

Negation – an overview of typological research

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Abstract

This article is an overview of the current state of typological research on negation. Structures expressing standard negation – the negation of declarative verbal main clauses – have been classified on the basis of the status of the negative marker, and later, paying more attention to the structure of the negative clause as a whole. Structural similarities and differences (symmetry and asymmetry) between negatives and affirmatives have been identified and classified, and explanations have been proposed for them. Negative strategies used in imperatives, existentials and non-verbal clauses often differ from standard negation; these differences are exemplified and discussed. The interaction between negative indefinite pronouns and standard negation shows interesting cross-linguistic variation in terms of whether the latter cooccurs with the indefinite and whether the indefinite is inherently negative. Some cross-linguistic observations on diachronic developments and on the interaction between negation and modality and negation and focus are also briefly discussed.

Introduction

In simple propositional logic, negation is an operator that reverses the truth value of a proposition. Thus, when p is true $\text{not-}p$ is false, and vice versa. While the core meaning of negation may be described in this straightforward way – and this is also the basic definition of negation adopted in this article – negation shows complex interaction with many aspects of meaning and structure. When we look at negation from a cross-linguistic perspective, we immediately see that there is much more to it than just adding a negative marker to an affirmative sentence – in natural language negation is a complex and multi-faceted phenomenon, not all aspects of which have been studied by typologists. This article is an overview of our current typological knowledge of negation, drawing on existing sample-based typological studies. I will begin by discussing standard negation, the negation of declarative verbal main clauses, then move on to other types of clausal negation: negation of

imperatives and negation of non-verbal and existential clauses. The fourth major topic covered is negative indefinite pronouns. There is a vast philosophical and linguistic literature on negation, see Horn (2001 [1989]) for a thorough overview (focusing mainly on logical, semantic and pragmatic aspects), but in this paper those aspects of negation that have not been studied using systematic typological language samples, will not be discussed or will be treated only briefly in the final section; thus, there will be no separate section, e.g., on negative polarity items or on the scope of negation (see also Miestamo 2006 for some aspects not covered here).

Standard negation

The literature is unanimous about the universal status of negation. Every natural language possesses at least a means to express clausal negation, i.e. a construction or constructions the function of which is to negate a clause. This section will look at the various ways in which the world's languages express standard negation. The term standard negation originates from Payne (1985). It can be characterized as the basic means that languages have for negating declarative verbal main clauses. In English we can identify the construction that adds *not* after the auxiliary verb as the standard negation strategy. It has been noted by many linguists that certain grammatical environments are more likely than others to have negative constructions different from standard negation. In Kahrel's (1996: 70-71) 40-language sample, imperatives, existentials and non-verbal clauses were the most common environments for non-standard negative constructions: imperatives showed non-standard negatives in 17 languages, existentials in 9 languages and non-verbal clauses in 8 languages. The negation of these clause types will be treated in separate sections below.

Not all treatments of standard negation use the term, but every study discussed in this section focuses on standard negation. On the basis of a sample of approximately 240 languages, Dahl (1979) proposes a typology where the basic distinction is between morphological and syntactic negation. According to the status of the negative marker, morphological negation is further divided into prefixal (Latvian 1), suffixal (Lezgian 2),

circumfixal (Chukchi 3), prosodic and reduplicative negation; the latter two types are only marginally attested and will not be exemplified here (see Dahl 1979: 81-82).

(1) Latvian (Indo-European, Baltic) (Lazdiņa 1966: 24-25, 303)¹

- | | | | | |
|------------------------------------|--------|------------|--------------------------|------------|
| a. tēv-s | strādā | pļavā | b. tēv-s | ne-strādā |
| father-NOM | work.3 | meadow.LOC | father-NOM | NEG-work.3 |
| ‘Father is working in the meadow.’ | | | ‘Father is not working.’ | |

(2) Lezgian (Nakh-Dagestanian, Lezgian) (Haspelmath 1993: 127, 245)

- | | | | |
|--|---------|-----------|---------------|
| a. xürünwi-jri | ada-waj | meslät-ar | q̄aču-zwa |
| villager-PL(ERG) | he-ADEL | advice-PL | take-IMPF |
| ‘The villagers take advice from him.’ | | | |
| b. xürünwi-jri | ada-waj | meslät-ar | q̄aču-zwa-č |
| villager-PL(ERG) | he-ADEL | advice-PL | take-IMPF-NEG |
| ‘The villagers do not take advice from him.’ | | | |

(3) Chukchi (Chukotko-Kamchatkan, Northern Chukotko-Kamchatkan) (Kämpfe and Volodin 1995: 68, 69)

- | | | |
|---------------|--------------------------|------------|
| a. čejwə-rkən | b. a-nto-ka | (itə-rkən) |
| go-DUR | NEG-go.out-NEG | be-DUR |
| ‘(S)he goes.’ | ‘(S)he does not go out.’ | |

In syntactic negation the negative marker can be an uninflected particle (Indonesian 4, French 5) or an auxiliary verb (Finnish 6), and in both cases a further distinction can be made as to whether or not the lexical verb is modified morphologically (in these examples Finnish shows modification while Indonesian and French do not). There is a further type where the negative marker is a particle, a “dummy” auxiliary is added to the clause and the finite verb of the affirmative is modified morphologically (Korean 7).²

- (4) Indonesian (Austronesian, Sundic) (Sneddon 1996: 195; David Gil, p.c.)
- | | |
|-------------------------|-------------------------------|
| a. mereka menolong kami | b. mereka tidak menolong kami |
| they help us.EXCL | they NEG help us.EXCL |
| ‘They helped us.’ | ‘They didn’t help us.’ |
- (5) French (Indo-European, Romance) (constructed examples)
- | | |
|-------------------|---------------------------|
| a. je chante | b. je ne chante pas |
| 1SG sing.PRES.1SG | 1SG NEG sing.PRES.1SG NEG |
| ‘I sing.’ | ‘I do not sing.’ |
- (6) Finnish (Uralic, Finnic) (constructed examples)
- | | |
|-----------------------|-------------------------|
| a. koira-t haukku-vat | b. koira-t ei-vät hauku |
| dog-PL bark-3PL | dog-PL NEG-3PL bark.CNG |
| ‘Dogs bark.’ | ‘Dogs do not bark.’ |
- (7) Korean (Korean) (Ramstedt 1997 [1939]: 104, 184)
- | | |
|-----------|---------------------|
| a. kan-da | b. ka-ži ani han-da |
| go-DECL | go-CVB NEG AUX-DECL |
| ‘I go.’ | ‘I do not go.’ |

Finally, Dahl suggests that a type where negation is expressed by change in word order might also exist; this remains uncertain and is not exemplified here. In Dahl’s 240-language sample, morphological negation is found in 108 languages, syntactic negation with uninflected particles in 99 languages and syntactic negation with negative auxiliaries in 40 languages;³ it should however be added that Dahl’s sample is genealogically and areally rather heavily biased.

It is worth noting in this context that double (or discontinuous) negative markers may be found, not only in morphological circumfixal negation as in Chukchi (3), but in syntactic negation as well, as the French example (5) shows. In a recent study, De Cuypere (2007) has

identified discontinuous negative strategies – negative constructions where negation is expressed by (at least) two negative markers appearing on opposite sides of the verb – in some 150 languages (not using a pre-defined language sample but counting all languages where he could find such a strategy). In Dryer's (2005b) study, 66 out of 1011 languages have this kind of double negation; note that cases where either part of the discontinuous negative marker is optional are not included in these 66 languages.

Payne (1985) observes four types of negative markers in the world's languages: morphological (affixal) negatives, negative particles, negative verbs (negative auxiliaries and higher negative verbs), and negative nouns. Examples have already been seen of morphological negatives (1-3), negative particles (4-5) and negative auxiliaries (6). Higher negative verbs are matrix verbs that take a clausal complement. In Tongan (8) the negator *'ikai* acts as a higher verb taking the corresponding affirmative clause as its complement; the subjunctive marker *ke* marks the complement clause as subordinate.

(8) Tongan (Austronesian, Oceanic) (Churchward 1953: 56)

a. na'e 'alu 'a siale	b. na'e 'ikai ke 'alu 'a siale
PST go ABS Siale	PST NEG SBJN go ABS Siale
'Siale went.'	'Siale did not go.'

Negative nouns are a marginal type and will not be exemplified here (note that the example given by Payne (1985: 228) is not an instance of standard negation; see Miestamo (2005a: 21) for discussion). Payne (1985: 228-231) also briefly discusses what he calls “secondary modifications” – changes that accompany the use of the negative marker in some languages: change in word order, change in tone, neutralization of tense distinctions, use of supporting verbs and change in noun case.

More recent cross-linguistic studies of clausal negation have paid more attention to these modifications, looking at the structure of negative clauses more holistically. Forest (1993) makes a distinction between two main types of negation: In recusative negation (*négation récursive*) the negative utterance is divided into two parts, one whose function is limited to

negative marking, the other being strictly identical to an autonomous positive utterance – the positive counterpart of the negative utterance in question. What exactly should be counted as recusative negation, i.e. when the other part of the utterance should be seen as identical to an autonomous positive utterance and what counts as a difference, remains unclear; Forest (1993: 30) gives only one example where negative and positive utterances are contrasted (from the Mande language *Sembla* (*Seeku*)); cf. Miestamo (2005a: 162-163) for more discussion. In suspensive-reassertive negation (*négation suspensive-réassertive*), suspensivity means that one or several grammatical domains are marked differently from the way they are marked in positives (in Forest's terms, they show affinity to a “lesser” pole in the semantic organization of the domain), whereas reassertion refers to the indication that the utterance belongs to the declarative utterance type. Forest does not give clear criteria for identifying the elements that mark reassertion, and indeed, the usefulness of the whole concept remains unclear; cf. Miestamo (2005a: 22-23) for more discussion. The concept of suspensivity is more interesting. Under this term, Forest gives many examples of how negatives differ from their affirmative counterparts, e.g., neutralization and/or obligatory use of certain tense and Aktionsart categories, use of irrealis categories under negation, and increase of stativity (examples of these will be seen below; note that this is not an exhaustive list of the domains of suspensivity discussed by Forest). According to Forest (1993: 42), suspensive-reassertive negation is much more common in the world's languages than recusative negation.

Honda (1996) bases his classification on the differences between the finite elements in affirmative vs. negative clauses: In type I, the same element functions as the finite element of the negative and the corresponding affirmative; this is the case, e.g., in Latvian (1), Lezgian (2), Indonesian (4) and French (5) above. In type II, a (non-negative) auxiliary is added as the finite element in the negative and the lexical verb typically occurs in a nonfinite form; a further distinction is made according to whether the negative marker is placed in relation to the added finite element, as in Korean (7), or to the lexical verb, as in Chukchi (3). In type III, a negative auxiliary is added as the finite element of the negative clause; this is the case in Finnish (6) and Tongan (8) above. In addition to his classification of negative constructions, Honda discusses various kinds of structural differences between affirmatives and negatives:

changes in the form of the verb (mainly in types II and III), changes in tense and aspect marking, changes in the marking of clausal participants, and appearance of markers of irrealis categories in negatives (examples of these will be seen below).

In Miestamo's (2000, 2003, 2005a) classification, based on a representative sample of 297 languages, negatives come in two basic types: symmetric and asymmetric. The distinction pays attention to whether or not negatives differ structurally from affirmatives in addition to the presence of negative markers. This can be observed from the point of view of constructions on the one hand and paradigms on the other. Negative clauses with symmetric negative constructions do not differ from non-negatives in any other way than by the presence of the negative marker(s); this is the case in Daga (9) as well as in Latvian (1), Lezgian (2), Indonesian (4) and French (5) above. In asymmetric constructions, by contrast, further structural differences – asymmetries – are observed between negatives and non-negatives, e.g. in Apalaí (10), where the lexical verb is deverbalized and the copula is introduced as the finite verb of the clause; of the above examples, Chukchi (3), Finnish (6), Korean (7) and Tongan (8) also show asymmetric constructions. In symmetric paradigms the correspondences between the members of the paradigms used in affirmatives and negatives are one-to-one, e.g. in Dutch (11). In asymmetric paradigms such one-to-one correspondence does not obtain; this is what happens in Meithei, where the affirmative makes a distinction between the non-hypothetical and the assertive (12a-b) but the negative may only use the latter (12c) and the paradigmatic choices are thus reduced in the negative, only one form corresponding to the two available in the affirmative. The negative constructions are symmetric in both Dutch and Meithei.

(9) Daga (Dagan) (Murane 1974: 113, 115)

a.	wat agoat	mum-en	b.	ya	wat agoat	mum-en
	help	OBJ.FOC.3PL-3		NEG	help	OBJ.FOC.3PL-3
	'He helped them.'			'He didn't help them.'		

(10) Apalaí (Cariban) (Koehn and Koehn 1986: 64)

a. isapokara	[Ø]-ene-no	b. isapokara	on-ene-pyra	a-ken
jakuruaru.lizard	[1>3]-see-IMPST	jakuruaru.lizard	3-see-NEG	1-be.IMPST
‘I saw a jakuruaru lizard.’		‘I did not see a jakuruaru lizard.’		

(11) Dutch (Indo-European, Germanic) (constructed examples)

a. zingen ‘sing’	POS	NEG
1SG PRES	ik zing	ik zing niet
PST	ik zong	ik zong niet
PERF	ik heb gezongen	ik heb niet gezongen
PLUPERF	ik had gezongen	ik had niet gezongen
b. zingen ‘sing’	POS	NEG
2SG PRES	jij zingt	jij zingt niet
PST	jij zong	jij zong niet
PERF	jij hebt gezongen	jij hebt niet gezongen
PLUPERF	jij had gezongen	jij had niet gezongen
c. zingen ‘sing’	POS	NEG
3SG PRES	hij/zij zingt	hij/zij zingt niet
PST	[etc.]	

(12) Meithei (Sino-Tibetan, Kuki-Chin-Naga) (Chelliah 1997: 133, 228)

a. təw-í	b. təw-e	c. əy fotostat	təw-tə-e
do-NHYP	do-ASS	I photostat	do-NEG-ASS
‘(She) does.’	‘(Yes, she) has.’	‘I haven't made copies.’	

Symmetric negation, both constructionally and paradigmatically, is more common than asymmetric negation in the sample languages (for the geographical distribution of the types see also Miestamo 2005b,c).

Cross-cutting the constructional-paradigmatic distinction, different subtypes of asymmetric negation can be identified. In Subtype A/Fin negatives, the finiteness of the lexical verb is reduced or lost and a new finite element is usually added. This subtype can be divided into further subtypes according to the relationship between the negative marker and the finite element. The most common subtypes are exemplified by Chukchi (3) and Apalaí (10), where negative marking is on the lexical verb (A/Fin/Neg-LV), Korean (7), where it is on the added finite element (A/Fin/Neg-FE), and Finnish (6) and Tongan (8), where the negative marker is itself the finite element of the negative, i.e. a negative verb (A/Fin/NegVerb). Subtype A/Fin asymmetry is almost always constructional. It is found in one fourth of the sample languages.

In subtype A/NonReal, negatives are marked for a category that refers to non-realized states of affairs – most commonly a general irrealis category. In Maung, the affirmative can make a distinction between realis and irrealis mood (13a-b), but in the negative (13c) only the irrealis is possible.

(13) Maung (Australian, Iwaidjan) (Capell and Hinch 1970: 67)

a. <i>ni-udba</i>	b. <i>ni-udba-ji</i>	c. <i>marig ni-udba-ji</i>
1SG.3-put	1SG.3-put-IRR.NPST	NEG 1SG.3-put-IRR.NPST
‘I put.’	‘I can put.’	‘I do not [/cannot] put.’

As the presence of the negative particle *marig* is the only difference between the non-negative irrealis (13b) and the negative (13c), the construction is symmetric. However, the paradigm has A/NonReal asymmetry, since there is only one form available in the negative corresponding to two in the affirmative; the distinction between realis and irrealis is lost in the negative. A/NonReal asymmetry is roughly equally often constructional and paradigmatic. It is found in 13 % of the sample languages, most commonly in Australia.

Subtype A/Emph is characterized by the presence of marking that denotes emphasis in non-negatives. Meithei (12) provides an example. The affirmative can distinguish between the nonhypothetical (12a) and the assertive (12b). The latter is a more emphatic category. As the negative (12c) uses the assertive corresponding to both choices in the affirmative, the distinction is lost and we may conclude that there is paradigmatic asymmetry of subtype A/Emph. We find both constructional and paradigmatic asymmetry in subtype A/Emph, but the type itself is quite marginal, occurring only in 2 % of the sample languages.

Finally, in subtype A/Cat negatives, the marking of grammatical categories differs from their marking in affirmatives in other ways, the most commonly affected categories being tense-aspect-mood (TAM)⁴ and person-number-gender (PNG). In Diola-Fogny (14), the negative construction has asymmetry in the marking of tense since the future has a special portmanteau negative marker. In Burmese, negation is marked by a discontinuous marker (15d), and as the suffixal part of this marker replaces the suffixes that mark TAM distinctions in the affirmative (15a-c), these distinctions are lost in the negative and there is paradigmatic asymmetry of type A/Cat/TAM.

(14) Diola-Fogny (Niger-Congo, Northern Atlantic) (Sapir 1965: 33)

a. pan-i-maŋ	b. let-i-maŋ
FUT-1SG-want	FUT.NEG-1SG-want
‘I will want.’	‘I won't want.’

(15) Burmese (Sino-Tibetan, Burmese-Lolo) (Cornyn 1944: 12-13)

a. θwâ-dé	b. θwâ-mé	c. θwâ-bí	d. ma-θwâ-bû
go-ACT	go-POT	go-PERF	NEG-go-NEG
‘goes, went’	‘will go’	‘has gone’	‘does/did/will not go, has not gone’

Burmese also shows constructional asymmetry of type A/Cat/TAM in that negation is not marked by the simple addition of negative markers to the corresponding affirmative, but the

TAM suffixes also disappear; the examples in (15) thus show constructional and paradigmatic asymmetry simultaneously. A/Cat asymmetry is found in roughly one third of the sample languages, both constructional and paradigmatic asymmetry being common; in two thirds of the cases A/Cat asymmetry involves loss of grammatical distinctions in the negative.

Miestamo (2000, 2003, 2005a) proposes functional explanations for the different types of standard negation. Note first that there are various ways in which negation differs from affirmation on the functional level (in semantics and pragmatics). The following aspects of this functional-level asymmetry are relevant for the explanations (ibid. 195-200; see also Givón 1978, 2001: 369-398):⁵ A. Stativity vs. dynamicity: affirmatives can report stative or dynamic states of affairs, but negatives prototypically only report stative ones; a clause that negates an event refers to no change in the universe, i.e. to a stative state of affairs. B. Reality-status: in their semantics, affirmatives belong to the realm of the realized whereas negatives belong to the non-realized. C. Discourse context: negatives are prototypically used as denials, i.e. in contexts where the corresponding affirmative is somehow present or supposed, but the typical contexts of affirmatives are not restricted in this way.

The explanations themselves are based on analogy: Symmetric negatives copy the linguistic structure of the affirmative and are thus language-internally analogous to these affirmative structures; this is motivated by pressure for system cohesion. Asymmetric negatives copy aspects of the functional-level asymmetry between affirmation and negation and are thus language-externally analogous to these functional-level asymmetry phenomena. Different subtypes of asymmetric negation are structural reflections of different aspects of the functional asymmetry: the stativity of negation motivates subtype A/Fin, the semantic connection between negation and other conceptualizations of the non-realized is responsible for subtype A/NonReal, and the prototypical discourse context of negatives motivates – in different ways – both subtype A/Emph and those subtype A/Cat structures where grammatical distinctions are lost.

After this survey of standard negative strategies, a few words on the position of negative markers in the clause are in order. Already Jespersen (1917) had noted that negative markers

tend to be placed before the elements they negate. Dahl's (1979) and Dryer's (1992) sample-based studies show that this "Neg-First Principle", as Horn (2001 [1989]) calls it, holds for negative particles regardless of basic word order, but basic word order does play a role in the case of negative auxiliaries, which are more readily placed after the lexical verb in languages with object-verb basic word order (cf. also Dryer 1988 for further discussion). Dahl (1979) also notes that negative markers tend to be placed in relation to the finite element rather than in relation to the whole clause, and they tend to come as close to the finite element as possible.

Negation in imperatives

The negative strategies used in imperatives have received considerably less attention in the literature than standard negation. Focusing on second person singular imperatives, van der Auwera and Lejeune (2005) propose the following typology of negative imperatives (or prohibitives); their study is based on a sample of 495 languages.

- Type 1: The prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy found in (indicative) declaratives – 113/495 languages, e.g. Bagirmi (16).
- Type 2: The prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy not found in (indicative) declaratives – 183/495 languages, e.g. Purépecha (17).
- Type 3: The prohibitive uses a verbal construction other than the second singular positive imperative and a sentential negative strategy found in (indicative) declaratives – 55/495 languages, e.g. Italian (18).
- Type 4: The prohibitive uses a verbal construction other than the second singular positive imperative and a sentential negative strategy not found in (indicative) declaratives – 144/495 languages, e.g. Koasati (19).

(16) Bagirmi (Nilo-Saharan, Bongo-Bagirmi) (Stevenson 1969: 91, 93, 95)

- | | | | | | | |
|-------|------------|-------|-------------|-------|------------------|--------|
| a. ab | 'be | b. ab | eli | c. je | j-ab | eli |
| | go | | go | | we | 1PL-go |
| | NEG | | NEG | | NEG | |
| | 'Go home!' | | 'Don't go!' | | 'We did not go.' | |

(17) Purépecha (Tarascan) (Chamoreau 2000: 112, 242)

- | | | | | | |
|---------|-------------|------------------------|---------|-------------|--------------------------|
| a. 'no, | 'xua-ø-rini | 'sani | b. 'aši | 'xua-ø-rini | 'sani |
| | NEG | bring-IMP-2>1 | | NEG | bring-IMP-2>1 |
| | | little | | | little |
| | | 'No, bring me little!' | | | 'Don't bring me little!' |
| c. 'no | pi' | ri-šiN-ti | | | |
| | NEG | sing-HAB-ASS.3 | | | |
| | | 'He does not sing.' | | | |

(18) Italian (Indo-European, Romance) (constructed examples)

- | | | | | |
|----------|--------|--------------|--------|-------------------|
| a. canta | b. non | cantare | c. non | canti |
| | | NEG | | NEG |
| | | sing.IMP.2SG | | sing.PRES.2SG |
| | | 'Sing!' | | 'You don't sing.' |

(19) Koasati (Muskogean) (Kimball 1991: 58, 270)

- | | | |
|-------|-----------------|---------------------|
| a. íp | b. is-p-án | c. cík-m-q |
| | | |
| | 2SG-eat-NEG.IMP | 2SG.NEG-gather-NEG |
| | | |
| | 'Eat!' | 'You don't gather.' |

In Bagirmi the negative imperative (16b) shows the same imperative construction as the positive imperative (16a) and the same negator as standard negation (16c). In Purépecha the negative imperative (17b) uses the same imperative construction as the positive imperative (17a), but negative marking differs from standard negation (17c); note that in (17a) the negator does not belong to the same clause with the rest of the example, so it really is a positive imperative. Italian negative imperatives (18b) use a different imperative construction

from positive imperatives (18a) but the same negator as standard negatives (18c). Finally, Koasati negative imperatives (19b) use personal prefixes, differing thus from the imperative verb forms found in the positive imperative (19a), and the negative marker is also different from standard negative markers (19c).

It is noteworthy that in a clear majority of languages, imperatives use a negative strategy that differs from standard negation. Van der Auwera (2006) proposes an explanation for this preference based on the speech act status of prohibition that radically differs from that of (the more frequent) declarative negation. He also discusses some diachronic developments behind the types of the typology. Miestamo and van der Auwera (2007) discuss, on the basis of a 30-language pilot sample, how declarative and imperative negatives differ from each other in terms of symmetry and asymmetry.

Negation of non-verbal and existential clauses

Non-verbal and existential clauses are often negated by non-standard strategies. Croft (1991) proposes a typology of the relationship between verbal negators and negative existential forms. He finds three distinct types in the languages of the world: A in which the ordinary existential predicate is negated by the verbal negator, B in which there is a negative existential predicate different from the verbal negator, and C in which the negative existential is identical to the verbal negator. These are exemplified by Tzutujil (20), Turkish (21) and Tongan (22), respectively.

(20) Tzutujil (Mayan) (Dayley 1985: 242, 245)

- | | | | | | | |
|------------------------|------|-----|----------------------------|-----|-----|-------|
| a. m-ix | utz | ta | b. ma | k'o | ta | jaay |
| NEG-2PL.ABS | good | IRR | NEG | EX | IRR | house |
| 'You all aren't good.' | | | 'There aren't any houses.' | | | |

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

a. gel-me-yecek	b. su var	c. su yok
come-NEG-FUT	water EX	water NEG.EX
‘(S)he will not come.’	‘There is water.’	‘There is no water.’

(22) Tongan (Austronesian, Oceanic) (Churchward 1953: 56-57)

a. na'e 'ikai ke 'alu 'a siale	b. 'oku 'ikai ha faiako 'i heni
PST NEG SBJN go ABS Siale	PRES NEG.EX ART teacher at here
‘Siale did not go.’	‘There is not a teacher here.’

In Tzutujil (20), Type A, the verbal negator *m(a)* negates the existential verb as any other verb. In Turkish (21), Type B, there is a special negative existential *yok*, completely different from the positive existential *var* and from the ordinary verbal negator *-me-*. In Tongan (22), Type 3, the same element *'ikai* functions as the negator in ordinary verbal clauses and as a negative existential predicate. In addition to these types, some languages show variation between two types: A~B, B~C and C~A. The central point in Croft’s paper is that such cases of variation can be interpreted as ongoing change from one type to another. He argues that we are here dealing with a cyclical development – the negative-existential cycle – whereby negative existential structures change from Type A to Type B, from B to C, from C to A, from A to B, and so forth (A>B>C>A>...).

The only larger-scale typological study of non-verbal negation can be found in Eriksen’s (2005) dissertation. He identifies several ways in which the structure of non-verbal negative clauses (negation of clauses where the predicate is nominal) may differ from standard negation on the one hand and positive non-verbal clauses on the other. He divides these strategies into two main types: distantiating and subordinating strategies. In distantiating strategies the nominal predicate or the whole clause appears as a complement of a superordinate predicate which is in the direct scope of negation (as in Thai 23). In subordinating strategies the negator itself is subordinated below the positive value of the nominal predicate (as in Jamul Tiipay 24).

(23) Thai (Tai-Kadai, Kam-Tai) (Iwasaki and Ingkaphirom 2005: 15, 222, 227)

a. *mây khâw pay*

NEG enter go

‘(He) won’t go in.’

b. *man pen mét sǐi khǎaw khiǎw ɲay*

3 COP tablet colour green PP

‘It was a green tablet, you see.’

c. *kô khǎw bɛ̀ɛp wâa mây dây pen rôok alay mâak maay*

LP LINK HEDGE NEG AUX COP illness what much

‘It’s like – it’s not really a serious illness.’

(24) Jamul Tiipay (Hokan, Yuman) (Miller 2001: 168, 183)

a. *nya’wach yu’ip xemaaw*

1PL hear.PL NEG

‘We didn’t hear it.’

b. *nyaap [nye-’iipa]*

1SG 1SG-man

‘I am a man.’

c. *nyaap [’iipa nya-maw]*

1SG man 1SG-NEG

‘I am not a man.’

In Thai, standard negation is expressed by preverbal *mây* (23a). Nominal predicates require the copula *pen* (23b). This copula cannot, however, be directly negated but requires a verbal element, either *chây* ‘to be so’ or the aspectual auxiliary *dây*, which appears in the direct scope of negation. In Jamul Tiipay, standard negation is expressed by the negator *xemaaw* (24a). In the negation of copulaless nominal predications such as (24b), we find the nominal negator *maw* (24c) that is also used to negate relative clauses; the structure in (24c) can thus be literally translated as ‘I am a non-man’ where the overall polarity of the clause remains positive. Eriksen attributes these differences between standard negation and non-verbal negation to the principle of Direct Negation Avoidance (DNA), which states that nominal

predicates may never be directly negated. In fact, he claims that the principle is also operational in languages where there is no difference between standard negation and negation of nominal predicates. This is an area that clearly requires more study.

Negative indefinite pronouns

Using a balanced sample of 40 languages, Kahrel (1996) investigates the ways in which languages express the negation of indefinite pronouns referring to persons and things, i.e. the equivalents of English *nobody* and *nothing*. His classification distinguishes the following five types of constructions; the first four types are also identified in Dahl (1979: 105, note 1) and Bernini and Ramat (1992), the latter work focusing on European languages only.

Type I: Standard negation is found with ordinary (positive) indefinites – in 27/40 languages, e.g., Evenki (25).

Type II: Standard negation appears with a special indefinite different from the one used in corresponding positives – in 9/40 languages, e.g., Finnish (26).

Type III: There is an inherently negative indefinite pronoun without standard negation – in 5/40 languages, e.g., Swedish (27).

Type IV: An inherently negative indefinite pronoun is accompanied by standard negation – in 5/40 languages, e.g., Middle Atlas Berber (28).

Type V: There is no indefinite pronoun at all, and the equivalent function is expressed with an existential construction – in 7/40 languages, e.g., Nadëb (29).

(25) Evenki (Altaic, Tungus) (Nedyalkov 1994: 25)

a. ekun-da	ō-ra-n	b. ekun-da	e-che	ō-ra
something-CLT	become-NFUT-3SG	something-CLT	NEG-PST	become-PTCP
‘Something happened.’		‘Nothing happened.’		

(26) Finnish (Uralic, Finnic) (constructed examples)

- | | |
|--------------------|-------------------------|
| a. näe-n jotakin | b. e-n näe mitään |
| see-1SG something | NEG-1SGsee.CNG anything |
| ‘I see something.’ | ‘I don’t see anything.’ |

(27) Swedish (Indo-European, Germanic) (constructed examples)

- | | |
|------------------------|-------------------------|
| a. jag ser någonting | b. jag ser ingenting |
| 1SG see.PRES something | 1SG see.PRES nothing |
| ‘I see something.’ | ‘I don’t see anything.’ |

(28) Middle Atlas Berber (Afro-Asiatic, Berber) (Penchoen 1973: 87)

- | |
|--|
| a. ḥm(a)d ur as ttægga t̥fiyra walu |
| in.order NEG to.him do.3SG.F snake nothing |
| ‘so that the snake wouldn’t do anything to him.’ |

(29) Nadëb (Vaupés-Japurá) (Weir 1994: 301)

- | |
|--|
| a. dooh ha-wəh péh |
| NEG RS-eat.IND NREF |
| ‘No-one is eating’ (lit. ‘One who is eating is something non-existent.’) |

In Evenki (25) standard negation is expressed with the negative auxiliary *e-* and the lexical verb is in a non-finite form; as we can see, the form of the indefinite pronoun remains the same in positives and negatives. Type I is the most common type in Kahrel’s data. Finnish (26) expresses standard negation with the negative auxiliary *e-*; the indefinite used in the negative differs from the one used in the affirmative, but it is not inherently negative. In the Swedish example (27), standard negation is not present and the negative force comes solely from the inherently negative indefinite *ingenting*. In Middle Atlas Berber (28), the standard negator *ur* appears in its normal position, but the indefinite *walu* is also inherently negative. The Nadëb example (29) contains no indefinite pronoun, but negates the existence of a non-

referential entity; note that Type V is the primary strategy in only 2 of the 7 languages in which Kahrel has found it.

Haspelmath (1997) notes that although the typology may be useful at a superficial level, it is problematic in a number of ways. The inherently negative indefinites (in Types III and IV), may have non-negative uses in some languages in contexts such as questions and conditionals. The definition of special indefinites (in Type II) is also problematic. Haspelmath views indefinites used in the scope of negation in the larger context of indefinite pronouns, proposing a semantic map where the functions of indefinite pronouns range from specific known to direct negation and free-choice items. An indefinite pronoun in a given language serves only adjacent functions on the map. The semantic map accounts for the functions of the indefinite pronouns, but in addition to this, the typology of negated indefinites needs to pay attention to cooccurrence with standard negation (which is naturally functionally related to the position of the indefinite on the semantic map). Haspelmath distinguishes three main types: NV-NI, where the negative indefinite always cooccurs with standard negation, e.g., in Evenki (25), Finnish (26) and Middle Atlas Berber (28) above; V-NI, where standard negation and the negative indefinite never cooccur, e.g., in Swedish (27) above; and (N)V-NI, where negative indefinites sometimes do and sometimes do not cooccur with standard negation. The latter type is illustrated by Italian where postverbal negative indefinites require the standard negator *non* to appear on the verb (30a) but preverbal negative indefinites do not (30b).

(30) Italian (Indo-European, Romance) (constructed examples)

- | | | |
|----------------------|---------|-------------------------|
| a. non è venuto | nessuno | b. nessuno è venuto |
| NEG is come.PST.PTCP | nobody | nobody is come.PST.PTCP |
| ‘Nobody came.’ | | ‘Nobody came.’ |

The requirement that standard negation be present on the verb if the negative indefinite does not occur preverbally is clearly due to the Neg-First Principle (cf. above). In Haspelmath’s (2005) sample of 206 languages, 170 languages have structures of Type NV-NI, 11 of Type

V-NI, 13 of Type (N)V-NI, and 12 use a negative existential construction to express the same function. This shows that the Standard English construction without verbal negation (e.g. *I saw nobody*) is a minority pattern cross-linguistically and with this cross-linguistic background it becomes quite difficult to label non-standard constructions such as *I didn't see nobody* as illogical (cf. Haspelmath 2005 for discussion).

Further issues

The above discussion covers the aspects of negation on which sample-based typological work exists. This final section will briefly mention some issues on which less systematic cross-linguistic observations have been made.

De Haan (1997) examines various aspects of the interaction between modality and negation. His central focus is on the relative scope of the modal and negative elements. The situation where the modal has scope over negation (MOD(NEG(P))) is exemplified by English *must not* and the situation where negation has scope over the modal (NEG(MOD(P))) by English *need not*. De Haan identifies two basic strategies languages use for expressing this difference: the Modal Suppletion Strategy where different modals are used for the different scope relations, as in the English examples just mentioned, and the Negation Placement Strategy where differences in scope are signalled by a different position of the negative marker, as in Italian where the wide-scope element precedes the narrow scope element (*non dovere* NEG must 'need not' vs. *dovere non* must NEG 'must not'). Van der Auwera (2001) discusses the semantics of negated modals (necessity and possibility), and examines the lexicalization of different scopal variants of the combinations of modal and negation in a number of languages from Europe and India.⁶

As to the relationship between negation and focus, Dahl (1979: 104-105, note 1) identifies two ways in which languages may associate negation and focus: focus-dependent and verb-dependent negative placement. In the former, the negator is placed in front of the focused element (e.g., in Russian), whereas in the latter, the negator is always placed in relation to the verb and focus needs to be expressed in other ways (e.g., in English). Payne (1985: 232-233) notes that in some languages the association of negation and focus is made by regular

syntactic means of focusing (prosody, clefting) (e.g., in English), but some languages show special devices for associating negation and focus. These include focus-related placement of negators (e.g., in German) (Dahl's focus-dependent negative placement) and special negative forms associated with elements focused by fronting (e.g., in Welsh and Yoruba).

To conclude this overview, some observations on the diachrony of negation are in order. Negators are often ancient elements whose (non-negative) origin cannot be traced by the methods of historical linguistics. This is the case for Indo-European **ne*. Perhaps the best-known origin of negative markers is the development known (since Dahl 1979) as Jespersen's Cycle whereby elements that serve to reinforce negation are reanalysed as negative markers (the classic reference is Jespersen 1917). This is the origin of French *pas* (5), which originally meant 'step', and English *not*, for example, and similar developments have been identified in other language families as well. It is interesting to note that Jespersen's Cycle often leads to constructions with double (discontinuous) negative markers. De Cuypere (2007) discusses iconic motivations behind the emergence of double negative marking. Another possible source for standard negators is the reanalysis of negative existentials as verbal negators in Croft's negative-existential cycle (change from Type B to C, see above). Negative-implicative verbs such as 'fail', 'lack', 'leave', 'refuse' have also been identified as sources for negators (see Givón 2001: 267-268; Heine and Kuteva 2002: 188, 192). Some diachronic developments behind symmetric and asymmetric standard negation structures are discussed in Miestamo (2005a: 217-231).

A great number of negation-related topics are treated in the linguistic literature in general, but only a few of them have been approached from a typological point of view. It is thus obvious that negation still has a lot to offer for typologists in search of research topics. And even the topics that have received some typological attention, especially the negation of non-declaratives, existentials and non-verbal predicates, are far from being exhaustively studied.

Notes

1. The genealogical affiliations given for each language follow the classification by Dryer (2005a) in the *World Atlas of Language Structures* (Haspelmath et al. (eds) 2005). No attempt has been made to unify the spelling of the examples, but the orthography used in the original sources has been adopted as such. The abbreviations used in the examples are as follows: 1 first person, 2 second person, 3 third person, ABS absolutive, ACT actual, ADEL adelative, ART article, ASS assertive, AUX auxiliary, CLT clitic, CNG connegative, COP copula, CVB converb, DECL declarative, DUR durative, ERG ergative, EX existential, EXCL exclusive, F feminine, FOC focus, FUT future, FV final vowel, HAB habitual, HEDGE hedging device, IMP imperative, IMPF imperfective, IND indicative, INF infinitive, IRR irrealis, LINK linker, LOC locative, LP linking particle, NEG negation, NFUT non-future, NHYP non-hypothetical, NMLZ nominalizer/nominalization, NOM nominative, NPST non-past, NREF non-referential, OBJ object, PERF perfect, PL plural, PLUPERF pluperfect, POS positive, POT potential, PP pragmatic particle, PRES present, PST past, PTCP participial, RS relativized subject, SBJN subjunctive, SG singular.
2. The negative construction exemplified in (7b) is the so-called long-form negation in Korean, in many contexts interchangeable with the alternative short-form negation expressed by the mere addition of the negative marker. It should perhaps be noted that we are here typologizing linguistic structures, not languages, and it is quite common for one language to have different negative strategies used either interchangeably or in different environments.
3. When one adds up the number of languages where each type is found, the sum exceeds the number of sample languages. This is due to the fact that more than one type of structure may be attested in one language.
4. See Miestamo and van der Auwera (to appear) for a more detailed cross-linguistic survey on how imperfective vs. perfective aspect behaves under negation.

5. See Givón (1978), Horn (2001 [1989]: 154-203), Miestamo (2005a: 195-200, 2006, in press) for discussions on the markedness of negation and how it connects to asymmetry on the functional and formal levels.
6. The discussion is based on the “three-layered scalar square” proposed as an analysis of the semantic and pragmatic relations of the notions of possibility and necessity and of their negations in van der Auwera (1996).

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