Negative existentials: A cross-linguistic study

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The aim of this study is to provide a cross-linguistic outline of the negation strategies in existential predications like 'There are no mice in the basement'. It is found that there is a strong cross-linguistic tendency to use a special negation strategy in these predications. Furthermore, the special negators, labelled here 'negative existentials', show a number of similarities in terms of their semantics, morphosyntax, use and diachronic origin. In light of this, it is suggested that they represent a linguistic construction of its own, and in fact, a separate conceptual domain.

1. Introduction

The purpose of this paper is to investigate the expression of negation in existential sentences such as (1):

(1) There are no mice in the basement

Cross-linguistically oriented surveys of negation (see, for instance, Dahl 1979, 2010 and Miestamo 2005) tend to cover a domain usually defined as standard negation (SN), for example the negation of simple indicative sentences with an overt verb predicate as in (2):

(2) Mary doesn't sing

Normally, sentences like (1) are excluded from the domain of SN because in many languages they are negated by a special strategy. Apart from the collection of articles in Kahrel & van den Berg (1994), which present detailed accounts of negation in specific languages, and only as a side topic in Stassen (1997), a systematic survey of the strategies used for the negation of non-verbal and existential predications does not yet exist. Croft (1991) draws attention to negative existentials from a diachronic perspective, discussing their re-analysis as markers of SN.

As will become clear from the presentation below, the use of a special strategy to negate existential sentences is cross-linguistically extremely common. Special negative existentials show a number of

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similarities in terms of their semantics, morphosyntax, and diachronic origin. All this suggests that they can be described as a unified cross-linguistic phenomenon. Furthermore, the claim put forth here is that they represent a separate functional domain, whereby absolute absence is predicated rather than relative absence, which is predicated by negation markers proper.

The paper is organized as follows. In section 2, I present the terminology and methodology used here. In section 3, I offer a classification of negative existentials based on a comparison between the negation strategy used for existential predications and that used for standard negation in each language under study. A discussion of negative existentials as a separate cross-linguistic phenomenon is presented in section 4. A summary and some conclusions follow in section 5.

2. Concepts and methodology used in this study

2.1. Concepts

For theoretical introductions to the concepts presented below, see Givón (1979), Hengeveld (1992), Stassen (1997) and Hamari (2007). Short working definitions are provided in this section.

'Standard negation' (**SN**) refers to the negation strategy used in main declarative sentences where the predicate is a full lexical verb as in (2) above. SN is used interchangeably with the term 'verbal negation'. 'Existential sentence' refers to sentences which state the plain existence of an object and typically show one or more of the following characteristics: non-referential subject, usually marked by a non-prototypical subject marking; word order that differs from dominant word orders in language X; special agreement or no agreement between subject and predicate (whenever agreement is relevant); a predicate (item) with a special morphology. Thus (1) above is considered an existential sentence because of the dummy subject and its indefinite non-referential notional subject. A sentence such as the one shown in (3) is a regular intransitive sentence.

(3) Dark wizards do not exist

'Locative-presentative' constructions, in the sense of Hengeveld (1992), often share features with existential constructions, but, in addition to stating existence, they also specify the location of the predicated entity as in (4).

(4) There are giant spiders in the forbidden forest

The short definition offered here does not exhaust the topic on affirmative existential constructions; however, it is considered sufficient for the purposes of this paper, as they are not the focus of the current inquiry. The criteria listed above were used to identify grammaticalized existential constructions in the languages under study. Apart from the English one in (4), some examples of such constructions in other languages follow below.

(5) Bulgarian (Indo-European, Slavic, South)[1] (own data)

Grammaticalized existential construction

a. Ima tri butilk-i vino v xladilnik-a
have.3.SG.PRS three bottle-PL.F.INDF wine in fridge-DEF.M.SG[2]
'There are three bottles of wine in the fridge'

Intransitive sentence

b. Tri-te butilk-i vino sa v xladilnik-a
three-DEF.F.PL bottle-PL.F.INDF wine be.3.PL.PRS in fridge-DEF.M.SG
'The three bottles of wine are in the fridge'

In (5a) the word order is marked, the notional subject *tri butilki* is syntactically an object and does not trigger agreement; in (5b), where the sentence is an intransitive predication, the subject *tri butilki* is marked by the definite article as expected and the copula verb agrees with it in number.

In Swahili (a Niger-Congo language, with an official status in Tanzania, but also spoken as a second language in a number of other countries), the copula takes pronominal agreement in an intransitive locative sentence (cf. (6a)), but it has to take locative agreement when existence is predicated (cf. (6b); see also Marten in this volume).

(6) Swahili (Niger-Congo, Bantu, Central), (Givón 1979: 744)

a. Mtoto a-li-kuwa nyumba-ni
child he-PST-be house-LOC
'The child was in the house'

b. Ku-li-kuwa na mtoto mmoja nyumba-ni
LOC-PST-be with child one house-LOC
'There was a child in the house'

Existence can be also predicated by a nominal predication where no verb categories are allowed. For instance, in Māori, a verb initial Polynesian language spoken in New Zealand, the verb complex which consists of tense-aspect marker and the verb comes first in a verbal predication (cf. (7a)); when predicating existential, a nominal predication has to be used where the notional subject and a possible location are simply juxtaposed (cf. (7b)); no tense-aspect marking is possible in such a predication. Existence is predicated in a similar way in a number of other languages in Australia and Oceania (cf. also Map 2 in the Online Appendix 1).[3]

(7) Māori (Austronesian, Malayo-Polynesian, [...] Nuclear Polynesian, Eastern, Tahitic), (Harlow 2007: 151, 153)

a. E tangi ana te tamaiti
GENR weep TA DET child
'The child is/was crying'

b. He whare wānanga kei Kirikiriroa
DET house learning PREP Hamilton
'There is a university in Hamilton'

'Existential negation' refers to the negation strategy used in existential sentences such as (1) above. 'Locative negation' refers to the negation strategy used in sentences with a locative predicate and a definite subject as in (8).

(8) The cat is not on the couch

'Ascriptive negation' refers to the negation strategy used in sentences with a nominal or adjectival predicate[4] such as (9); the predication of inclusion in a certain class as in (10); the predication of a stable quality as in (11), and finally the predication of a temporary state as in (12) (see Stassen 1997).

(9) I am Luna
(10) Luna is a student at Hogwarts

(11) Luna is tall.
(12) Luna is happy

While the typology of negation in these predications is outside the scope of the current inquiry, an overlap between the negation strategies used in existential and ascriptive predications does exist, which is why a working definition of the latter is necessary here.

'Negation of possession/possessive negation' is used to refer to sentences which express negated predicative possession such as (13). All the other kinds of possessive constructions are ignored here.

(13) Mary does not have a car

'Stative predication' is a cover term for all predications described above as ascriptive, locative, existential and possessive. Likewise, if one and the same negator is used in all these predications, this is referred to as 'stative negator'.

All negators that differ from SN are referred to as 'special negators'.

The term "pro-sentence" was introduced by Bernini & Ramat (1996: 89) to describe "sentences with the same propositional content as the utterance of the preceding context". In English two words can be used as pro-sentences: *not* as in (14) and *no* as in (15).

(14) Are you coming or not?
(15) No, [I am not coming]

'Negative-Existential cycle' refers to the diachronic cycle for the evolution of negation suggested by Croft (1991).

2.2. Methodology

The current study seeks to explore the cross-linguistic distribution and variation of negative existentials. I use two kinds of samples: one with world-wide coverage, which I call a 'macro-sample'; it consists of 95 genealogically and geographically diverse languages (cf. Online Map 1). To test the generalizations suggested by the macro-sample and also to get more in-depth diachronic information, I use several 'micro-samples', in particular, comparative data from three language families, Slavic, Uralic and Polynesian.

The data used for this study were collected with the aid of a translation questionnaire.[5] The data sources are grammars as well as elicitation from language experts.

The special negative existentials are first identified on the basis of a comparison between the negation strategy used for existential sentences and the expression of SN. Explicit criteria for what counts as difference are detailed in section 3 below. These criteria also serve to postulate structural types of negative existentials based on the degree they differ from SN.

Once identified, the properties negative existentials have in common are discussed. The semantic maps method is used for the analysis of their content and various uses; the analysis is accompanied by a structural and constructional description. The reasons for choosing semantic maps over other methods are as follows. It is a function-usage based approach, but it also allows a visualization of rather abstract data. Following this method, the first step is to identify all the functions of a particular lexical item or a gram. There is no need to commit to functions which appear basic and others that appear secondary. The second step is to decide on the spatial arrangement of the identified functions. Generally, their arrangement has to reflect their closeness in semantic space in as many languages as possible.[6] The map has to be the same for all languages. If the arrangement is changed for one language, one has to go back and re-do the map for all languages. By way of conclusion, I discuss the origin of negative existentials.

3. Classification of negative existentials on the basis of the comparison with SN

Four types of situations have been found with respect to whether the various negation strategies of a language are different or similar. The first is that of 'prototypical difference'. This involves a complete formal and constructional difference between the expressions used for the negation of existential constructions and those used for SN. For instance, in Turkish SN is expressed by a suffix *-me* on the main verb (cf. (16b) below). Existential predications are negated by the word *yok* 'not exist' which shows some verbal properties. This is illustrated by (16d) below.

(16) Turkish (Altaic, Turkic), (Van Schaaik 1994: 38-39, 44-45)

a. Gel-ecek
   come-FUT
   '(She) will come'

b. Gel-me-yecek
come-NEG-FUT
'(She) will not come'

c. Su var-dı
water exist-PST
'There was water'

d. Su yok-tu
water NEG.EX.PST
'There was no water'

There are also some intermediate cases. The first one is when SN and the negative existential are formally the same, but one is a free form and the other is bound. For instance, in Kannada, a South Dravidian language spoken in southern India, SN is expressed by the suffix *-illa*. Locative, existential and possessive predications are negated by *illa* as a free-standing form, in a predicate position (cf. (17b) below).

(17) Kannada (Dravidian, South), (Sridhar 1990: 112, 220)

a. Anil ka:le:jige ho:gu-vud-illa
name college.DAT go-NONPST.GER-NEG
'Anil won't/doesn't go to college'

b. Khaja:neyalli haNa illa
treasury.LOC money NEG.EX
'There is no money in the treasury'

The second case of intermediate difference is when SN and the negative existential are formally the same, but require different syntactic constructions for the negation of existential predications and for verbal predications. For instance, in Māori SN is expressed by a negative *kāore* 'not exist' in a complex clause. The verb *kāore* is in the main clause and the negated proposition is in the subordinate clause. When negating an existential predication *kāore* is used in a simple clause (cf. (18c)).

(18) Māori (Austronesian, Malayo-Polynesian, […] Nuclear Polynesian, Eastern, Tahitic), (Harlow 2007: 161-162, 153-154)

a. E tangi ana te tamaiti
GENR weep TA DET child
'The child is/was crying'

b. Kāore te tamaiti e tangi ana
NEG DET child GENR weep TA
'The child is/was not crying'

c. He whare wānanga kei kirikiriroa
DET house learning PREP Hamilton
'There is a university in Hamilton'

d. Kāore He whare wānanga i Taihape
NEG DET house learning PREP Taihape
'There's no university in Taihape'

Thus, *illa* (free form) and *-illa* (bound form), as well as *kāore* as SN in a complex clause and *kāore* as a negative existential in a simple clause, are considered to be intermediate cases of different negation markers. The first one is considered to be a case of morphological difference, the second a case of constructional difference. The languages are classified accordingly.

A somewhat more complex case is represented by Swedish in this sample, but what is said about Swedish applies, in varying degrees, to all Germanic languages. In Swedish, existential predications can be negated by the SN marker *inte*, as shown in (19d). However, another possibility for negating these predications is by using a negative quantifier, *ingen* (or relevant forms), shown in (19e). Pragmatically, (19e) is the unmarked choice.

(19) Swedish (Indo-European, North Germanic), (own data, checked by Mikael Parkvall, p.c.)

a. Maia sjung-er
Maia sing-PRS
'Maia sings'

b. Maia sjung-er inte
Maia sing-PRS NEG
'Maia doesn't sing'

c. Det finns ost i kylskap-et
it be at cheese in fridge-DEF
'There is cheese in the fridge'

d. Det finns inte ost i kylskap-et
it be at NEG cheese in fridge-DET
'There isn't any cheese in the fridge'

e. Det finns ingen ost i kylskap-et
it be at any cheese in fridge-DET
'There is no cheese in the fridge'

Generally, the choice between SN and the negative quantifier is contingent on a complex interplay of factors relating to polarity, quantification and scope (Östen Dahl, p.c.). Spelling them out in full detail is not possible because of space limits. For the purposes of identifying negation strategies of existential predications that differ from SN, the Swedish case represents yet another intermediate situation which has to be allowed its own structural type. Furthermore, as we will see later, there are languages where negative existentials are used instead of negative quantifiers/indefinite pronouns. So there is definitely a connection between negation of existence and indefinite pronouns (see also Haspelmath 1997 for a detailed discussion of this issue).

Finally, there are languages where one and the same negation strategy, SN, is used for the negation of verbal and existential predications. This is illustrated by Modern Greek in (20) below.

(20) Modern Greek (Indo-European, Hellenic)

a. Tin agap-ó
she.ACC love-1SG
'I love her'
(Miestamo 2005: 267)

b. Den tin agap-ó
NEG she.ACC love-1SG
'I don't love her'
(Miestamo 2005: 267)

c. Iparh-un prásin-a liontári-a
exist-3PL green-PL.NOM lion-PL.NOM
'Green lions exist'/ 'There are green lions'
(Gerasimia Melisssaratou-Matsson, p.c.)

d. Prásin-a liontári-a den ipárh-un
green-PL.NOM lion-PL.NOM NEG exist-PL
'Green lions do not exist'/ 'There are no green lions'
(Gerasimia Melisssaratou-Matsson, p.c.)

Table 1 provides a synopsis of the findings of the cross-linguistic survey on negation existential predications. The degrees of difference between the two types of negation are translated into structural types. Their geographic distribution is presented on the Online Map 1.

Table 1. Quantitative distribution of negative existentials.

TYPE OF NEGATIVE EXISTENTIAL	NUMBER OF LANGUAGES	
Formally and constructionally different from SN	42	63 (66.32%)
Negative existentials and SN are formally identical but morphologically different	4	
Negative existentials and SN are formally identical but are used in different constructions	17	
SN or a negative quantifier alternate for the negation of existence	1	1 (1.1%)
No special negative existential	31	31 (32.63%)
TOTAL	95	

The results presented in Table 1 show three groups of negative existentials. Among them the negative existentials which are both formally and constructionally different from SN predominate. Typically, a language has one negative existential only. However, it is also possible for a language to have more than one. In my current dataset, there are four languages, Khalkha (Mongolic, Mongolia), Hausa (West Chadic, Nigeria), Mokilese (Austronesian, […] Ponapeic, Micronesia) and Warao (Isolate, Venezuela), that have two different negative existentials. This is exemplified by Hausa below.

(21) Hausa (Afro-Asiatic, Chadic, West), (Newman 2000: 361)

a. Bābù mâi
NEG.EX oil
'There isn't any oil'

b. Bâ mâi
NEG.EX oil
'There isn't any oil'

The forms *bābù* and *bâ* appear to be in free variation. There is no agreement on whether the two forms are historically related.[7] Further discussion of this particular issue goes beyond the scope of this section. For the purposes of identifying and classifying negative existentials, may it suffice to say that the co-occurrence of several negative existentials might be more common than it appears at a first glance, since the languages where they are observed are spoken in very different parts of the world and obviously come from very different language stocks. I will return to issue of double negative existentials in the section on diachrony (cf. section 4.3).

Special negative existentials occur in 63 languages, that is 66.32% of the samples. In addition to this quantitative predominance, they are also widely spread geographically. As shown on the Online Map 1, they show no special geographical or areal distribution, but rather occur in all the parts of the world. The languages without special negative existentials, on the other hand, are concentrated in Western Europe, parts of South East Asia and parts of Central and Southern South America. While it may be premature to draw strong conclusions about areal distribution based on a relatively small sample, some comment on what we currently see is still warranted. Both Europe and South East Asia are linguistic areas with rather distinct character that sets them apart from the rest of the world. The absence of special negative existentials, which are otherwise very common in the rest of the world, may be yet another property that should be added to the highly distinct profile of these areas. I am not aware of Southern South America forming such a linguistic area, so more data and research are necessary to offer a meaningful hypothesis for the absence of negative existentials there.

It should also be noted that special negative existentials outnumber the grammaticalized affirmative existential constructions by about 13%. According to the definition of a grammaticalized existential provided in section 2.1, there are 50 languages (52.63%) which have such a construction. The geographical distribution of grammaticalized affirmative existential constructions is shown on the Online Map 2. Observe that the occurrence of a special negative existential does not necessarily correlate with the occurrence of a grammaticalized affirmative existential. Rather, it is fully possible for a language not to have a grammaticalized existential construction, but to exhibit a special expression for the negation of existence. Such languages appear to be especially common in the Americas in the current sample, but they are also found in parts of North East Asia.

4. Negative existentials as a separate construction and functional domain

4.1. Semantic characteristics

4.1.1. General overview

As stated in 2.2 above, the semantic maps method is used for description of the semantics of the negative existentials. All in all, 26 functions were identified for negative existentials. They are listed in Table 2 below, in decreasing order of frequency. All of them are exemplified in the Online Appendix 2. Only some of the most frequently occurring ones are illustrated below. The spatial distribution suggested for these functions in a semantic map is shown in the example maps in Figure 1, as well as on the maps within the Online Appendix 1.

The headings in Table 2 indicate the name of a specific function (FUNCTION NAME), a short description of its content (SHORT DESCRIPTION), and the number of languages where this function is observed with the special negative existential in that language (NR OF LANGS).

Table 2. Functions of negative existentials identified on semantic maps.

FUNCTION NAME	SHORT DESCRIPTION	NR OF LANGS
NEG.EX	Negation of existence	63
NEG.POSS	Negation of possession	53
NEG.LOC	Negation of location	33
PRO-SENTENCE	The word used has the same propositional content as the preceding proposition	22
-TENSE	The negative existential does not admit any tense-aspect marking.	20
NO	The negative existential is also used as a short answer 'no'	16
NONE	The negative existential is also a negative indefinite pronoun	13
SN	The negative existential is also used as a standard negator	10
WITHOUT	Use of the negative existential as a pre-/ postposition meaning 'without' or as a privative marker	10
ABSENT, AWAY, GONE	The negative existential is also used with any of these senses	9
NEG.EMPHATIC	The use of the negative existential produces an emphatic statement	9
NOTHING	The negative existential also has the sense 'nothing'	8

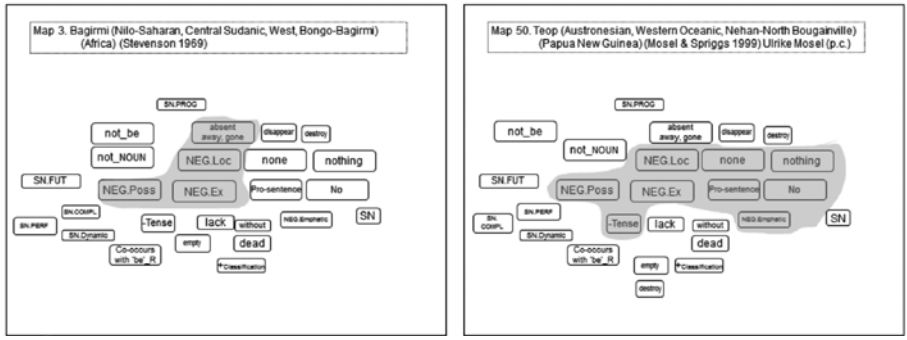
FUNCTION NAME	SHORT DESCRIPTION	NR OF LANGS
NOT_NOUN	Use of negative existentials as a negator for nominal constituents	8
NOT_BE	The negative existential is a general negative copula	7
LACK	The negative existential also has the sense 'lack'	6
SN.FUT	The negative existential is used as marker of SN for future constructions	3
SN.PRF	The negative existential is used as marker of SN for perfective or experiential constructions	2
DEAD	The negative existential also has the sense 'dead'	2
DESTROY	The negative existential also has the sense 'destroy'	1
DISAPPEAR	The negative existential is related to 'disappear'	1
EMPTY	This word is used with negative existential function as well	1
CO-OCCURS WITH 'BE'_RESTRICTED	The negative existential may be used to negate the copula verb	1
+ CLASSIFICATION	There are different negative existentials depending on the semantic properties of the noun phrase: animate, human, age	1
SN.DYNAMIC	The negative existential is used as a standard negator for dynamic verbs	1
SN.COMPL	The negative existential is used as a standard negator for completive aspect	1
SN.PROG	The negative existential is used as a standard negator for verbs in progressive aspect	1

As shown in Table 2, negative existentials show a rather high number of functions, especially when compared with the semantic maps of other linguistic phenomena, for instance Haspelmath's (1997) map for indefinite pronouns. The functions of negative existentials span from negating very general notions, such as existence, possession and location, to more specific lexical meanings such as 'dead', 'destroy' and 'disappear'. In order to achieve some economy of description when some senses were considered so close as to be almost identical, they were put in the same box, that is, they were considered to be the same function. This was done, for instance, with the grouping of 'absent', 'away' and 'gone'. In addition, the restriction

of a negative existential to a specific category is seen as a separate function. Specifically, in a number of languages, negative existentials are either restricted to the present tense or the predication as a whole does not admit any tense-aspect marking (cf. data from Māori in (7b) above). This is considered to be a separate function labelled -TENSE. In most grammatical descriptions this latter property is ascribed to morphology, and the negative existential in question is described as a defective lexical item. However, it is more appropriate to see this as a matter of semantics rather than morphology for the following reasons. First, this property of negative existentials is cross-linguistically very common. Second, existential predications in general, both affirmative and negative, are stative predications that postulate the presence or absence of something in an absolute way (see section 4.1.2). This does not combine well with tense-aspect marking, which may explain why such marking is banned in the existential structures of many languages.

The functions listed above are arranged on the semantic map in a way such that optimal cross-linguistic coverage is achieved. Senses that tend to co-occur were positioned in immediate adjacency to each other. The reader will have noticed that the senses identified for negative existentials show different degrees of cross-linguistic frequency. This too was a guiding principle in the establishment of their spatial arrangement. The most frequent ones, such as negation of existence (NEG.EX) and negation of possession (NEG.POSS), are put in the centre of the map. Another frequently recurring sense is negation of location (NEG.LOC), (see more on this issue in section 4.1.2). Other functions of negative existentials that appear to be cross-linguistically common are as follows: their use as pro-sentences, as indefinite pronouns, and, finally, their 'timelessness' as pointed out above. Senses that appear less frequently are nonetheless important, since they are indicative of the historical development of negative existentials. As we shall see in section 4.3 below many negative existentials appear to originate via re-analysis of lexemes with a negative content. Besides, one of the advantages of semantic maps is the possibility they offer to visualize different stages of language change. In this case, it can be shown that the less frequent senses represent a stage in the development of negative existentials. Spatially, less frequent senses are put in the periphery of the map. Some examples of semantic maps for negative existentials in specific languages follow in Figure 1.

Figure 1.



The maps for the negative existentials in Bagirmi (Nilo-Saharan, Chad) and Teop (Austronesian, […] Nehan-North Bougainvill, Papua New Guinea) show two different kinds of functional load. In Bagirmi, the negative existential *g^{w}oto* is used for the negation of existential (22a), possessive (22b) and locative predications (22c); its (presumably older) lexical sense, 'absent' is still preserved and used in glosses in the grammar.

(22) Bagirmi (Nilo-Saharan, Central Sudanic), (Stevenson 1969: 165-166)

a. Kabkinja-ge g^{w}oto
egg-PL be.absent
'There are no eggs'

b. Ma g^{w}oto-m-jo nyiŋa
I be.absent-1SG-POST spear
'I have no spear' (lit.: I absent-me-to spear)

c. Ne g^{w}oto lol(o)
he be.absent here
'He is not here'

In Teop, the negative existential is used for the negation of existence (23a), possession (23b), and location (23c). However, it has a number of other functions as well: it is used as a pro-sentence (23d) and as the general word for 'no' (23e); it can also be used as an emphatic negator in an already negated sentence (23f), and it is also an indefinite pronoun (23g). The Teop data presented below provide a good illustration of a multifunctional negative existential. In addition, two other facts are noteworthy. First, when the negative existential

ahiki is used, even proper names such as *Gaagin* in (23c) are treated as common nouns, in that they have to be preceded by the indefinite/ non-specific quantifier *ta* (Ulrike Mosel, p.c.). Thus, even with locative negation, the negative existential still requires an indefinite subject. Second, the use of the negative existential *ahiki* as an indefinite pronoun needs to be brought up. This topic has been discussed at length in (Haspelmath 1997). The author pointed that this is a special characteristic of the languages in Oceania, where indefinite pronouns do not exist as a separate class.

(23) Teop (Austronesian, Western Oceanic, Nehan-North, Bougainville)

a. Na hiki vakis nana ta inu vai ta mataa
TAM NEG still IPFV:3SGNSP house DEM NSP good
'There is still not a good house'
(Mosel & Spriggs 1999: 49)

b. Ahiki ta maa taba te-ara ta maa mataa
NEG NSP PL thing PREP-1:INCL NSP PL good
'We did not have good things' (lit.: There were not our good things)
(Mosel & Spriggs 1999: 49)

c. Ahiki ta Gaagin ou
there.is.not any Gaagin there
'Gaagin is not there'
(Ulrike Mosel, p.c.)

d. Eam na va-kiu vatatana nom ge ahiki
2PL TAM COOP-work together IPFV.2PL or NEG
'Do you work together or not?'
(Mosel & Spriggs 1999: 48)

e. -a ba tama-riori? -ahiki, a maa moon koa
ART PL father-3PL -NEG, ART PL woman only
'Their fathers? No, only women'
Mosel & Spriggs 1999: 48)

f. Te-a vaasusus-ti o si vahara beiko saka
PREP-ART teach-OBJ ART little group child NEG
o top class haa-no ahiki
ART top class NEG-IPFV.3SG NEG
'To teach the little children, not the top class, no'
(Mosel & Spriggs 1999: 49)

g. Ahiki ta peha te-nam to nata nana
NEG NSP one PREP-1EXCL REL know IPFV.3SG
'None of us knows it' (lit.: there is not one of us who knows it)
(Mosel & Spriggs 1999: 50)

i. Ahiki ta taba to tapaku,
NEG NSP thing REL happen
ahiki ta vaasusasun to tavus
NEG NSP fight REL break out
'Nothing happened, no fight broke out' (lit.: There was not a thing that happened, there was not a fight that broke out)
(Mosel & Spriggs 1999: 50)

The negative existentials in both Bagirmi and Teop can be said to reflect properties that are prototypical for negative existentials world-wide, in that they show functions which are cross-linguistically very frequent.

4.1.2. Negative existentials as predicators of absolute absence

The use of negative existentials to negate locative predications is frequently reported in grammars, usually without any detailed discussion. However, it has to be pointed out that in a number of cases, the negation of locative predications can be covered by either the existential or some other negator, depending on the intended sense.

Data from Uralic languages will be used to illustrate this. In Erzya, a Mordvin language from the Volga region in Russia, negation of locative predications can be done by all three available negators, i.e., the SN marker *a,* the ascriptive negator *avol'* and the existential negator *araś*, as is shown in (24).

(24) Erzya (Uralic, Mordvin) (Hamari 2007: 91)

a. Ezéme-ś a tarka-so-nzo
bench-SG.DEF.NOM NEG place-INE-PX.3SG
'The bench is not in its place'

b. Ezéme-ś avol' tarka-so-nzo
bench-SG.DEF.NOM NEG place-INE-PX.3SG
'The bench is not in its place'

c. Ezéme-ś araś tarka-so-nzo
bench-SG.DEF.NOM NEG place-INE-PX.3SG
'The bench is not in its place'

Hamari (2007: 177) comments that "when *a* or *avol"* are used, the scope of negation is restricted to the locative phrase, whereas in clauses with *araś*, the negation is much more categorical". Specifically, when speakers produce sentences such as (24a) or (24b), the most common interpretation is that 'the bench' is not in its place, but it is supposed to be in some other place. The contrast with some other location of 'the bench' is always present, even though the other location may not be mentioned explicitly. When a sentence such as (24c) is produced, the default interpretation is that the presence of 'the bench' is denied without any further reference to its possible presence or existence in another location. The English translations of the examples under (24) do not reflect these nuances of meaning, but Hamari (2007: 91) states that speakers of Erzya interpret these utterances differently. The important point to stress here with regard to the semantics of the negative existential *araś* is that it predicates absolute absence (24c). As such, it is banned from constructions with contrastive focus.

Similar data can be reported for Hungarian where the negative existential *nincs* is completely excluded from constructions of contrastive focus and the standard negator *nem* has to be used instead.

(25) Hungarian (de Groot 1994: 150)

a. Nem Péter van itt, hanem János
NEG Peter be.3SG here but John
'It is not Peter who is here, but John'

b. * Péter nincs itt, hanem János
Peter NEG.EX here but John

This observation about negative existentials appears to reflect a strong cross-linguistic tendency and may even be a universal. As shown in Table 2, negative existentials can be used in locative predications in 33 languages, that is to say, in half of the 63 languages with negative existential (cf. Table 1 above for quantitative estimates). For all of these 33 languages, it holds true that, if a negative existential is used in locative statements, it will deny the existence of an entity in an absolute, categorical way. No contrast with another entity or another location is possible. The use of negative existentials in locative predications typically involves some further complication regarding, for instance, the marking of pivot.[8] As shown by data from Teop in (23c) above, repeated below as (26), proper nouns are treated as common nouns when negated by the negative existential. Specifically, the

indefinite quantifier *ta* has to precede the proper noun *Gaagin* in this construction; *ta* is otherwise not used with proper nouns.

(26) Teop (Austronesian, Western Oceanic, Nehan-North, Bougainville)

Ahiki ta Gaagin ou
there.is.not any Gaagin there
'Gaagin is not there'
(Ulrike Mosel, p.c.)

In Bulgarian, the pivot of this construction is marked by an object clitic when the negative existential is used; no such marking is either required or possible when the standard negator is used (cf. the data in (27) below). It should also be noted that contrastive focus with the negation of location is possible in (27a). No such contrast is possible when the negative existential is used in (27b). Further information about the location of the pivot has to be given in a new sentence.

(27) Bulgarian (Indo-European, South Slavic) (own data)

a. Todor ne e v kəšti a na kino
Todor NEG is in home but at cinema
'Todor is not at home but at the movies'

b. Todor go njama (v kəšti).Toj e na kino
Todor 3.SG.OBJNEG.EX (in home) he is at cinema
'Todor is not at home. He is at the movies'

The encoding of absolute negation in negative existentials is made even more apparent in languages where negative existentials simply cannot be used for the negation of locative predications. As already pointed out, half of the languages with the negative existentials allow their use in locative predications; however, in the other half, such use is banned and some other negator has to be used instead. This is illustrated by Turkish below.

In Turkish, the particle *değil-* is used to negate locative predications as shown in (28b), which is the negated counterpart of (28a). The negative existential *yok* may be used for their negation only in very special cases (van Shaaik 1994: 41-45). For instance, the context for the statement in (28c) is that the speaker is looking at holiday pictures and makes the observation that the listener is missing on them. Thus, the statement in (28c) is a statement about absolute

absence and consequently the existential negator is chosen. In (28d), the speaker is talking about not being present at a party; again the statement is about categorical absence and the negative existential is preferred for its predication.

(28) Turkish (Altaic, Turkic), (van Shaaik 1994)

a. Ev-de-ydi-k
house-LOC-PST-1PL
'We were at home'

b. Ev-de değil-di-k
house-LOC not-PST-1PL
'We were not at home'

c. Ama sen yok-sun
But you not.exist-2SG
'But you are absent'

d. O zaman ben yok-tu-m
then I not.exist-PST-1SG
'Then I wasn't there'

Finally, data from Kiowa (Kiowa-Tanoan, New Mexico, USA) shed further light on the marking of absolute negation in negative existentials.

(29) Kiowa (Kiowa-Tanoan) (Stassen 1997: 94, citing Watkins 1980: 261)

a. E:go yi: ol è-cel kicoy-ka
here two hair 3DU-be in soup-in
'There are two pieces of hair in the soup'

b. Kɔ́ýgú· háyá á-t'ɔ́-dê nɔ́ pày+ hɛ́ gyà-dɔ̨́-mê
kiowa.INV somewhere 3PL-stay.HSY and sun+without PL-be-HSY
'The Kiowas were living somewhere and there was no sun'

There is no grammaticalized existential construction in Kiowa; existence is predicated by intransitive sentences. An example of such a predication is shown in (29a). The statement in (29b) is about the absence/non-existence of the Kiowas at a certain mythic time. There is no negative element in this sentence. The postposition *-hɛ́* 'away,

gone' can be used with either incorporated or non-incorporated subject to express the sense of non-existence. When used with an incorporated subject as in (29b), the non-existence is of more stable/permanent nature. Thus (29a) represents a predication of affirmative existence in Kiowa while (29b) shows an expression of negated existence. These examples are very instructive about the nature of negative existentials: they are used to make a statement about the absence of something, rather than negate its existence.

4.1.3. Negative existentials and their interaction with SN

It is commonly noted that negative existentials interact with SN synchronically and diachronically. Croft (1991) suggests that negative existentials are one possible source for SN markers via the Negative Existential Cycle. A full discussion of this cycle falls outside of the scope of this paper (see Veselinova 2010, Veselinova *under revision*). As suggested by the inventory of functions in Table 2 above, negative existentials are used as markers of SN in 10 languages, that is, 15.87% of the languages with negative existentials. There are also languages where the negative existential is used as a SN marker for a specific tense-aspect category or a major group of verbs. All together, the languages in this latter group amount to 6, that is, about 10% of the languages with negative existentials. In the semantic maps, SN as a function is listed apart from the functions where the negative existential is used as SN marker for a specific category. The reason for this is that data both from the macro- and micro-samples suggest that there are different paths by which negative existentials come to be used as general markers of SN and as markers of SN for a specific category.

Negative existentials appear to evolve into general markers of SN via their uses as pro-sentences and then as general words for 'no', typically used as clause external tags. This hypothesis is based on the cross-linguistic frequency of these senses paired up with corpus data. The use as a pro-sentence is more frequent than the use as a short word for 'no' (cf. Table 2). As indicated in the same table, both of these senses are cross-linguistically more common than the use of negative existential as SN marker. Following the theory on semantic maps, these facts are taken to represent different diachronic stages in the interaction of negative existentials with SN. Data from the micro-samples support this hypothesis. It is illustrated below by data from Russian (Indo-European, East Slavic, Russia) and Sino-Russian (Russian-based Pidgin, Kyakhta and vicinity, Russian-Mongolian Border).

In the Russian National Corpus,[9] the negative existential *net* is tagged either as a predicate (30a), or as a sentence particle/short word 'no' (30b) or as a pro-sentence (30c).

(30) Russian (Indo-European, East Slavonic) (Russian National Corpus)

a. Sil u neë net
strength.F.PL.GEN in her NEG.EX
'She does not have any strength' (lit.: Strengths in her there-is-not)
(Russian National Corpus [Ordinamenti // "Screen and scene", 2004.05.06])

b. Net ja tak ne duma-l i tak ne mechta-l
no I so NEG think-PST.SG.M and so NEG dream-PST.SG.M
'No, I neither thought nor dreamed that way'
(Russian National Corpus, Evgenij Grishkovets, Odnovremenno (2004))

c. I tut my ne zna-em v kak-oj
and PART we NEG know-1PL.PRS in what-SG.M
moment my pochuvstvu-em a v kak-oj net
moment we feel-1PL.PRS but in what-3SG.M not
'And we don't know at which moment we feel and at which not'
(Russian National Corpus, Evgenij Grishkovets, Odnovremenno (2004))

Frequency counts on the disambiguated part of the corpus show that *net* is used much more frequently as a sentence particle/pro-sentence than as a main predicate. Although this tendency is especially noticeable in informal speech, the same tendency is observed in formal speech as well as in fiction. Non-fiction texts are the only part of the corpus where the use of *net* as a main predicate prevails over its use as a sentence particle. These texts include technical, business, and non-fiction texts.[10] In Table 3 below, the percentages indicate the proportion of the hits of *net* for a particular function (predicate or sentence particle/pro-sentence) and the total hits for *net* in each genre.

Table 3. Counts for 'net' in the Russian National Corpus.

			NET 'PREDICATE'		*NET* 'SENTENCE PARTICLE' & 'PRO-SENTENCE'	
	T1	*T2*	*T3*	*% of T2*	*T4*	*% of T2*
Fiction	314294	6622	2757	41%	3865	58,37%
Non-fiction	2162109	2918	1695	58,09%	1219	41,78%
Formal speech	229663	874	342	39,13%	532	60,87%
Informal speech	17356	143	45	31,47%	99	69,23%

T1 Total number of word tokens in each genre

T2 Total hits of *net* in each genre

T3 Total hits of *net* tagged as a predicate

T4 Total hits of *net* tagged as a sentence particle/pro-sentence

The data on the Russian negative existential *net* show that *net* is expanding its domain of use towards functions that are cross-linguistically common for negative existentials. As shown above, it is increasingly used as pro-sentence, (30c), or sentence particle/short word for 'no' (30b). The latter use can also be described as a sentence tag, external to the proposition. A form related to *net*, *netu*, is adopted as SN in some Russian-based pidgins such as Sino-Russian.

(31) Sino-Russian (Pidgin, Kyakhta and vicinity, Russian-Mongolian Border), (Stern 2002: 23)

Naša ego ponimaj netu
1PL 3SG understand NEG
'We don't understand him'

The use of negative existentials as negators for a particular tense-aspect category appears to result from their tendency to be used in specific constructions. This is illustrated by data from Hawai'ian (Autronesian, […] Nuclear Polynesian, Hawai'i, USA) below. In this language, the SN marker *'a'ole* and the negative existential *'a'ohe* alternate in several constructions shown in (32) and (33).

(32) Hawai'ian (Austronesina, Malayo-Polynesian, Polynesian, Nuclear, Eastern, Marquesic), (Elbert and Pukui 1979: 142)

a. 'A'ohe o kana mai
NEG LOC tens towards.speaker
'There is no limit (idiom)'

b. ‘A’ole o kana mai
NEG LOC tens towards.speaker
‘There is no limit (idiom)’

As the data in (32a-b) show, the negative existential *‘a’ohe* alternates with the SN marker *‘a’ole* for the negation of existential predications. However, *‘a’ohe* is also used as a SN when the predication is about an action and the subject is marked by the possessive marker *o* or *a*[11] (cf. (33b-d).

(33) Hawai’ian (Polynesian, Nuclear, Eastern, Marquesic)

a. ‘A’ole i hele ke kanaka
NEG PFV.NEG go DET man
‘The man did not go’
(Elbert and Pukui 1979: 142)

b. ‘A’ohe o lākou hana
neg.ex POSS 3PL work
‘They didn’t work’

c. ‘A’ohe ā lākou hana
NEG.EX POSS 3PL work
‘They had no work’
(Kahananui and Anthony 1975: 372)

d. ‘A’ohe o’u ‘ike/lohe au iā ia
NEG.EX 1SG.POSS see/hear I OBJ 3SG
‘I can’t see/hear him/her’
(Kahananui and Anthony 1975: 346)

It is unclear what triggers the selection of *‘a’ole* or *‘a’ohe*. Obviously, the predication in (33a) is a verbal one, whereas the constructions in (33b-d) show some properties of action nominals (cf. Comrie & Thompson 1985: 383, and Koptjevskaja-Tamm 1993: 209, 211, 256), in that the subjects are marked by the genitive marker. In the current literature, the only source in which it is suggested that the two negators *‘a’ole* and *‘a’ohe* stand in complementary distribution is Kahananui & Anthony (1970: 346). These authors observe that when *‘a’ohe* is used in sentences with genitive subjects, the action expressed by the verb is incomplete. Thus the examples in (34) contrast with those in (35) in terms of aspect: (34a-b) are imperfective, by contrast with (35a-b), which are not.

(34) Hawai'ian (Polynesian, Nuclear, Eastern, Marquesic), (Kahananui and Anthony 1970: 346)

a. 'A'ohe o'u 'ike/lohe aku iā ia
NEG.EX 1.POSS see/hear DIR.away.from.speaker PART 3SG
'I can't hear him/her' (lit.: not-exist my seeing/hearing away from him/her)

b. 'A'ohe ona 'ike/lohe mai ia'u
NEG.EX 3.POSS see/hear DIR.towards.speaker 1SG
'S/he can't hear me' (lit.: not-exist his/her seeing/hearing towards me)

(35) Hawai'ian (Polynesian, Nuclear, Eastern, Marquesic), (Kahananui and Anthony 1970: 346)

a. 'A'ole hiki ia'u ke 'ike/lohe aku iā ia
NEG can 1SG PART.MOD see/hear DIR.away.from.speaker PART 3SG
'I can't hear him/her'

b. A'ole hiki iā ia ke
NEG can PART 3SG PART.MOD
'ike/lohe mai ia'u
see/hear DIR.towards.speaker 1SG
'S/he can't hear me'

What is of particular interest in this context is how the special existential negator *'a'ohe* expanded into the domain of verbal negation. Speculations concerning the possible ways in which such expansion might have evolved are offered below, beginning with a discussion of the frequency of use of the two negators.

According to Schütz *et al.* (2005: 23-24), *'a'ohe* is substantially less frequent than *'a'ole*, and it is used with noun phrases only. Both of these generalizations are confirmed by my counts in newspaper texts from 1864. In blogs dated 2010, *'a'o'he* exhibits very low frequency as well, but a greater variation in the kinds of words it collocates with is observed (see Table 1 and Table 2 in Appendix at the end of this paper). The frequency counts reported here were done on the following kinds of text: Bible translations (see http://baibala.org), and concordances of *'a'ole* and *'a'ohe* as keywords in context in newspaper texts from 1864, and blogs dated 2010. The frequency counts in the Bible translations are summarized in Table 4. In this table, the

numbers under *ʻa'ohe* or *ʻa'ole* indicate the number of verses in which these forms occur. The summary of the frequency counts in newspaper texts from 1984 and blogs dated 2010 follow in Table 5.

Table 4. Frequency counts in Hawai'ian Bible translations.

YEAR	*ʻA'OLE*	% OF T1=31103		*ʻA'OHE*	% OF T1=31103
1839	5924	19,05%		507	1,63%
1868	5959	19,16%		544	1,75%
1994	5915	19,02%		547	1,76%

T1 = Total number of verses

Table 5. Frequency counts in Hawai'ian newspaper texts from 1864 and blogs dated 2010.

YEAR	T2	*ʻA'OLE*		*ʻA'OHE*	
		N	% of T2	N	% of T2
1864	66997	773	1,15%	28	0,04%
2010	391854	2139	0,55%	173	0,04%

T2 = total number of word tokens in each text collection

N = number of hits of 'a'ole/'a'ohe, respectively

A'ohe is very infrequent in the texts studied here (0.04-1.76% of the total number of word tokens). It appears to be more frequently used in the Biblical texts than in newspapers and blogs, so its frequency may be genre dependent. However, there is not much difference between the findings of the analysis of Bible texts and those of the analysis of the newspapers and blogs. Consequently, it is cautious to hypothesize that the frequency of *ʻa'ohe* has not changed very much in the past 150 years. *ʻA'ohe* is nonetheless used for the negation of existential and possessive predications, cf. (36) below, and also as SN, when the predication is about an action and has a genitive subject. As cited above, Kahananui & Anthony (1970) consider the latter use to imply that the action expressed by the verb is incomplete. Since there is no doubt that *ʻa'ohe* was first used for the negation of existential and possessive predications, it seems reasonable to suggest that it has a stable association with the constructions shown in (36).

(36) Hawai'ian (Austronesian, Malyo-Polynesian, […] Polynesian, Nuclear, Eastern, Marquesic), (Elbert and Pukui 1979: 142)

a. ʻElua a'u keiki
two 1.SG.POSS child
'I have two children'

b. ‘A’ohe a’u keiki
NEG.EX 1.SG.POSS child
‘I have no children’

The said association led to the use of *‘a’ohe* in verbal predications with genitive subjects such as the ones shown in (33) and (34), since those are modeled on possessive constructions. As shown by the text counts, the frequency of *‘a’ohe* has remained very low through the passage of time. So its use as a SN (negator of actions) most probably depends on the expansion of the possessive construction. Similar developments whereby the negative existential is carried over to a specific category of the domain of SN are also observed in Slavic and Uralic languages (cf. Veselinova 2010, Veselinova *forthcoming*). Likewise, Croft (1991: 17) brings up Tamil data[12] to highlight this issue.

4.2. Morpho-syntactic properties of negative existential

Morpho-syntactically, negative existentials show the following characteristics. First, they are commonly argued not to fit in any wider morphological class, but rather to form separate morphological classes, in their respective languages. When they take on pertinent verb morphology, especially person-number agreement markers, as in Turkish (cf. (28c-d) above), this is typically indicative of them being used outside the realm of negated existence proper. The special negative existentials are incompatible with tense-aspect marking in 20 languages, that is, in approximately one-third of the 63 languages with special negative existentials. In section 4.1.1 above, I argued that this should be considered a matter of semantics rather than simply defective morphology. Even when they are used in non-present tense contexts, they may still not take any tense-aspect marking (cf. data in (37) below from Mari (Uralic, Russia)). In this language, the negative existential *uke* is supposed to be restricted to the present tense according to textbooks. However, in actual usage it may occur even in non-present tense contexts but it does not take any pertinent morphological marking (Jeremy Bradley, p.c.). Languages like Turkish, Bulgarian and Makedonian, where the negative existentials admit of tense marking, are rare in both the macro- and the micro-samples. In fact, in the current macro-sample they amount to 3: Barasano (Tucanoan, Colombia), Turkana (Nilo-Saharan, Kenya) and Kuot (Isolate, Papua New Guinea/New Britain).

(37) Eastern Mari (Uralic, Mari)

a. Kvorum uke-lan köra jükl-ə-maš əš lij
quorum NEG.EX-DAT due.to vote-EPH-NOM NEG.3SG.PST be.CONNEG
'Due to the lacking quorum, there was no vote'
(Jeremy Bradley, p.c., citing Galkin 1990-2005)

b. žap-em uke əl'e
time-1.SG.GENNEG.EX be.3SG.PST
'I didn't have the time'
(Jeremy Bradley, p.c., citing (Riese at al. 2010)

Secondly, negative existentials tend to replace the affirmative existential that they negate. This can be seen from the Turkish example in (16c-d), which we repeat here for convenience as (38a-b).

(38) Turkish (Altaic, Turkic) (van Schaaik 1994: 44-45)

a. Su var-dı
water exist-PST
'There was water'

b. Su yok-tu
water NEG.EX-PST
'There was no water'

Further illustration of this is given in (39):

(39) Kuot (Kuot), (Eva Lindström, p.c.)

a. Ame tomato-p mi- lə blu-meŋ
exist tomato-PL 3PL.SBJ-RELR blue-3PL.SBJ
'Blue tomatoes exist'

b. Karuk ma tomato-p mi- lə blu-meŋ
is.not of.3PL tomato-PL 3PL.SBJ-RELR blue-3PL.SBJ
'Blue tomatoes do not exist'

If there is no affirmative existential, the negative ones simply come to replace a zero-encoded predicate. This is shown in the data from Māori in (18), which we repeat here as (40), and in Maybrat (Maybrat, Indonesia / Northwestern Papua) (cf. (41)).

(40) Māori (Austronesian, Malayo-Polynesian, [...] Nuclear Polynesian, Eastern, Tahitic), (Harlow 2007: 153-154)

a. He whare wānanga kei Kirikiriroa
DET house learning PREP Hamilton
'There is a university in Hamilton'

b. Kāore he whare wānanga i Taihape
NEG DET house learning PREP Taihape
'There's no university in Taihape'

(41) Maybrat (Maybrat) (Dol 1999: 127)

a. Fiam aya ete
catfish water below
'There are catfish under the water' (lit.: Catfish the water's below)

b. Arko m-fe
firewood3.unmarked.NEG
'There is no firewood'

A similar situation is found in Sentani (East Bird's Head Sentani, Indonesia/Papua), Kayardild (Australian, Pama-Nyugan) and Mara (Australian, Gunwingguan, Northern Australia). There is only one language in my dataset, Mandarin Chinese (Sino-Tibetan, China), where the negative existential may either replace the affirmative existential or co-occur with it.

(42) Mandarin (Sino-Tibetan, Chinese), (Wiedenhof 1994)

a. Dàn shi zhěng ge fángzi
but be whole CLF house
dōu méi *yǒu* shéme dōngxi
all NEG.EXexist what thing
'But there wasn't anything worthwhile in the whole house'

b. Wǒ shuō:'wǒ méi liángpiào
I say I NEG.EX grain coupon
'I said: I don't have grain coupons'

A final morphosyntactic property of negative existentials is that they appear to be closely associated with specific constructions. This was pointed out in the discussion of Hawai'ian and other languages in section 4.1.3. As shown by the Hawai'ian data, in this language the negative existential always occurs with a subject marked by the possessive/genitive. When used with a definite subject in Bulgarian, the subject has to be marked as an object (cf. discussion in section 4.1.2 and data in (27) above). Similarly in Teop, proper nouns, when used with negative existentials are treated as common noun and have to be preceded by a non-specific marker (cf. (23) above).

4.3. Diachronic notes

Negative existentials appear to originate mainly from two processes: coalescence (univerbation) of SN and a lexical item that is part of the existential construction, or re-analysis of a lexical item with an appropriate sense. There are negative existentials which are clear univerbations between SN and another word (17 languages, i.e., 27% of all negative existentials). Typically, the univerbation is between SN and an existential marker or a HABEO verb. A few of coalesced forms are shown in (43) below.

Negative existentials which are clear univerbations between SN and another word

(43) a. Ket (Yeniseian, Russia)
bən's'aŋ < *bənj* 'SN' + *us'aŋ* 'there'

b. Samoan (Austronesian, […] Polynesian Outlier, Samoa)
lēai < *lē* 'SN' + *ai* 'exist'

c. Ukrainian (Indo-European, East Slavic, Ukraina)
nema / nemae < *ne* 'SN' + *mae* 'have.3SG.PRS'

There are also negative existentials which are completely separate from SN (25 languages, i.e., 39% of all negative existentials.). Many are associated with a specific lexical meaning or can be shown to have a diachronic connection to a word with a particular lexical meaning. Some examples are cited in Table 6 below.

Table 6. Negative existentials which are formally distinct from SN and are still associated with a lexical meaning

	LANGUAGE	SN	NEGATIVE EXISTENTIAL	LEXICAL SENSE FOR THE NEGATIVE EXISTENTIAL
a.	Bagirmi	*(e)li*	*g^{w}oto*	absent
b.	Turkana	*ɲi-*	*a-mamaka-ɔ̰*	lack
c.	Nez Perce[13]	*wéeʔu*	*cáʔya*	absent
d.	Kewa[14]	*na-*	*dia*	there is not

A lexical sense can be listed for a negative existential even if it is identical with SN. For instance, the negative existential in Kannada *illa* is said to be derived from an old Dravidian root meaning 'die' (cf. Burrow & Emeneau 1984). Nivkh (Isolate, Eastern Asian Russia) *-qavr-* is said to mean 'not have' (Ekaterina Gruzhdeva, p.c.).

The tendencies described above are based on data from the macro-sample. They are summarized in Table 7 below.

Table 7. Summary of the origins of negative existentials.

SOURCE	NR OF LANGUAGES
Univerbation of SN and another word	17 (27%)
Lexical item with a negative content	25 (39.7%)
Formally identical with SN (origin unknown)	21 (33.3%)

Another source for negative existentials suggested by data in the micro-samples is borrowing. For instance, in Mari (Uralic, Mari, Russia), the negative existential *uke* is a borrowing from Turkic (cf. Turkish *yok* 'not exist') (Kangasmaa-Minn 1998: 231, Vasikova 1990: 72-73). While borrowing does not surface as a source in the world-wide sample used here, it might be more common in another sample and in a more in-depth study of languages in contact. For example, one of the negative existentials in Hausa, *bâ* may be a borrowing from Kanuri (Nilo-Saharan, Nigeria), a language with which Hausa speakers have close contact. The Russian negative existential *net* is reported, albeit sporadically used, as an alternative negative existential form in Forest Enets (Uralic, Samoyedic, Russia) (Florian Siegl, p.c.). This issue cannot be fully investigated in this paper, although it definitely deserves further inquiry.

The tendencies on the origin of negative existentials reported above suggest that their origin is a matter of lexicalization rather than any other process. The most widespread source appears to be the reanalysis of words with a negative content such as 'lack', 'absent', 'there is not', 'empty' or 'dead'. Another very common source, and one which is well known (Croft 1991), is the creation of negative exis-

tentials via the fusion of SN and a collocate, typically, the copula or the affirmative existential particle. This particular pathway shows that SN and the copula or the affirmative existential co-occur so frequently that they easily merge. It has to be added that the resulting fusion is also conceptually strong and can gain a lexical force on its own. Markers of SN can fuse easily with words they collocate with often (cf. also van der Auwera 2010). For instance, in Old English the SN marker fused with the verb *willan* 'want' to yield *nille* 'not want.1.SG.PRS', with a full paradigm in the present tense. The fused forms were in use for a while, but did not survive in later stages of the development of the language. Similarly, Latin *nolle* 'not-want, disfavour' and its related forms are all fusions between the SN marker and forms of *velle* 'want'. One can claim that there is functional pressure towards the creation of negative existentials. For instance, in Khalkha (Mongolic, Mongolia), one of the negative existentials, the noun *üɣei* 'absence, non-being' (cf. (44a)), while still being used as a negative existential, has evolved into the SN marker *-güi* in modern Khalka (cf. (44b)). At the same time, a new negative existential, *alɣa* 'absent' has been introduced. This is shown in (44c-d).

(44) Khalkha (Altaic, Mongolian), (Beffa & Hamayon 1975: 199)

a. Minij üɣüj-d
1.SG.GEN absence-DAT
'When I wasn't there' (lit.: in my absence)

b. Luu gej am'tan bai-dag- güi
dragon COMP living.being be.there-HAB.PTCP-NEG
'Dragons do not exist'
(Benjamin Brosig, p.c.)

c. Nɜg č xun alɣa
here CONTR.PART person absent
'There is no one'

d. Axynd očixoos biš öör arɣa alɣa
older brother go than other means there is not
'There is no other way but to go to older brother'

4.4. Negative existentials: a special negator or a separate semantic domain

In individual language descriptions, negative existentials are typically seen as negators of their own kind, or as a special property of affirmative existential predications. However, as I have been arguing in the preceding sections, they also show a number of features that make them look more like a conceptual domain of their own rather than prototypical negation markers. The motivations for this claim are as follows. Morphologically, negative existentials tend to fall outside traditional word classes, and generally form a class of their own. Semantically, negative existentials predicate the absence of an entity rather than negate its existence. In addition, it is fully possible to outline a prototype of their content. Specifically, by using the semantic maps method, we are able to point out functions that recur with negative existentials world-wide. Thus a proto-typical negative existential is used for the negation of existence, possession and location; it is also a pro-sentence and the short word 'no'. In terms of syntax, negative existentials replace the lexical items they are supposed to negate, and are bound to specific constructions. Historically, negative existentials show similar origins in a number of unrelated languages. Specifically, most of them can be successfully traced to lexicalizations, which result from fusions between a negative element and a collocate meaning 'be' or 'exist', or to reanalyses of lexical sources meaning 'absent', 'lack', 'poor'. Some of them are still used with these senses on occasion. Also, they appear to be re-created all the time.

The use of negative existentials as predicates can explain why they acquire phrasal properties easily, and are frequently interpreted as short answers for 'no'. Because of their semantics they are often included in other periphrastic constructions whereby they appear to break into the domain of verbal negation. Thus, they fall in between the domain of existence and the domain of negation, but are neither. Given their semantic and structural properties, it is justified to describe negative existentials as a separate semantic domain, which I call here the 'domain of absence'.

5. Summary and conclusions

In this paper I presented a cross-linguistic study of negative existentials. The starting point of the study was to outline negation strategies used for existential predications, as it is commonly pointed out that those may differ from SN. While it is possible to use SN for the negation of existential predications, cross-linguistically this is the least common option, which is both quantitatively and geographically restricted. In the current dataset, SN is used to negate existential sentences in Western Europe, parts of South East Asia and parts of Central and Southern South America. In the rest of the world a special strategy is employed for the negation of existential predications. As we have seen in the sections above, the negative existentials identified here share a number of properties in terms of their semantics, morpho-syntax, use and origin. In light of these similarities it was suggested that they are better described as a functional domain of their own. They interact with both the domain of existence and the domain of negation, but are in essence a separate grammatical and conceptual phenomenon.

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Appendix: Hawai'ian text counts

In Table 1 and Table 2 below, *N* shows the number of times a particular collocation is encountered and % represents the proportion of the total; down-arrows are used to indicate a decrease in the frequency of a particular collocation in 2010 relative to its frequency in 1864; upward arrows are used to indicate increases in frequency.

Table 1. Collocations of *'a'ole*

	1864		**2010**	
COLLOCATION	*N*	%	*N*	%
'a'ole LEXICAL ITEm	221	29%	211	10% ↓
'a'ole TAM particle	168	22%	465	22%
'a'ole ADVERBIAL PARTICLE	145	19%	734	35% ↑
'a'ole PERSONAL PRONOUN	94	12%	416	19% ↑
'a'ole LOCATIVE or DIRECTIONAL PARTICLE	52	7%	94	4% ↓
'a'ole PREPOSITION	25	3%	80	4%
'a'ole ARTICLE	24	3%	68	3%
'a'ole POSSESIVE PRONOUN	14	2%	11	1%
'a'ole POSSESSIVE MARKER *o*	17	2%	45	2%
'a'ole POSSESSIVE MARKER *a*	3	0%	2	0%
'a'ole DIGIT	2	0%	6	0%
'a'ole EXISTENTIAL PARTICLE *ai*	1	0%	3	0%
'a'ole unclear word	7	1%	4	0%
Total	773	100%	2139	100%

Table 2. Collocations of *'a'ohe*

	1864		**2010**	
COLLOCATION	N	%	N	%
'a'ohe BARE NOUN	18	63%	78	46% ↓
'a'ohe *mea* 'thing'	7	25%	58	34% ↑
'a'ohe *i,* highly polysemous word	1	4%	2	1%
'a'ohe POSSESSIVE MARKER *o*	1	4%	6	4%
'a'ohe *nui* 'plenty, a lot'	1	4%	2	1%
'a'ohe *ona* '3.SG POSSESSIVE PRONOUN' or 'PL marker'	-	-	12	7%
'a'ohe *like* 'similar'	-	-	11	6%
'a'ohe *hoi* 'also, too, besides'	-	-	4	1%
Total	28	100%	173	100%

Notes

[1] For the genealogical affiliation of the languages presented here I follow the Ethnologue classification, http://www.ethnologue.com.

[2] In this paper, the following abbreviations are used: ART: article; CLF: classifier; COMPL: completive; CONNEG: connegative; CONTR: contrastive; COOP: cooperative prefix. Indicates that people do something together or to each other; DAT: dative; DEF: definite; DEM: demonstrative; DET: determiner; DIR: direction / directional; DU: dual; EPHE: epenthetic; EQ: equality; EX: existence; EXCL: exclusive; F: feminine; FUT: future; GEN: genitive; GENR: generic tense-aspect marker; GER: gerund; HAB: habitual; HSY: hearsay; I: class inclusion; IMPF: imperfect; INCL: inclusive; INDF: indefinite; INE: inessive case; INF: infinitive; INV: inverse. This is a morpheme that indicates a number category opposite to the inherent number of the noun to which it is attached. In Kiowa, every noun stem has an inherent or implicit number, either singular / dual or dual / plural; IPFV: imperfective; LOC: location / locative; M: masculine; MOD: modal; NEG: negative; NOM: nominative; NSP: non-specific; OBJ: object; PART: particle; PL: plural; POSS: possession; PREP: preposition; PRET: preterite; PRF: perfect; PROG: progressive; PRS: present; PST: past; PTCP: participle; PX: possessive suffix; REL: relative / particle which introduces relative clauses; RELR: relator; SBJ: subject; SG: singular; SN: standard negation; TA: tense-aspect; TAM: tense-aspect-mood.

[3] The online material to which this article makes reference can be found on the Italian Journal of Linguistics web page within the Table of Contents of this special issue (http://linguistica.sns.it/RdL/Riviste_anni.htm). It includes the following items: Online Appendix 1, Online Appendix 2, Online Map 1, and Online Map 2.

[4] The term *ascriptive* to cover these predications is suggested by Hengeveld (1992).

[5] The translation questionnaire can be found at the following web page <http://www2.ling.su.se/staff/ljuba/negation_questionnaire.pdf>.

[6] For the purposes of this paper I adopt the approach of van der Auwera (*forthcoming*). The theoretical debate on different kinds of semantic maps reflected in recent works on this method is considered outside the scope of the current inquiry. For a more detailed discussion, cf. for instance Wälchli (*forthcoming*), Sansò (2009) and also Malchukov (2009).

[7] Etymologically, the relation between *bābù* and *bâ* is in dispute. One analysis takes *bābù* as original and interprets *bâ* as a phonologically reduced form restricted to certain syntactic environments. Support for this analysis comes from the fact that some dialects only have *bābù* but not *bâ*. The other analysis, which is the traditional one and the one to which Newman (2000) subscribes, views *bābù* as a historically fused, grammaticalized word derived from *bâ* and *àbù* 'thing'. Comparative support for this view is provided by the existence of other Chadic languages, e.g., Gude, in which the negative existential is made up of a negative marker plus the word for 'thing'. Internal evidence against the interpretation of *bābù* as a basic, monomorphemic function word comes from the fact that it uses independent rather than object pronouns as its object/complement. Newman takes this to be an example of a grammaticalization, and provides details of use from the Sokoto dialect of Hausa. Finally, according to Newman, there is also the possibility that *bâ* is a borrowing from Kanuri (whose negative existential has this same shape), which would preclude its having developed from *bābù* by internal means.

[8] The term 'pivot' typically refers to the verb argument around which the sentence 'revolves'. This usually means any of the following: (i) pivot refers to the only argument of the verb; (ii) the verb agrees with the pivot if agreement is expected; (iii) in coordinated propositions, in languages where an argument can be left out, the omitted argument is the syntactic pivot.

[9] The Russian National Corpus is an online resource of some 300 million words and multiple stratification according to genre and modality. It can be found at http://www.ruscorpora.ru/en/index.html.
[10] These cover a number of domains typically covered by non-fiction writing such as official business, technical manuals, journalism, advertising, law, academic, theological, everyday life, electronic communication. The types of texts have been proportioned to reflect real life use. A full list of the types of text included can be seen here http://www.ruscorpora.ru/en/reqattr.html (last accessed 28-10-2012).
[11] Subjects marked by possessive markers are also referred to as genitive subjects in the literature.
[12] Tamil is a South Dravidian language spoken in Southern India.
[13] Penutian, Northern Idaho, USA.
[14] Trans-New Guinea, Angal-Kewa, Papua New Guinea.

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