

## THE DEGREE OF NEGATIVITY OF MORPHOLOGICAL, SYNTACTIC AND LEXICAL NEGATION IN ENGLISH AS SEEN BY ENGLISH LANGUAGE AND LITERATURE STUDENTS<sup>a</sup>

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### Abstract

The phenomenon of negation is part of perception and a universal property of all human languages. The focus of this study lies on morphological, syntactic and lexical negation, with the main goal to determine how they are perceived in terms of the degree of negativity by English language and literature students (N=91). The main administered instrument was the Polarity scale, comprising utterances with the three broad types of negation. The obtained results were analysed via *IBM SPSS 21*. Overall, the sample evaluated the affixal–syntactic negation pairs fairly equally, as negative or mildly negative. On the aggregate scores, though, the affixal negation (Neg. pref. + Adj) was evaluated more negatively than the syntactic one (not + Adj). The participants evaluated the absolute negative *never* more positively than its semantics implies (as negative only), and semi-negatives, and negated frequency and quantity adverbs were rated quite evenly. In future studies, we propose the use of utterances with inanimate subjects in addition, as well as replication in different cultural settings to check whether there are culturally induced differences or else cognitive similarity.

**Key words:** affixal negation, EFL English language and literature students, lexical negation, negation degrees, syntactic negation.

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## СТЕПЕН НЕГАТИВНОСТИ МОРФОЛОШКЕ, СИНТАКСИЧКЕ И ЛЕКСИЧКЕ НЕГАЦИЈЕ У ЕНГЛЕСКОМ КРОЗ ПРИЗМУ СТУДЕНАТА ЕНГЛЕСКОГ ЈЕЗИКА И КЊИЖЕВНОСТИ

### Апстракт

Феномен негације је део перцепције и универзално својство свих људских језика. Фокус истраживања чине морфолошка (нег. преф. + прид), синтаксичка (нег. парт. + прид) и лексичка негација (речи са негативним значењем), са главним циљем да се утврди како их, у односу на степен негативности, опајају студенти студијског програма Енглески језик и књижевност (N=91). Главни истраживачки инструмент је Скала поларитета, која садржи исказе са три поменути општа типа негације. Добијени резултати су анализирани у статистичком програму *IBM SPSS 21*. Уопштено говорећи, узорак је доста уједначено оценио парове које су чиниле афиксна и синтаксичка негација, и то као негативне или умерено негативне. Међутим, када су у питању општи скорови по категоријама, афиксна негација је негативније процењивана од синтаксичке. Испитаници су оценили апсолутно негативни прилог позитивније него што његова семантика сугерише, и то само као негативан, а апроксимативе и негиране прилоге учесталости и квантификаторе су оценили врло уједначено. У будућа истраживања би било пожељно уврстити и неаниматне субјекте, те реплицирати истраживање у различитим културним срединама како би се утврдило да ли постоје културно условљене разлике или пак когнитивна сличност.

**Кључне речи:** афиксна негација, лексичка негација, синтаксичка негација, степени негације, студенти Енглеског језика и књижевности.

### INTRODUCTION

The phenomenon of negation is a universal property of all human languages since no language can be found without it (Tian and Breheny, 2019). It represents one of the fundamental building blocks of cognition because it guarantees positive knowledge (Israel, 2011), and is part of human perception (Saury, 2009). In terms of expression, it can be realised both nonverbally and verbally. Nonverbal acts may include shaking one's head, crossing one's arms, maintaining a distance, frowning, and these acts frequently accompany a verbal act (e.g. waving a finger while saying *No*). Besides negative nonverbal acts, speakers may use negative verbal acts to reject, deny, or object to things or ideas. So what is negation then?

Logical negation implies the conversion of the truth value of a proposition *p* into its opposite, *not p*. In linguistics, this view becomes overly simplistic because not only do languages abound in resources for expressing negation (Israel, 2011) but they also subsume interrelated aspects (syntactic, prosodic, semantic, pragmatic), which make this phenomenon even more challenging to define (Aina, Bernard, & Fernández, 2019). Depending on the angle of analysis, negation may be regarded as “a logical operator, [...] a type of speech act, a basic element of semantic

representations, [...] a pragmatically loaded form of communicative interaction” (Israel, 2004, p. 701). Generally put, negation acts as “a truth-reversing operator” (Aina, Bernardi, & Fernández, 2019, p. 58) and it “[...] typically expresses the contradiction of some or all of a sentence’s meaning” (Crystal, 2019, p. 518). This contradiction primarily assumes the binary opposition termed polarity (affirmation–negation), and its main function is “to flip the polarity of a sentence” (Bahlmann, Mueller, Makuuchi, & Friederici, 2011, p. 1). Apart from tense, aspect, evidentiality, person, reference classification, number, and case, negation is regarded as a grammatical category at the top of dependency hierarchies of grammatical systems (Lee, 2016).

Since negation may be realised on different levels of language organisation, structurally speaking, the negative polarity may be broadly reduced to morphological (negative affixal markers: *untypical*), syntactic (negative particle: *not typical*), and lexical categories (negatively keyed lexemes: *seldom*). Nevertheless, all of these are mediated by pragmatics (Prčić, 2016). Furthermore, there is a consensual view among scholars that negation is marked (de Swart, 2010; Israel, 2011; Lee, 2016) because it is viewed as logically, ontologically, epistemologically and psychologically secondary to affirmation (Horn, 2001). Being marked, a negative expression is thus more complex than the affirmative one. Thus, a negative expression seems to bear a greater potential to have different implicatures inferred than its affirmative counterpart (e.g. having a mitigating effect, acting as a hedging device). This raises many questions, such as whether negation exerts a greater semantic load than its unmarked counterpart, what the linguistic and extralinguistic implications of the act of negating are, how negation is perceived by interlocutors, what its illocutionary force and/or perlocutionary effect might be, and so on.

In this paper, we focus on the three broad types of negation (morphological, syntactic and lexical) and the way they are perceived in terms of the degree of negativity, since linguistic literature on the topic seems to be scarce. As regards the layout of the paper, firstly, we will broadly introduce the aforementioned types of negation; afterwards, we will present the methodology and the main results of the research; finally, we will point to the main conclusions, as well as further steps that might be taken in future studies.

### *MORPHOLOGICAL, SYNTACTIC AND LEXICAL NEGATION IN ENGLISH*

At the most basic level (the level of grammar), negation may be reduced to the morphological, syntactical and lexical levels. Morphological negation is expressed via affixal negative markers (e.g. *disorganised*), syntactical typically via the negative particle *not* (e.g. *not organised, do*

*not love*), and lexical via adverbial and adjectival negative markers (e.g. *rarely*, *rare*) or independent nouns and verbs (e.g. *denial*, *to reject*). Alternatively, the expression of negation can be viewed in terms of standard and nonstandard forms. Standard negation is characterised by having scope over the whole (declarative) clause, with a verb with a negative operator as its main predicate (van der Auwera, 2010). A negative form lacking any of these properties falls into the category of nonstandard negation. Based on this simplified binary classification, syntactic negation may be considered an example of standard negative forms, and absolute and approximate negators, discussed below, may be regarded as nonstandard.

In view of English morphological (affixal) negation, linguists list a different number of negative affixes. Crystal (2019) identifies five primary negative affixes *a-*, *dis-*, *in-*, *non-*, and *un-*, while other authors also include *de-*, *dys-*, *il-*, *ir-*, *im-*, *mal-*, *mis-*, *anti-*, *counter-/contra-* (Dzukanova, 2006). Their distribution is far from equal, and some corpus studies show that *un-* is the most and *dis-* the least common negative prefix, with the former comprising almost half and the latter insignificant 6% of the corpus data of 2,156 negated adjectives (Kjellmer, 2005). What is sustainable is that affixation resulting from negative polarisation is a productive derivational process in English morphology, since English has a variety of affixes at its disposal<sup>1</sup>.

In addition to morphological negation, syntactic negation is typically viewed as a basic means for negation formation (van der Auwera, & Du Mon, 2015)<sup>2</sup>. These two negation strategies behave differently not only in terms of syntax but also semantics and pragmatics. Syntactically speaking, morphological negation uses the *negative prefix + X* or *X + negative suffix* strategy (cf. morphological antonyms), whereas syntactic negation uses the strategy *not + X*, which results in certain syntactic implications that can be illustrated by the following example:

(1) *She looked unattractive.*

(2) \**She looked not attractive.*

In utterance (1), negating affixally is grammatical, and in utterance (2), it is ungrammatical because attributive adjectives cannot undergo direct sentence negation (\**A not attractive girl*), but can be negated affixally (*An unattractive girl*) (Huddleston, & Pullum, 2017, p. 809). Although negating affixally or syntactically does flip the polarity of a proposition, it does not necessarily convey the same meaning, as illustrated by the following examples from the same authors (p. 821).

<sup>1</sup> In the current study, we included *in-*, *un-* and *dis-*, as examples of morphological negation, along with the allomorphs of *in-* (i.e. *il-*, *im-*, *ir-*);

<sup>2</sup> Note that our focus lies exclusively on negated adjectives, rather than the particle *not* used generally as a specialised negative marker;

(3) *Such mistakes are common.*

(4) *Such mistakes are not common.*

(5) *Such mistakes are uncommon.*

While negative utterance (4) is the contradictory form of (3), the affixal negation in (5) is not. Utterances (4) and (5) cannot both be true at the same time, but they can be simultaneously false, since *common* is a gradable adjective. Utterance (5) is the contrary opposition to (3), and thus it is reasonable to state that *Such mistakes are neither common nor uncommon*. Accordingly, *uncommon* implicates lesser frequency quality than its syntactic counterpart *not uncommon*, being thus stronger. By analogy, semantically and pragmatically, other utterances with a negated gradable adjective, such as *She is not attractive* and *She is unattractive*, do not seem to be functional equivalents either.

There is a whole range of negators used in the English language, the most salient being the negative operator *not*. However, there are other negative or *n*-words that can flip the polarity of a sentence, such as absolute negators (no, none, nobody, no one, nothing, nowhere, no place, neither, nor, and never) and approximate negators (few, little, rarely, seldom, barely, hardly, scarcely). These two classes may be said to belong to an in-between category (syntax-to-lexicology), while the items of the latter can be taken as examples of lexical negation in their own right (cf. examples (6) and (7) from van der Auwera, 2010, p. 89).

(6) *She never smiles.*

(7) *Stop smiling.*

In utterance (6), negation is expressed via the negative adverb *never*, and in utterance (7), indirectly or implicitly through the verb *stop*, which both carry (semi-) negative meanings. Therefore, (6) can be interpreted as +> *She doesn't smile (at all)*, and (7) as +> *Don't smile*.

The underlying idea of the dichotomy between the absolute and approximate negator classification is that the former implies absolute zero in terms of frequency (e.g. never), whereas the latter indicates an imprecise qualification (e.g. rarely) (Huddleston, & Pullum, 2017). In a similar fashion, utterance (8), given below, implies that the rate of an individual arriving on time is comparable to absolute zero, while the subject of utterance (9) does come to a specific location, but at a (very) low rate. Due to this 'unspecificity' feature, approximate negators tend to have ambiguous meanings.

(8) *They never arrive on time.*

(9) *He rarely comes.*

Additionally, approximate negators are negative only in meaning, but not in form, as in (10) and (11) (Quirk, Greenbaum, Leech, & Svartvik, 2011, p. 780). In utterance (10), *barely* is followed by a non-assertive form (any), which is typical of negative markers, and utterance (11) requires a positive question tag, which reflects the negative nature of the adverb *hardly*.

(10) *He barely earns any money from selling shoes.*

(11) *She hardly cares about him, does she?*

On the other hand, some approximate negators sometimes do not serve their function as a negative operator in terms of syntax, as illustrated in (12) and (13) (Quirk et al., 2011, p. 781). In utterance (12), *rarely* takes the sentence-initial position, thereby functioning as a sentence modifier, no longer acting as a negative operator. Otherwise, it would have caused a subject-operator inversion and required a positive question tag, as in utterance (13).

(12) *Rarely, crime pays well, doesn't it?*

(13) *Rarely does crime pay well, does it?*

Finally, negative-implicative verbs or implicit negatives, such as *fail*, *lack*, *leave* and *refuse* may also serve the function of a negator (Miestamo, 2007), but since they require an in-depth analysis in their own right, they will be discussed elsewhere.

Apart from all the grammatical and functional characteristics of the concept of negation that we have addressed so far, there is another feature that needs further analysis – speakers' perception of negation. Psycholinguistic research suggests that negative utterances are more difficult to process, emphasising the asymmetry in processing cost between negative sentences and their positive counterparts (Tian, & Breheny, 2019). Studies show that comprehension of negation is more difficult than affirmation (Hasson, & Gluckberg, 2006), which may be closely related to learning burden in the context of L2 learning (Danilović Jeremić, 2018). However, the subject matter of our study goes well beyond language processing, which is typical of psycholinguistic research. Instead, our focus lies on the participants' judgements about the degree of negativity that they would intuitively ascribe to the given utterances. Since linguistic literature dealing with speakers' perception of negative forms is scarce, in this paper we will attempt to gain some insights into how non-native speakers perceive adverbial negators, besides affixal and syntactic negative expressions.

### METHODOLOGY

The study was conducted during two exam periods in the academic year 2020/2021. with students of the English Language and Literature (ELL) Study Programme at the State University of Novi Pazar, and the Faculty of Philology and Arts, University of Kragujevac. The main aim was to determine how non-native ELL students perceive different negative forms in English, which represent different levels of negativity (negative, semi-negative, and negated frequency and quantity adverbs), so as obtain some preliminary insights into the line of research holding that negation is the matter of cognition.

### *Sample*

The final sample included N=91 ELL students, aged from 18 to 28 (M=22.07, StD=2.17), unevenly distributed according to geographical distribution (Novi Pazar, N=70, and Kragujevac, N=21) due to the voluntary nature of the research, and the sex criterion (m=22; f=69), which is commonplace in language acquisition studies. The participants were enrolled in different years of study: Year 1 (N=14), Year 2 (N=31), Year 3 (N=12), Year 4 (N=20), and Year 5 (N=14). As regards the initial age, they started learning English formally approximately at the age of 9 (M=9.25, StD=4.31).

The reason behind choosing ELL students was the assumption that they have better knowledge of the linguistic phenomenon of negation, either theoretically or intuitively, and, above all, they are expected to have better overall mastery of English.

### *Instruments and Procedures*

To collect data, we devised a sociodemographic questionnaire to determine the background data on the participants (age, sex, year of study, year of enrolment, initial age of learning English formally), as well as the Polarity Scale to determine the participants' perception of negativity degrees. The employed seven-point Likert-type scale has values ranging from 1 – *absolutely negative* to 7 – *absolutely positive*, and it includes affixal negation (e.g. *Her attendance was irregular*), its syntactic counterpart with the particle *not* (e.g. *Her visits were not regular*), and lexical negation with negatively keyed words (e.g. *They seldom meet up with their cousins*). Regarding the last category, we assumed a certain scalarity (i.e. different degrees of negativity), similar to scalar implicature interpretation, by including the absolutely negative adverb (e.g. *She never smiles*), semi-negatives (e.g. *I hardly know you*), and negated frequency and quantity adverbs (e.g. *He doesn't come often, I didn't sleep much*)<sup>3</sup>. Finally, we included corresponding pairs (e.g. *not considerate* vs. *inconsiderate*) to check whether there is a difference between affixal and syntactic negation. The scale made use of ten pairs of affixal vs. syntactic negation of adjectives (Neg. prefix + Adj, not + Adj.), and twelve items with adverbs, with four items distributed to each of the following categories: the absolutely negative adverb, semi-negatives, and negated adverbs of frequency and quantity. The scale reliability test has shown good internal consistency (Cronbach's  $\alpha=.878$ ).

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<sup>3</sup> In formal semantics, the assumption that *often* and *many* are corresponding pairs is taken *a priori*, without subjecting it to empirical testing. However, recent research provides evidence that patterns of quantificational force lexicalisation may indeed be similar for the two English adverbs (Alstott, & Jasbi, 2020);

The data being quantitative, we employed the statistical program *IBM SPSS 21*, namely: descriptive statistics tests (frequency, mean, standard deviation) to determine the degree of negativity ascribed to certain items in utterances; difference tests to determine differences between sexes (independent-samples T test), affixal-syntactic pairs (paired-samples T test), and years of study (one-way ANOVA); and scale reliability test to check its internal consistency.

### RESULTS AND DISCUSSION

Since our aim was to test how the participants perceive different negative categories and what values they typically assign to specific negative forms, we will present the mean values of the three broad categories of English negation, and compare the tested pairs values, where appropriate.

Table 1 shows the mean values of contrasted morphological and syntactic pairs, as well as *t* values. As illustrated, the corresponding affixal vs. negative particle pairs were generally evaluated as negative to mildly negative<sup>4</sup>. Very interestingly, out of ten corresponding pairs, only two were differently evaluated (not active vs. inactive, not mature vs. immature), in favour of the particle. In other words, the participants evaluated the affixal items more negatively. This finding is in line with previous research showing that although negated adjectives tend to be conceived as expressing an intermediate meaning between an adjective and its antonym, thus being more similar to the adjective without the negative particle than to its antonym, such an effect was less strong for affixal antonyms (Aina, Bernardi, & Fernández, 2019).

When these two broad types of negation were compared in terms of their aggregate scores (cf. Table 2), paired-samples T test indicated a statistically significant difference in favour of the syntactic negation ( $t(83)=1.995$ ,  $p=.049$ ). Namely, overall, the participants evaluated affixal negation much more negatively than the syntactic one. This finding, however, is not in line with the conclusions of the abovementioned study, which states that these two types of negation are similar, since the affixal negation has a morphological structure resembling the negated adjectives (Aina, Bernardi, & Fernández, 2019).

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<sup>4</sup> Drawing on Grubor (2021), the seven points of the scale can be taken as a frame of reference: 1 very negative, 2 negative, 3 mildly negative, 4 neutral, 5 mildly positive, 6 positive, 7 very positive estimates. In this study, the value equalling exactly 1 would be absolutely negative, and 7 would be absolutely positive;



Table 1. Pairs of affixal (Neg. pref. + Adj.) and syntactic negation (not + Adj.)

Item	N	M	StD	Min	Max	T
He is not considerate.	91	2.75	1.47	1	7	
He is inconsiderate.	91	2.81	1.75	1	7	-.293
They are not active.	91	2.95	1.46	1	7	
They are inactive.	90	2.56	1.43	1	7	<b>2.040*</b>
I am not interested in eating healthy.	91	2.80	1.72	1	7	
You are disinterested in healthy food.	89	2.90	1.64	1	7	-.301
Doing that is not mature.	91	3.32	1.73	1	7	
Saying that is immature.	91	2.82	1.47	1	7	<b>2.224*</b>
His actions are not logical.	90	2.73	1.49	1	7	
The answer is illogical.	91	3.03	1.54	1	7	-1.643
She is not attractive.	90	2.28	1.59	1	7	
She is unattractive.	91	2.05	1.37	1	6	1.148
We are not organised when we plan things.	90	2.98	1.59	1	7	
They are disorganised when it comes to planning.	90	2.90	1.50	1	7	.391
She is not responsible.	90	2.73	1.87	1	7	
He is irresponsible.	91	2.33	1.89	1	7	1.773
Her visits were not regular.	91	3.11	1.36	1	7	
Her attendance was irregular.	91	2.96	1.58	1	7	.922
He was not happy about the way I did it.	91	2.70	1.35	1	7	
He was unhappy about the outcome.	90	3.02	1.68	1	7	-1.425

p<.001\*\*\*; p<.01\*\*; p<.05\*

Table 2. Morphological and syntactic negation (overall scores)

Type	N	M	StD	Min	Max	T
not + Adj.	88	2.83	.72	1.00	4.80	
Neg. pref. + Adj.	86	2.69	.90	1.30	5.30	1.995*

p<.001\*\*\*; p<.01\*\*; p<.05\*

We also set out to test whether there are variable negativity degrees between the three tested subtypes of adverbs: the absolute negative *never*, which should assume the lowest level of negative polarity (i.e. absolutely negative); over semi-negatives, such as *hardly* and *rarely*, which are expected to take on the ‘almost-never’ value; to negated frequency and quantity adverbs, such as *not often* and *not much*, which are assumed to take the ‘occasionally’ value, which is line with quantification force research that focuses on how speakers judge quantity<sup>5</sup>.

<sup>5</sup> According to this research, the adverbials from our study fall under different quantificational forces categories: *often* under the positive proportional force, *seldom* and *rarely* under the negative proportional force, *never* under the negative existential force (Alstott, & Jasbi, 2020, p. 2002), which corresponds with the previously mentioned content values of the adverbs employed herein.

If we apply the same frame of reference (Grubor, 2021), the results fall outside the set semantic values of the adverbs. The absolute negative did not take the lowest value, but took the negative value only (around 2), although other studies reported much lower mean values of 1.28 (Pareira, & Lorga da Silva, 2016). However, the scores on the positively keyed utterances were neutral, not positive (around 4). The first one, *He never beats around the bush*, may be said to be representative of directness, which is typically appraised as positive in the Serbian mindset and interpreted as honesty, and similarly, the second one, *We never stalled the process*, has the implicitly negative verb *stall* negated in addition, thereby potentially indicating responsibility. With this in mind, we may assume that the negative adverb *never* played its role in colouring the utterance as ‘not so positive’ as semantics may imply.

The semi-negatives were assigned different values, except for *rarely* and *barely*, and *hardly* and *seldom*, which were assigned similar values. The former pair is typically treated as synonymous, but the latter is not, since *hardly* would rather go along with *rarely* and *barely*, while *seldom* would take on a higher value. If we consider some learner corpus studies, in which *seldom* was found to be infrequently (Rabadán, & Izquierdo, 2013) or never used (Bobkina, & Stefanova Radoulska, 2018) by L2 English learners, we may assume that this slight discrepancy in the participants’ judgements (perceiving *hardly* and *seldom* as synonymous) may be the cause of assigning lower values to the latter adverb. In a similar vein, hierarchical cluster analysis performed in quantification force research revealed that there is one tier containing, among others, *never*, *rarely* and *seldom*, termed minority quantificational force, and another tier including, among others, *many* and *often*, termed majority quantificational force (Alstott, & Jasbi, 2020).

The descriptive statistics were supported by the paired-samples T test, which detected statistically significant differences between all the semi-negatives but *rarely* and *barely*, on the one hand, and *hardly* and *seldom*, on the other (*hardly* vs. *rarely*:  $t(86)=2.505$ ;  $p=.014$ ; *hardly* vs. *barely*:  $t(89)=2.331$ ;  $p=.022$ ; *rarely* vs. *seldom*:  $t(86)=-2.329$ ;  $p=.010$ ; *barely* vs. *seldom*:  $t(88)=-2.477$ ;  $p=.014$ ). As can be noted from the  $t$  values, the sample perceived *hardly* and *seldom* as more positive than *barely* and *rarely*. Finally, in terms of the negated frequency adverb *not often* and quantity adverb *not much*, no differences were found between the frequency and quantity adverbs, and any of the semi-negatives, which implies that these categories were not seen as distinctively different. Thus, it is possible that, overall, the participants regarded semi-negatives as negative, without paying special attention to specific levels of negativity degree. However, the question that some future studies may address is whether the negated frequency and quantity adverbs are closer to the mi-

nority or majority quantificational force category since, in their case, the majority quantificational force is reversed.

*Table 3. Adverbial negation: absolutely negative adverb, semi-negatives, and negated frequency and quantity adverbs*

Item	N	M	StD	Min	Max
She never smiles.	91	2.36	1.56	1	7
They never arrive on time.	90	2.33	1.65	1	7
He never beats around the bush. <sup>+</sup>	91	4.64	1.87	1	7
We never stalled the process. <sup>+</sup>	91	4.21	1.80	1	7
I hardly know you.	90	3.47	1.51	1	7
He rarely comes.	88	2.99	1.58	1	7
I barely slept.	91	2.97	1.80	1	7
They seldom meet up with their cousins.	89	3.55	1.59	1	7
They don't meet up with their cousins often.	91	3.26	1.58	1	7
He doesn't come often.	90	3.30	1.47	1	7
I didn't sleep much.	91	3.05	1.89	1	7
She doesn't smile much.	91	2.84	1.51	1	7

<sup>+</sup>positively keyed utterances

When the aggregate values were compared (cf. Table 4), the order was as set by the grammatical rules and semantics: the absolute negative took the lowest value (although being only negative), then semi-negatives, and negated frequency and quantity adverbs (*not often*, *not much*) reported a mildly negative score.

*Table 4. Degrees of (adverbial) negation (overall scores)*

Negation degrees	N	M	StD	Min	Max
never: negative	90	2.36	1.21	1	5.50
never: positive	90	4.43	1.44	1	7
never: average	89	3.38	.92	1	6.25
semi-negatives	86	3.22	1.14	1.25	7
negated frequency & quantity adverbs	90	3.28	.83	1.63	5.63

To test whether our participants made a significant difference between semi-negatives, and negated frequency and quantity adverbs, which are expected to take on higher values than semi-negatives (*X rarely smiles* expresses a lower level of frequency than *X does not smile often*), we employed paired-samples T test. Statistically significant differences were reported between the absolutely negative adverb and all other tested categories, including the positively keyed utterances, as illustrated in Table 5. On the other hand, no difference was found between the semi-negatives, and negated adverbs of frequency and quantity. Besides not being differently evaluated by the participants, these two categories were significantly correlated in addition ( $r=.606, p=.000$ ).

Table 5. Differences in negation degrees

Negator type	Negator type	T	p
<i>never</i> : negative	semi-negatives	-6.743	.000
<i>never</i> : negative	negated frequency & quantity adverbs	-7.129	.000
<i>never</i> : positive	semi-negatives	6.019	.000
<i>never</i> : positive	negated frequency & quantity adverbs	7.654	.000
semi-negatives	negated frequency & quantity adverbs	1.022	.310

Regarding the sex criterion, independent-samples T test detected no difference on any item or aggregate score. As for the year of study criterion, ANOVA reported statistically significant differences on two items only, namely, *not considerate* ( $F(86) = 1.875$ ;  $p = .002$ ) and *not happy* ( $F(86) = 1.659$ ;  $p = .021$ ). A post-hoc Tukey test showed a difference between Year 1 and Year 4 ( $M(I-J) = 1.600$ ;  $p = .010$ ), and Year 3 and Year 4 ( $M(I-J) = 1.683$ ;  $p = .010$ ) on the former item, and Year 2 and Year 3 ( $M(I-J) = -1.285$ ;  $p = .034$ ), and Year 3 and Year 4 ( $M(I-J) = 1.583$ ;  $p = .010$ ) on the latter item. To summarise, the male and female participants did not evaluate the items differently, which was also the case with students enrolled in different years of study, excluding the said two items.

Finally, we need to point to the *limitations* of the study. The sample is not representative because it involved two out of the six state universities in Serbia. Furthermore, the distribution by the sex and year-of-study criteria was uneven. Concerning the instrument, all the items referred to animate entities, thus potentially exerting emotional perlocutionary effects. Moreover, all the items were given on the sentential, rather than the suprasentential plane.

### CONCLUSION

In order to propose some possible directions of future research, we will address the aims of our study and its main results, and then provide some suggestions relative to the sample and the instrument.

The main aim was to determine how non-native ELL students perceive different negative forms in English. Overall, the sample evaluated the affixal–syntactic negation pairs fairly equally (only two out of ten pairs displayed a statistically significant difference in favour of syntactic negation), on a continuum ranging from negative to mildly negative. The aggregate scores, though, indicated different results – the affixal negation was evaluated more negatively than the syntactic one. This finding is worth pursuing in further research since there is a discrepancy in the results. The results pertaining to the separate items on the affixal–syntactic plane, except for the items *inactive* and *immature*, are in line with the available literature, which reports that these two categories are similarly perceived (Aina, Bernardi, & Fernández, 2019). On the other hand, the

results relating to the overall categories suggest that affixal negation is more negatively evaluated by our participants. This might raise the question of whether there are tiers, as quantification-force research shows, with negative prefixes overall imparting a higher level of negativity than *not + Adj*, as in our study, whereas the individual utterances are evaluated against the semantic value *per se*.

We also set out to test the extent to which the participants distinguished between different levels of lexical negatives. The participants evaluated the absolute negative more positively than its semantics implies (as negative only). However, the positively keyed utterances with *never* were evaluated as neutral rather than with some level of positivity, which may imply the cognitive force of negation. Regarding semi-negatives, and negated frequency and quantity adverbs, the participants evaluated them fairly equally, contrary to the theoretical and intuitive understanding. Therefore, it might be reasonable to include the affirmative form of these adverbs and compare the results in some prospective studies.

Concerning the sample and employed instrument, future research may include a representative sample of ELL students in Serbia by including random participants from all the universities in the country, in line with the strict statistical procedures. Although valuable insights may be gained by including the general population and not a target sample, as was the case in our study, the problem would lie in the variable concerning the proficiency levels of the participants, which would be too complex to determine. However, what would be insightful is to include a control group of native speakers as a frame of reference against which the results may be compared. As for the instrument, we mainly used negated adjectives referring to animate entities (e.g. *She is not attractive*), which may be emotionally coloured, thus potentially exerting certain perlocutionary effects on the participants, such as taking pity on the subject. Against this backdrop, it may be wise to include inanimate entities in future research as well (e.g. *The offer is not attractive*), since they lack emotional connotations and may thus exclude potential interference of pragmatic effects. What is more, the inclusion of discourse would be more relevant from the standpoint of contemporary linguistic enquiry if researchers could find valid procedures for measuring the reliability of the employed texts.<sup>6</sup>

On a more general note, it would be useful to replicate this study with samples from different countries, in order to check whether there are culturally induced differences in different EFL contexts or in comparison to native speakers' reports. Should no differences be found, it may be reasonable to assume that negation is a matter of cognition rather than a purely linguistic phenomenon.

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<sup>6</sup> Longer samples of texts would not easily allow the extraction of negative forms in terms of their negativity degree without making sure that they have not been influenced by the context.

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## СТЕПЕН НЕГАТИВНОСТИ МОРФОЛОШКЕ, СИНТАКСИЧКЕ И ЛЕКСИЧКЕ НЕГАЦИЈЕ У ЕНГЛЕСКОМ КРОЗ ПРИЗМУ СТУДЕНАТА ЕНГЛЕСКОГ ЈЕЗИКА И КЊИЖЕВНОСТИ

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### Резиме

Феномен негације је део перцепције и универзално својство свих људских језика. Фокус истраживања чине морфолошка негација (нег. преф. + прид), синтаксичка негација (нег. парт. + прид) и лексичка негација (речи са негативним значењем). Главни циљ је утврдити како их опажају студенти студијског програма Енглески језик и књижевност у односу на степен негативности. Коначан узорак  $N=91$ , узраста од 18 до 28 година ( $M=22,07$ ,  $StD=2,17$ ), чинили су студенти Државног универзитета у Новом Пазару и Универзитета у Крагујевцу. У сврху прикупљања података, осмислили смо социодемографски упитник (за утврђивање пола, узраста, године студија), као и седмостепену Скалу поларитета за утврђивање степена негативности. Скала садржи исказе са три поменути типа негације, и то двадесет исказа са по десет парова афиксне и синтаксичке негације (нпр. непривлачан/-на – није привлачан/-на), четири исказа са апсолутно негативним прилогом никада (два са негативним, два са позитивним значењем), четири исказа са апроксимативима (нпр. готово никада), и четири исказа са негираним квантификатором (нпр. Не спавам много) или прилогом учесталости (нпр. Не долази често). Добијени подаци су анализирани у статистичком програму IBM SPSS 21, применом дескриптивне статистике (израчунаване су фреквенције, средње вредности, стандардна девијација) и тестова разлика (t-тест за независне и упарене узорке, једнофакторка анализа варијансе). Тест за утврђивање поузданости скале показао је добру интерну конзистентност ( $\alpha=0,878$ ). Уопштено говорећи, узорак је доста уједначено оценио парове које су чиниле афиксна и синтаксичка негација, што је у складу са резултатима других истраживања, и то као негативне или умерено негативне. Међутим, у погледу општих скорова, афиксна негација је процењивана негативније од синтаксичке. Испитаници су оценили апсолутно негативни прилог позитивније него што ње-

гова семантика сугерише, и то само као негативан (2,35 у просеку), а исказе са позитивним значењем као неутралне (4,42 у просеку), док су доста уједначено оценили апроксимативе, и негиране прилоге учесталости и квантификаторе. За будућа истраживања је пожељно укључити студенте са осталих универзитета у Србији, поред аниматних уврстити и неаниматне субјекте у исказе због потенцијалног утицаја прагматичких ефеката, и реплицирати истраживање у различитим културним срединама не би ли се проверило да ли постоје културно условљене разлике или пак когнитивна сличност.