’è* ‘there is’ and *ci sono* ‘there are’ cannot be used when the existence of an entity itself is negated. Instead, the verb *esistere* ‘to exist’ is used:

- (114) *I gate selvatici non esistono*
DEF.PL cat.PL wild.PL NEG exist.PRS.3SG
‘There are no wild cats.’ (p.c. Francesca Di Garbo)

As the verb is negated using the standard negation marker *non* ‘not’, Italian can be classified as Type A.

Romanian

Negation in Romanian is achieved through the preverbal particle *nu* (see Gönczöl-Davies 2008):

- (115) *o fată face sport, cealaltă fată nu face.*
INDEF.F.SG girl make.PRS.3SG sport other.F.SG girl NEG make.PRS.3SG
‘One girl does sports, the other girl doesn’t.’ (Gönczöl-Davies 2008: 36)

This same negator is used in negative existentials:

- (116) *Se găsesc pisici sălbătice*
MID.3SG find cat.PL wild.PL
‘There are wild cats.’ (p.c. Andreea Calude)
- (117) *Nu se găsesc pisici sălbătice*
NEG MID.3SG find cat.PL wild.PL

‘There are no wild cats.’ (p.c. Andreea Calude)

The sentence above has the verb *a se gasi* ‘to find themselves’ (middle voice). It is also possible to use *a exista* ‘to exist’, but the copula, which appears in many other non-verbal constructions, is dispreferred without a locative:

- (118) *Nu există pisici sălbatice*
NEG exist cat.PL wild.PL
‘There are no wild cats.’ (p.c. Andreea Calude)

- (119) *El nu e aici, e în oraș.*
3SG.MASC NEG be.PRS.3SG here, be.PRS.3SG in town.
‘He is not here, he is in town.’ (p.c. Andreea Calude)

- (120) *Nu e nici o pisică sălbatică *(acolo/aici)*
NEG be.PRS.3SG even INDEF cat.PL wild.PL *(there/here)
‘There aren't any wild cats there/here.’ (p.c. Andreea Calude)

- (121) *Nu sunt mulți copii la școală azi.*
NEG be.PRS.3PL many child.PL at school today
‘There are not many kids at school today.’ (p.c. Andreea Calude)

When the negated sentence is absolutely and universally true, the copula can be used, but the existential verb is still the default:

- (122) *Nu este viață eternă.*
NEG be.PRS.3SG life eternal
‘There is no eternal life.’ (p.c. Andreea Calude)

- (123) *Nu sunt luni de toate culorile.*
NEG be.PRS.3PL moon.PL of all color.PL
‘There are no rainbow-coloured moons.’ (p.c. Andreea Calude)

Despite this dispreference for the copula in the negative existential construction, the negator *nu* is identical in all of these sentences. The same applies when the pivot is quantified:

- (124) *Nu sunt multe pisici sălbatice*
NEG be.PRS.3PL many cat.PL wild.PL
‘There are not many wild cats.’ (p.c. Andreea Calude)

Spanish

Spanish has only one sentential negator, the preverbal *no* (Butt and Benjamin 1994: 319ff).

- (125) *¿Se lo has dado?*
3SG 3SG.OBJ have.PRS.2SG give.PST.PTCP
No, no se lo he dado.
NEG NEG 3SG 3SG.OBJ have.PRS.1SG give.PST.PTCP

‘Did you give it to him/her/them?
No, I didn’t give it to him/her/them.’ (Butt and Benjamin 1994: 320)

Butt and Benjamin (1994: 382ff) features a chapter on existential sentences. They detail that true existentials are formed with the present indicative form *hay* of the special verb *haber*, which means ‘there is, there are’. The verb *estar* is used for locatives, meaning ‘to be located/there’. The different usages of *hay* and *estar* are illustrated here:

(126) *Hay un gerente en la compañía*
HAY INDEF manager in DEF company
‘There’s a manager in the company.’ (i.e. ‘a manager exists’) (Butt and Benjamin 1994: 383)

(127) *Está el gerente*
be.PRS.3SG DEF manager
‘The manager is there/here/in.’ (Butt and Benjamin 1994: 383)

The existential construction with *hay* is negated with *no* as is any other verb:

(128) *No hay dinero*
NEG HAY money
‘There’s no money (anywhere).’ (Butt and Benjamin 1994: 383)

(129) *No hay nadie que sepa tocar más de un violín a la vez*
NEG HAY nobody REL know.SBJ.3SG play more of one violin at DEF time
‘There is no one who can play more than one violin at once.’ (Butt and Benjamin 1994: 269)

Spanish is therefore classified as a Type A language.

Catalan

Sentential negation in Catalan is expressed by *no* in preverbal position:

(130) *en Joan viu a Barcelona*
ART John live.3SG in Barcelona
‘John lives in Barcelona.’ (Hualde 1992: 154)

(131) *en Joan no viu a Barcelona*
ART John NEG live.3SG in Barcelona
‘John does not live in Barcelona.’ (Hualde 1992: 154)

Existential sentences have a special construction that consists of the verb *haver-hi* ‘there is’, literally ‘there has’, which is not one of the copulas *ser* or *estar*, as may be expected. These have received some attention as impersonal sentences (Hualde 1992: 81; Wheeler et al. 1999: 460). Hualde (1992: 81) notes that in example 3, there is optional agreement between the verb and the noun phrase, suggesting that *quatre gats* can also be analyzed as the subject (see also Wheeler et al. 1999: 460). While Hualde (1992) glosses *hi* as a locative element, Wheeler et al. (1999: 460) classify it as an adverbial clitic.

- (132) *hi havia / havien quatre gats*
 LOC have.IP.3SG have.IP.3PL four cat.PL
 ‘There were four cats.’ (Hualde 1992: 81)
- (133) *hi ha tres possibilitats.*
 there have.PRS.3SG three possibility.PL
 ‘There are three possibilities.’ (Wheeler et al. 1999: 460)

Similar to any other verb in Catalan, this construction is negated through a preverbal *no*:

- (134) *No hi podia haver hagut cap altra manera d’-aconseguir-ho.*
 NEG there can.IMPF.3SG have.INF have.PTCP NEG other way of-achieve.INF-3SG
 ‘There could not have been any other way of achieving it.’ (Wheeler et al. 1999: 460)
- (135) *No hi ha cap examen on no enxampin algú copiant.*
 NEG there have.PRS.3SG NEG exam where NEG catch.SUBJ.3PL somebody copy.GER
 ‘There is no exam where they don’t catch somebody copying.’ (Wheeler et al. 1999: 422)

Catalan is therefore classified as a Type A language.

Latin

Latin has various negative particles (Greenough et al. 1903: 129) of which only *non* is relevant for the current purposes. The particle *ne* is also used for clause negation, but only in the subjunctive mood (p.c. Paul Hulsenboom).

- (136) *Non recusabo quominus omnes mea scripta legant*
 NEG protest that all my writings read
 ‘I will not object to all men reading my writings.’ Roby (1862 [2010]: 145)

The copula *sum* is used for most nonverbal predicates, including existentials, and these are negated using *non* as it is in any other clause:

- (137) *Feles ferae sunt*
 cat.PL wild.PL be.3PL
 ‘There are wild cats.’ (p.c. Paul Hulsenboom)
- (138) *Feles ferae non sunt*
 cat.PL wild.PL NEG be.3PL
 ‘There are no wild cats.’ (p.c. Paul Hulsenboom)

Since Latin uses the standard negation marker to negate existential predicates, we classify it as Type A.

5. Germanic

All Germanic languages are classified as Type A~B, see article.

English

In English, one of the negators that is used for existential predications is the negative quantifier *no*:

(139) *There are no tame zebras.*

The standard negator *not* can be used when the pivot is quantified:

- (140) a. *There are not many tame zebras.*
b. *There aren't any tame zebras.*

German

In German, the preferred negator for existential predications is the negative quantifier *kein*, while the standard negator is *nicht*. Existential constructions are introduced by the fixed expression *es gibt*, with the neutral third person singular pronoun *es* followed by the third person form of the verb *geben* 'to give'. This is functionally equivalent to the English *there is/are*. The use of the copula *sein* 'to be' is not allowed in existential constructions, and it triggers context-bound and situational readings, most commonly locative.

(141) *Es gibt kein-e Lehrer.*
it give NEG.Q-PL teacher.PL
'There are no teachers.' (p.c. Anne-Maria Fehn)

(142) *Tom ist (nicht) glücklich*
Tom be.PRS.3SG (NEG) happy
'Tom is (not) happy.' (p.c. Anne-Maria Fehn)

However, the standard negator *nicht* can be used when the pivot is quantified:

(143) *Es gibt nicht viele Kuchen*
it give NEG many cakes
'There are not many cakes.' (p.c. Anne-Maria Fehn)

The negative quantifier can also be used for certain types of non-existential negation, including the first example of truly standard negation:

(144) *Ludwig mag kein-e Film-e.*
Ludwig likes NEG.Q-PL movie-PL
'Ludwig does not like movies.' (p.c. Anne-Maria Fehn)

(145) *Ronald ist kein Lehrer, er ist Doktor.*
Ronald is NEG.Q teacher he is doctor
'Ronald is not a teacher, he is a doctor.' (p.c. Anne-Maria Fehn)

(146) *Klara hat kein Auto*
Klara has NEG.Q car
'Klara does not have a car.'

(147) *Da sind kein-e Wildkatz-en im Garten.*

there are NEG.Q-PL wild.cat-PL in.DEF garden
'There are no wild cats in the garden.'

The negative quantifier seems to be used in a greater range of constructions than its counterparts in Dutch and English. We cannot further consider whether it is taking over standard negation.

Dutch

In Dutch, the preferred negator for existential predications is the negative quantifier *geen*:

- (148) *Er zijn geen taxis*
there are NEG.Q taxis
'There are no taxis.' (own data)

However, the standard negator *niet* can be used when the pivot is quantified:

- (149) *Er zijn niet veel taxis*
there are NEG many taxis
'There are not many taxis.' (own data)

Western Frisian

The most common negator in Western Frisian is *net* 'not' (Tiersma 1999: 102-103):

- (150) *ik wit net oftsto wol taliten wurdst*
1SG know NEG whether indeed admit.INF become
'I don't know whether you will be admitted.' (Tiersma 1999: 91)

The determiner *gjin* 'no', nevertheless, is used in many non-verbal predicates, including existentials and possessives:

- (151) *Der binne gjin wylde katten*
there be no wild cat.PL
'There are no wild cats.' (p.c. Eric Hoekstra)

- (152) *hy hat gjin fyts*
3SG.MASC have no bike
'He has no bicycle.' (Tiersma 1999: 102)

As in many other Germanic languages, it is possible to use the standard negator when the pivot is quantified:

- (153) *Der binne net folle wylde katten*
there be NEG many wild cat.PL
'There are not many wild cats.' (p.c. Eric Hoekstra)

Hence, we classify Western Frisian as Type A~B.

Eastern Frisian

Not to be confused as a close relative of Western Frisian, Eastern Frisian is a Low German variety. It behaves similar to Standard German and the other Germanic languages, but there appears to be a wider range of contexts in which the determiner *kien* ‘no’ can be used. The standard negator is *neet* ‘not’:

- (154) *Marie singt neet*
Marie sing.3SG NEG
‘Mary does not sing.’ (p.c. Temmo Bosse)

For negative existential predicates, the determiner *kien* ‘no’ is used in combination with *geven* ‘to give’ or *wesen* ‘to be’:

- (155) *Dat giff kien wille Katten*
EXPL give.3PL no wild cat.PL
‘There are no wild cats.’ (p.c. Temmo Bosse)
- (156) *Daar bünd kien wille Katten*
there be.3PL no wild cat.PL
‘There are no wild cats.’ (p.c. Temmo Bosse)

The standard negator *neet* ‘not’ can be used when a quantifier is present:

- (157) *Daar bünd /Dat giff neet mennig wille Katten*
there be.3PL EXPL give.3PL NEG many wild cat.PL
‘There are not many wild cats.’ (p.c. Temmo Bosse)

Due to this split in usage, we classify Eastern Frisian as Type A~B.

Swedish

In Swedish, the preferred negator for existential predications is the negative quantifier *ingen* (Bordal 2017). The verb most frequently used to express existence is *finns* (Bordal 2017: 9).

- (158) *Det finns ingen ost i kylskap-et*
it be.at any cheese in fridge-DEF
‘There is no cheese in the fridge.’ (Veselinova 2013: 115)

However, the standard negator *inte* can also be used:

- (159) *Det finns inte ost i kylskap-et*
it be.at NEG cheese in fridge-DEF
‘There isn’t any cheese in the fridge.’ (Veselinova 2013: 115)

Bordal (2017) is a corpus study that aims to describe the choice between the usage of the negative quantifier/negative indefinite pronoun versus standard negation. Reference grammars of Swedish recommend using the standard negator *inte*, but Bordal (2017: 15ff) demonstrates that there is a major preference for *ingen*. The reason for this preference is

semantic; negation using *ingen* is absolute, and the existence of the pivot nominal is negated. In contrast, negation using *inte* and an indefinite pronoun suggests an absence of the pivot nominal rather than non-existence, and hence it is dispreferred (Bordal 2017: 21-22). See also Veselinova (2013: 114-115) for earlier comments on Swedish negative existentials.

Norwegian

In Norwegian, the negator for existential predications can be the standard negator *ikke*:

- (160) *Anton er ikke her, han er i byen*
 Anton is NEG here he is in town
 ‘Anton is not here, he is in town.’ (p.c. Benedicte Haraldstad Frøstad)

- (161) *Det finnes ikke ville katter*
 there are NEG wild cats
 ‘There are no wild cats.’ (p.c. Benedicte Haraldstad Frøstad)

However, the negative quantifier can also be used:

- (162) *Det fantes ingen erstatning*
 there was NEG.Q replacement
 ‘There was no substitute.’ (p.c. Benedicte Haraldstad Frøstad)

It is also possible to use the negative quantifier in combination with *finnes*, but this is ambiguous with the following two interpretations:

- (163) *Det finnes ingen ville katte*
 there are NEG.Q wild cats
 1. ‘There are no wild cats. (anywhere, they don’t exist)’
 2. ‘There are no wild cats. (here right now/in this room/etc.)’ (p.c. Benedicte Haraldstad Frøstad)

Danish

In Danish, the negator for existential predications can be the standard negator *ikke*:

- (164) *Peter læser ikke bogen*
 Peter reads NEG book.DEF
 ‘Peter does not read the book.’ (p.c. Bjarne Ørnes)

- (165) *Der findes ikke vilde katte*
 there are NEG wild cats
 ‘There are no wild cats.’ (p.c. Bjarne Ørnes)

The verb *at findes* ‘to exist’ is used with all the existential constructions that pertain to situations that are a certain way in the world at large; it can be contrasted to the use of *være* ‘to be’, which is used in more specific contexts:

- (166) *Der er vilde katte i haven i aften*
 there are wild cats in garden.DEF this evening

‘Tonight there are wild cats in the garden.’ (p.c. Bjarne Ørnes)

The standard negator *ikke* has to be used with any quantifier that is not *nogen* ‘any’:

- (167) *Der findes ikke mange vilde katte*
there are NEG many wild cats
‘There are not many wild cats.’ (p.c. Bjarne Ørnes)

But otherwise, the negative quantifier *ingen* is interchangeable with the standard negator *ikke* + *nogen* ‘any’. The difference between the two is stylistic, where the second is more frequent, especially in spoken language, and the first is more formal and used in written language:

- (168) *Der findes ingen vilde katte*
there are no wild cats
‘There are no wild cats.’ (p.c. Bjarne Ørnes)

- (169) *Der findes ikke nogen vilde katte*
there are NEG any wild cats
‘There are no wild cats.’ (p.c. Bjarne Ørnes)

Icelandic

The most common negator in Icelandic is *ekki* ‘not’:

- (170) *þjóðin lét ekki blekkjast af þessum*
nation.DEF let NEG deceive.PST by this
Bretapægu stjórnvöldum okkar
Britain.friendly government our
‘The nation didn’t let itself be deceived by this Britain-friendly government of ours.’
(Wood 2012: 286)

However, locative, existential, and possessive clauses make use of another negator, *enginn* ‘nobody, none’, which inflects for number, case, and gender:

- (171) *ég hef enga frétt*
1SG have none story
‘I have no news, I have nothing new.’ (Bjarnason 1998: 62)

- (172) *það var enginn maður þar*
INDEF.SBJ be nobody man there
‘There was nobody (no man) there.’ Einarsson (1949: 123)

- (173) *Það eru engir villikettir*
INDEF.SBJ be.PL none wild.cat.PL
‘There are no wild cats.’ (p.c. Elísabet Eir Cortes)

Other than *enginn* ‘nobody, none’, the standard negator *ekki* ‘not’ can also be used:

- (174) *það eru ekki alltaf jólin*
INDEF.SBJ be.PL none always Christmas

‘It’s not always Christmas.’ (expression)

The preferences for these negators require further investigation. At present, we classify Icelandic as a Type A~B language.

6. Celtic

Breton

Breton has a double negator, *ne ... ket*, which is located on both sides of the verb:

- (175) *Ne ro ket al laeron a laezh da zen*
NEG give.PRS NEG the robber.PL PREP milk to anyone
‘The robbers give no-one any milk.’ Press (1986: 126)

When the copula *bezañ* ‘to be’ (Press 1986: 144) is negated, it takes one of a set of special (contracted?) forms (Press 1986: 152), as is evident in the pair of sentences below:

- (176) *Ur c’helenner eo Tom*
ART teacher COP Tom
‘Tom is a teacher.’ (p.c. Marianna Donnart)
- (177) *N’eo ket ur c’helenner, ur medesin eo Tom*
NEG+COP NEG ART teacher ART doctor COP Tom
‘Tom is not a teacher, he is a doctor.’ (p.c. Marianna Donnart)

This special form of the copula is shared by negative locatives and negative existentials:

- (178) *Un draonienn a zo du-hont*
ART valley VERB.PART COP to-there
‘There’s the/a valley over there.’ (Press 1986: 154)
- (179) *An draonienn n’emañ ket du-hont*
ART valley NEG+COP NEG to-there
‘There’s no valley over there.’ (Press 1986: 155)
- (180) *Kizhier gouez a zo*
cat.PL wild VERB.PART COP.PRS
‘There are wild cats.’ (p.c. Marianna Donnart)
- (181) *N’eus ket kizhier gouez*
NEG+COP NEG cat.PL wild
‘There are no wild cats.’ (p.c. Marianna Donnart)

Nonetheless, in the past tense, there is no special form of the copula for negation (see paper) and we therefore classify Breton as Type A~B

Welsh

Welsh uses the negator *ddim* for negation:

- (182) *Ddaru ni °ddim gweld y ffilm neithiwr*
 AUX.PST we NEG see.VN DEF.ART film last.night
 ‘We didn’t see the film last night.’ (King 2003: 190)

Existential sentences are formed by using the copula *bod* ‘to be’ (see King 2003: 142ff):

- (183) *Mae cathod gwyllt yn bod.*
 be.PRS.3SG cats wild PROF be.INF
 ‘There are wild cats.’ (p.c. David Willis)
- (184) *Dydy/dyw cathod gwyllt ddim yn bod.*
 NEG.be.PRS.3SG cats wild NEG PROG be.INF
 ‘There are no wild cats.’ (p.c. David Willis)

In the negated existential sentence, the first instance of the copula *bod*, which functions as an auxiliary (see King 2003: 142ff) also has a negated form. This also occurs in other negated sentences in the same tense:

- (185) *Mae-’r cwrw ‘ma-’n °gryf*
 be.PRS.3SG-ART beer this-PROG strong
 ‘This beer is strong.’ (King 2003: 146)
- (186) *Dydy-’r cwrw ‘ma °ddim yn °gryf*
 be.NEG.PRS.3SG-ART beer this NEG PROG strong
 ‘This beer is not strong.’ (King 2003: 146)

Hence, existential negation functions similar to standard negation, and Welsh belongs to type A. See Willis (2013) for more information on the historical development of these and other negation strategies in Breton and Welsh.

Irish

Standard negation in Irish is achieved by placing a negative particle, *ní*, in front of the verb, which causes lenition if the initial consonant of the verb can be lenited (Stenson 2008: 86):

- (187) *Glanann sí a seomra*
 clean.PRS she POSS room
 ‘She doesn’t clean her room.’ Stenson (2008: 86)
- (188) *Ní ghlannann Caitríona a seomra*
 NEG clean Caitríona POSS room
 ‘Caitríona doesn’t clean her room.’ Stenson (2008: 86)

For the sake of simplicity, only the negative particle that is used with finite verb forms is mentioned here, but there are more of these types of particles, distinguishing a) polarity, b) interrogation, c) non-past vs past and d) non-relative versus relative. The same applies for the copula and substantive verb below (see Stenson 1981: 93).

For the analysis of existential negation, two verbs are relevant. Irish has both a copula, with

the present form *is* (negative form *ní*), and a substantive verb with the imperative form *bí* (present punctual *tá*, negative form *níl*) (Stenson 1981: 94). The former is used for essential or inherent qualities, while the latter is used for more temporal qualities, relating to matters such as existence, location and possession. The negative form of the copula, *ní*, should be considered formally distinct from the negative particle *níl*, as the former does not cause consonant lenition.

Copula usage for ‘essential’ predicates is as follows:

- (189) *Is múinteoir é.*
COP teacher him
‘He’s a teacher.’ (Stenson 1981: 132)
- (190) *Ní múinteoir é.*
NEG+COP teacher him
‘He isn’t a teacher.’ (Stenson 1981: 132)

Substantive verb usage for locative predicates:

- (191) *Tá sé anseo*
SUBST he here
‘He is here.’ (p.c. Cormac Anderson)
- (192) *Níl sé anseo, tá sé sa^L bhaile*
SUBST+NEG he here SUBST he in.the town
‘He is not here, he is in town.’ (p.c. Cormac Anderson)

Substantive verb usage for existential predicates is the following:

- (193) *Tá cait fiáin ann*
SUBST cat.PL wild in.3SG.MASC
‘There are wild cats.’ (p.c. Cormac Anderson)
- (194) *Níl cait fiáin ann*
SUBST+NEG cat.PL wild in.3SG.MASC
‘There are no wild cats.’ (p.c. Cormac Anderson)

Whether or not existential predicates are negative, they cannot be expressed by the copula but rather by the substantive verb. The word *ann* in the existential predicates is the third person singular masculine form of the preposition *i* ‘in’, and it has a similar meaning to the English ‘there’ (see Stenson 2008: 11). As the locus of predication can be specified for person and number, we can refer to it as an existential preposition ‘in’.

We classify Irish as Type B, despite the construction being not unique to negative existentials, but it is certainly different from standard negation.

Old Irish

Old Irish has a verbal negator *ni*, which is a particle that attaches to the beginning of the verb:

- (195) *can-aid máire*
sing-PRS.3SG Mary
‘Mary sings.’ (p.c. Cormac Anderson)
- (196) *ni-cain máire*
NEG-sing.PRS.3SG Mary
‘Mary does not sing.’ (p.c. Cormac Anderson)

The substantive verb behaves like a normal verb (McCone 2005: 40).

- (197) *a:taat da n-orpe*
SUBST.PRS.3PL two inheritance.PL
‘there are/exist two inheritances’ (McCone 2005: 40)

It can be used for locatives (in example ()), *at-* is a verbal particle meaning ‘at’):

- (198) *ni-ta Cormac sund, at-ta in-sind chathr-aig*
NEG-SUBST.PRS.3SG Cormac here, at-SUBST.PRS.3SG in-ART city-DAT.SG
‘Cormac is not here, he is in town.’ (p.c. Cormac Anderson)
- (199) *at-taat fiad-chait in-sind gurt*
at-SUBST.PRS.3PL wild-cat.NOM.PL in-ART garden.DAT.SG
‘There are wild cats in the garden.’ (p.c. Cormac Anderson)
- (200) *ni-taat fiad-chait in-sind gurt*
NEG-SUBST.PRS.3PL wild-cat.NOM.PL in-ART garden.DAT.SG
‘There are no wild cats in the garden.’ (p.c. Cormac Anderson)

The substantive verb can also be used for existential predicates. The form *and* below is identical in composition and meaning to the Modern Irish *ann*.

- (201) *at-taat fiad-chait and*
at-SUBST.PRS.3PL wild-cat.NOM.PL in.3SG.NEUT
‘There are wild cats.’ (p.c. Cormac Anderson)
- (202) *ni-taat fiad-chait and*
NEG-SUBST.PRS.3PL wild-cat.NOM.PL in.3SG.NEUT
‘There are no wild cats.’ (p.c. Cormac Anderson)

As we can consider the substantive verb to be equivalent to any normal verb, no formal distinction is made between standard negation and existential negation. Old Irish can therefore be classified as Type A.

As an aside, the same might apply for predicates that take the copula rather than the substantive verb, including adjectives and nouns (McCone 2005: 39).

- (203) *is fer hard Find*
COP.PRS.3SG man.NOM.SG tall Find
‘Find is tall.’ (p.c. Cormac Anderson)

- (204) *ni fer hard Find*
 NEG.COP.PRS.POS.3SG man.NOM.3SG tall Find
 ‘Find is not tall.’ (p.c. Cormac Anderson)

The negative copula *ni* might be considered to be *ni-ø*, where *ni* is the standard negator, and the copula has a zero form.

Scottish Gaelic

The negators of Scottish Gaelic are the preverbal particles *cha(n)* and *nach*. The following example illustrates both of them in a double negative construction:

- (205) *cha chreid mi nach eil iad gu math*
 NEG believe.INDEF 1SG NEG.COMP be.PRS 3PL well
 ‘I believe they are well.’ [Lit. I don’t believe that they are not well] (Lamb 2001: 61)

As in Irish and Old Irish, Scottish Gaelic has two verbs that are relevant to construct non-verbal predicates: the ‘substantive’ verb *tha* and the defective copula *is* (Lamb 2001: 65). The form *tha* is the independent present form of the verb *bi* ‘to be’, which is often used as an auxiliary with a verbal noun (Lamb 2001: 54). The sentence below illustrates both the independent present form *tha* and the dependent present form *eil* (varies according to dialect, register and grammatical context for the forms *bheil*, *beil*, *eil*, ‘I’):

- (206) *chan eil Màiri cho bradach agus a tha Seumas*
 NEG be.PRS.DEP Mary as thievish and REL be.PRS James
 ‘Mary isn’t as thievish as James is.’ (Lamb 2001: 42)

The dependent form of approximately 10 irregular verbs, including *bi* ‘to be’, is used when the verb is preceded by what are referred to as pre-verbal particles or sentence class markers, including the clausal negator *cha(n)* (*cha* appears before consonant-initial words, *chan* before vowel-initial words) (Lamb 2001: 48-50).

The copula *is* is used for predicate nominals (Lamb 2001: 66-67), while the substantive verb *tha* is used for predicate adjectives, locatives, possession and existentials (Lamb 2001: 67-69).

- (207) *Tha cait fhiathaich anns a’ ghàradh*
 be.PRS cat.PL wild in ART.DEF garden
 ‘There are some wild cats in the garden.’ (p.c. William Lamb)
- (208) *Chan eil cait fhiathaich anns a’ ghàradh (ann / idir)*
 NEG be.PRS.DEP cat.PL wild in ART.DEF garden (at.all / at.all)
 ‘There aren’t any wild cats in the garden.’ (p.c. William Lamb)
- (209) *Tha cait fhiathaich ann*
 be.PRS cat.PL wild there
 ‘There are wild cats.’ (p.c. William Lamb)
- (210) *Chan eil cait fhiathaich (idir) ann*
 NEG be.PRS.DEP cat.PL wild (at.all) there

‘There are no wild cats.’ (p.c. William Lamb)

The function of *idir* and *ann* in the current context is to emphasize negation. However, *ann* can be interpreted as a preposition, which is similar to the *ann* found in Irish. It is obligatory in (209) and (210) where it has the same function as English *there*, and is optional in (208). The adverb *idir* serves the same function of emphasizing (208).

While the form of the negative existential, [*chan eil ...*], does not feature the non-negative form of the substantive, *tha*, this is a consequence of the special dependent forms that certain verbs take, including *bi/tha* but also *abair* ‘say’ and *rach* ‘go’. Hence, negative existentials are not formed by a construction that is different from standard negation and Scottish Gaelic can be classified as Type A.

References to Appendix B

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