

2025, 9(2), 28-68

DOI: 10.21248/zwjw.2025.2.139

M. Silvia Micheli & Martina Verdelli

Old and New Intensifying Prefixes in Italian: The Case of *uber-*

Abstract: This study offers the first description of the prefix *uber*- in Italian. Through a dual methodology combining a corpus-based analysis with a questionnaire administered to 440 native speakers, we highlight that uber- can be considered as an emerging intensifying strategy in Italian, aligning with its established role as an intensifying prefix in other languages, such as English and Hungarian. More specifically, both the corpus-based analysis and the results of the questionnaire demonstrate that uber- is primarily used to intensify (animated) nouns and adjectives in colloquial contexts. The questionnaire also reveals that, when given the choice of using *uber*- or other intensive disyllabic prefixes to express the highest degree of intensity, speakers tend to prefer other prefixes (mainly super- and mega-), rarely opting for uber-. Therefore, uber- does not currently function as an over-the-top intensifier in Italian, as it does in English and other European languages.

Keywords: derivation, evaluative morphology, Italian, intensification, prefixation

1. Introduction¹

Like the other evaluative strategies, intensification represents an area of morphology that is particularly prone to change. Indeed, the need to renew its own means is typical of evaluative morphology, which thus requires constant monitoring to capture the micro-changes occurring in order to keep the expressive power intact (see Grandi 2011). Alongside the emergence of new values for pre-existing affixes in a language's repertoire, changes may also involve the entry of new affixes, either obtained by shortening from other native words (e.g., It. turbofrom turbina 'turbine' in turboritardo 'super delay', see Verdelli 2023) or borrowed from other languages.

¹ This article is the result of close collaboration between the two authors. Exclusively for Italian academic purporse, Silvia Micheli is responsible for Sections 1, 3.2, 4.2.2, and Martina Verdelli for Sections 2, 3.1, 4.1, 4.2.1. Sections 4.2.3 and 5 were jointly authored.

The latter case is represented by the prefix *uber*-², which, as will be further clarified in Section 2.1, has spread from German into some languages of Europe, such as English, Dutch, and Hungarian (see Majtényi 2012; Wacksler 2012). Interestingly, though not yet classified or documented among evaluative prefixes, *uber*- is also attested in Italian with an intensifying value, as shown in (1).³

(1) Sei chiarissima (oltre che uber-gentile, stata **UBER-kind** be.2SG.PRS be.PTCP.PST clear.ELATIVE beyond that è ormai *super assodato!)* ma questo but this be.1SG.PRS by now super ascertained

'You were very clear (and also very kind, but that is now a matter of fact!)'.

In the reported sentence, the speaker is addressing a person to whom (s)he ascribes two positive qualities, both of which are intensified through morphological means, i.e., the elative suffix -issimo in chiarissima 'super clear' and the prefix uber- attached to the gradable adjective gentile 'kind'. The emphatic tone of the sentence is also confirmed by the use of an additional intensifying prefix, namely, super- in super assodato 'super ascertained'. As will be shown further on in the article, uber- attaches not only to adjectives but, like the other intensifying prefixes, also to other parts of speech, such as nouns and verbs.

This paper aims at providing the first description of *uber*- in contemporary Italian in order to outline its morphological and semantic properties. In addition, it aims to clarify how *uber*-fits within the system of intensifying prefixes of Italian, and whether there is competition with the other elements of the system. To this end, we have adopted a dual methodology, involving both the analysis of data extracted from corpora and the analysis of a questionnaire administered to native speakers. The study of *uber*- will allow us not only to observe the case of a foreign morphological element entering the repertoire of a language to express evaluative values, but also to update the picture of intensification in Italian.

_

² In this paper, we classify *uber*- as a prefix on the basis of formal and semantic properties. First, *uber*- in Italian is not used as an independent word; specifically, it never appears postponed to the word it modifies and appears only once in the itTenten corpus20 in a predicative function (i.e., *Daryl Dixon sempre più uber* 'Daryl Dixon [is] ever more uber'). Moreover, unlike other morphological elements that originally had a lexical meaning but gradually acquired a relational or evaluative function (i.e., prefixoids according to Booij & Hüning 2014) – such as *turbo*-, which comes from *turbina* 'turbine' but now functions as an intensifier (see Verdelli 2023) – *uber*-in Italian conveys exclusively an evaluative meaning.

³ The example is taken from the Italian web corpus itTenTen20 (Jakubíček et al. 2013).

The paper is structured as follows. Section 2 provides the state of the art on intensification in Italian, with a focus on the most recent studies; in Section 2.1 we collect basic information about the prefix *uber*- and clarify its original values in German and those developed in English and other languages where it is attested. The dual methodology adopted for the study is explained and discussed in Section 3, which describes the criteria by which the corpus-based analysis was carried out and by which the questionnaire submitted to the speakers was designed. The results of the two investigations are presented in Section 4 and discussed in Section 5, where we also provide some concluding remarks as well as some insights for future research.

2. Prefixal Intensification in Italian

2.1 State of the Art

Intensification represents an evaluative strategy used by speakers to express and «modulate the degree of a given entity, quality or event» (Micheli, to appear). As pointed out by Rainer (2015), the term intensification includes not only strategies expressing the highest degree but also those conveying a low degree (i.e., attenuation). Paradis (2008: 321) identifies two main types of degree modifiers, namely totality modifiers (i.e., maximisers such as absolutely and approximators such as almost) and scalar modifiers. The latter can be classified as boosters (e.g., very, extremely), moderators (e.g., quite, fairly), and diminishers (e.g., slightly, somewhat). Intensification can be realized through phonological (e.g., intonation), morphological (e.g., derivation, compounding, partial and full reduplication), syntactic (e.g., dislocated sentences, use of adverbs) or lexical strategies (e.g., lexical intensifiers).4 In this paper we will focus on the upper end of the intensification scale and on the morphological strategies attested in Italian. Indeed, starting from the works by Berthelon (1955), Bolinger (1972) and Rainer (1983), the field of morphological intensification represents an area that has encountered wide interest among scholars, especially in the last two decades (see among all Prieto 2005; Krištofíková 2012; Rainer 2015, 2025). This shared interest is evidenced in particular by the work edited by Napoli & Ravetto (2017b) and the joint initiative Unlocking evaluative morphology: Conceptual and methodological

⁴ See Piunno (2023: 399) and Grandi (2017) for an overview of the different strategies attested in Italian.

challenges,⁵ which have provided a comprehensive state of the art and opened up new perspectives on intensification (and evaluative semantics as well). Considering studies on Italian, one of the most investigated strategies is derivation,⁶ as both prefixation and suffixation can be used to express an intensified meaning. There are several works devoted to derivation (see Grandi 2002; 2017)⁷ and more specifically to prefixation (see Grandi & Iacobini 2008; Montermini 2008; Lacić 2025; Ravetto 2023), as well as studies on single strategies (see Migliorini 1963 on prefix *super*-; de Boer 2003 on *iper*-; Napoli 2012, 2017 on *stra-*; Rainer 1983; Dressler & Barbaresi 1994; Napoli 2013 on the suffix *-issimo*).

Focusing on prefixation, Montermini (2008) and Micheli (to appear) identify several prefixes used in Italian to convey an intensified meaning (i.e. *arci-*, *extra-*, *iper-*, *mega-*, *sopra-*, *stra-*, *super-*, *ultra-*). All prefixes are of neoclassical origin (i.e., they have been borrowed from the classical languages since the 17th century), with the exception of *stra-*, which represents the evolution of Latin EXTRĀ. Intensifying prefixes mainly attach to adjectives to convey the value 'very X' and increase the degree of the quality expressed by the base (e.g., *ipercritico* 'hypercritical', *extra-croccante* 'extra-crunchy', *superforte* 'very strong', *arcinoto* 'very well known'). However, given their high combinability (Micheli 2023), they also started being used with nouns (e.g., *megafesta* 'big party', *superpaura* 'superfear'), verbs (e.g., *stragodere* 'to extra enjoy', *supercostare* 'to cost a lot')¹⁰ and adverbs (e.g., *megabene* 'very well', *ultravelocemente* 'in a very fast way').

Like all types of evaluative mechanisms, the list of intensive prefixes is not meant to be fixed, as it is constantly subject to change: indeed, there are cases in which evaluative strategies gradually lose their meaning to acquire a non-evaluative one, as well as cases in which other strategies develop new meanings from a specialised one. To the former belongs *sopra*-,

⁵ Unlocking evaluative morphology: conceptual and methodological challenges is an initiative funded by the Societas Linguistica Europaea through the "SLE Research Grant for Joint Initiatives" 2022 and coordinated by Francesca Masini (University of Bologna), Muriel Norde (Humboldt-Universität zu Berlin) and Kristel Van Goethem (F.R.S.-FNRS & Université catholique de Louvain). https://site.unibo.it/unlocking-evaluative-morphology/en (accessed 29 January 2025).

⁶ There are also several works concerning reduplication strategies (Wierzbicka 1986; De Santis 2011; Bonacchi 2017), while the evaluative uses of composition are more limited (cf. Verdelli 2023).

⁷ Grandi (2017) provides an updated study on intensification, taking into account also other syntactic and lexical strategies.

⁸ This paper takes into account both prefixation and suffixation as strategies for expressing evaluation in Italian verbs, but focuses only prefixes for the expression of intensification.

⁹ Unless otherwise indicated, all examples are taken from the Italian corpus itTenTen20.

¹⁰ Both the examples are taken from Grandi & Iacobini (2008: 487).

which has been replaced by other prefixes and nowadays is used almost exclusively in calques of English containing *over*- (Micheli 2024); to the latter belongs *mega*-, traditionally employed to convey an augmentative meaning, but which seems to be used also to express a more qualitative value, as already recorded in other languages (see, among all, Izert 2012; Calpestrati 2017; Napoli & Ravetto 2017a). In addition to the prefixes just mentioned, a further strategy can be represented by the combining form *turbo*- (i.e., a shortening of *turbina* 'turbine'): as shown by Verdelli (2023), *turbo*- underwent a grammaticalisation process and developed formal and semantic properties typical of a prefixoid, thanks to which it started being used in everyday language to express an intensified value (e.g., *turboritardo* 'great delay').

The complete list of the Italian intensifying prefixal/prefixoidal strategies presented in this section is summarised in the table below.

Tab. 1: List of Italian intensifying prefixes/prefixoids with examples from the itTenTen20 corpus

Intensifying prefix/prefixoid	Example from itTenTen20 corpus
arci-	Si prosegue con altri due volti arci-noti del Festival 'It continues with two more very well known faces of the Festival'
extra-	Sono avvolti in una deliziosa pastella e nel mio pangrattato extra-croccante 'They are wrapped in delicious batter and my extra-crunchy breadcrumbs'
iper-	Per quale motivo sei ipercritico verso i tre libri che hai citato? 'Why are you hypercritical of the three books you mentioned?'
mega-	Domenica le abbiamo fatto una megafesta a sorpresa! 'On Sunday, we gave her a surprise big party!'
stra-	I rapper non vengono strapagati come i cantanti pop 'Rappers are not overpaid like pop singers'
super-	Una donna superforte e leggendaria come Wonder Woman 'A very strong, legendary woman like Wonder Woman'
turbo-	Sto andando in uni e sono in turboritardo 'I'm on my way to the university and I'm very late'
ultra-	Immagina possa muoversi ultravelocemente '[he/she] imagines it moving very fast'

Given the dynamic nature of the evaluative field of intensification, it is not surprising that new markers can enter the repertoire of intensive prefixes. Furthermore, it should be noted that prefixation in Italian is a more dynamic mechanism than suffixation, as it generally does not change the lexical category of the base and requires minimal phonetic adaptation when attaching to it, unlike suffixation.¹¹ In this paper we aim to investigate an emerging strategy used to convey an intensified meaning that can be added to the previous list of mechanisms employed in Italian: the prefix *uber*-.

2.2 Basic Facts about uber-

In German *über* ('over') can be used in different grammatical constructions, acting as a preposition and as a verbal particle, both separable and inseparable (cf. Dewell 2011: 15). It has a core meaning related to space,¹² namely the position 'above' (e.g., *der* Ballon *schwebte über dem* Tal 'the balloon hovered above the valley'), and can also be used to describe a route path,¹³ as illustrated in the following image.



Fig. 1: *über* (route path) (adapted from Dewell 2011: 50)

Besides locative meanings, *über* also expresses quantity-related values. As an adverb, it can convey the idea of having more of something and can be paraphrased by *mehr als* 'more than', as exemplified in (2a). Moreover, it can also express the idea of excess, as shown in (2b) where *über*- occurs as an inseparable particle (Liamkina 2007: 143).

¹¹ We thank an anonymous reviewer for this observation.

¹² In addition to the spatial meaning, *über* can also convey several other meanings, such as time (e.g. a period of time in or after which something happens). See Liamkina (2007) for a semantic analysis within the framework of cognitive linguistics.

¹³ A *route path* can be defined as a route that passes through a point on or above the landmark (i.e., the region of space that serves to locate the figure and its path in Langacker 1987).

b. Ein Gefühl der Scham überflutet sie.
a feeling of shame over-flood.3SG.PRS her
'A feeling of shame overcomes her'.

The idea of excess is related to the evaluative usage of *über*-, attested in Salzmann (2017) and Costa (2017), where it is treated as an intensifier prefix as well as a "bound preposition" used as first constituent in compounding to express adjectival augmentation (e.g., *übereifer* 'overeagerness').

From German, *über* has been borrowed in other languages, such as English, Dutch and Hungarian. In English, the first attestation of *uber*- in the Oxford English Dictionary (OED) dates back to 2015 (O'Dell 2016), although it is also worth mentioning the case of *Übermensch* «which pre-dates the borrowing of *uber*- as prefix» (Schröter 2021: 69) to the 1960s. Nowadays, it is attested in other English dictionaries also without the spelling of the umlaut, with slight differences from one work to another. Both in the Cambridge Dictionary and in the OED, *uber*- is attested as prefix used before nouns and adjectives meaning 'extreme', 'extremely good or successful', 15 or 'denoting an outstanding, supreme, or pre-eminent example of its kind, or a person or thing markedly surpassing others of its class or type [...] frequently in fashion and popular culture contexts'. In the Oxford Advanced Learner's Dictionary, it is attested as a combining form used with nouns and adjectives to convey the meaning 'of the greatest or best kind; to a very large degree'. Below are some of the forms attested in dictionaries.

- (3) a. *uber-fan* 'number one fan'
 - b. *ubersociety* 'super society'
 - c. *über-billionaire* 'more than billionaire'

Despite differences related to the morphological category (i.e. prefix or combining form), all definitions share the evaluative nature of *uber*- (thus being the only value adopted in English) rather than the spatial one; in fact, «it is actually closer in meaning to other prefixes

_

¹⁴ Following Schröter (2021: 69), the first evidence of *Übermensch* in the OED is 1902, while the first evidence of *uber*- in English dates back to 1962. Moya (2021) explains that the first attestation of *uber* as a noun dates back to 1962, while the first attestation as an adjective is 1988.

¹⁵ https://dictionary.cambridge.org/dictionary/english/uber (accessed 1 February 2025).

¹⁶ https://www.oed.com/dictionary/uber_prefix?tab=meaning_and_use#1175053030 (accessed 1 February 2025).

¹⁷ https://www.oxfordlearnersdictionaries.com/definition/english/uber?q=uber (accessed 1 February 2025).

which add a superlative meaning» (O'Dell 2016: 96). In this light, *uber*- can be compared to *turbo*-, as it emerges as one of the few prefixoidal mechanisms within the intensification strategies employed in English. However, unlike German, *uber*- is used to create derived forms by combining only with nominal (*uber-luxury* 'extra luxury') and adjectival (*uber-popular* 'very popular') bases, ¹⁸ but not with verbs.

Although all intensifiers are used to express some degree of subjectivity (Athanasiadou 2007) depending on the communicative context and the speaker's needs, Waksler (2012; see also Wouden & Foolen 2017) argues that *uber*- is used in marked contexts of colloquial discourse to convey an expressive meaning called 'over-the-top-intensification'. In fact, it is used «to surpass the pragmatic limits of expectation with respect to the target's position on the scale», by placing «a target at an extreme point on the scale, higher than intersubjectively understood expectations» (Waksler 2012: 25). Speakers may demonstrate a positive connection, by aligning himself/herself with the target, or a negative one, by disassociating himself/herself with the target, as shown in the following examples provided by the author (Waksler 2012: 26).

- (4) a. The store is uber-cool with a lot of black and lucite, so immediately you feel that you are in an atelier rather than a flower shop
 - b. It's still an uber-modern... trendy yogurt bar, so if you don't like that vibe like me you won't like the vibe here

In both examples, the *store* (4a) and the *yogurt bar* (4b) are defined by the speakers as «off the charts on the scale» (Waksler 2012: 26) of how cool and how modern a shop and yogurt bar would be expected to be. In (4a) the speaker expresses its connection to the target, by defining the shop as *uber-modern*; he also adds additional discourse information about his connection, by claiming that the shop is so cool that it can be compared to a French atelier (rather than a simple shop). On the contrary, in (4b) the speaker disassociates herself from the target.

The same borrowing can be observed in Dutch (Wouden & Foolen 2017; e.g., schattige en überinteressante feitjes 'cute and very interesting little facts') and in Hungarian (e.g., übererős 'extremely strong'), where uber- has been investigated with a crosslinguistic perspective by Majtényi (2012). Looking at Italian, uber- seems to be not attested: in fact, it is neither mentioned in the most important dictionaries nor in the reference studies on Italian word

_

¹⁸ Both the examples are taken from Schröter (2021).

formation (e.g., Grossman & Rainer 2004). Only the homograph lemma *Uber* is registered by the Treccani dictionary as proper name of the American private car transport service company.¹⁹ The only exception is the word *übersexual*, first attested in 2005 in an article in *Panorama* magazine and registered in a repertoire of neologisms, i.e., *Neologismi Treccani*,²⁰ where it is defined as follows.

ÜBERSEXUAL. Il supermaschio, elegante, rassicurante, carismatico. Spesso una simpatica carogna. La donna non è un accessorio del suo piacere o un riflesso del suo narcisismo, ma una compagna da condividere e, se necessario, proteggere. All'occorrenza sa come cambiare i pannolini del pupo.

'The super-male, elegant, reassuring, charismatic. Often an affable scoundrel. The woman is not an accessory for his pleasure or a reflection of his narcissism, but a partner to be shared and, if necessary, protected. When necessary, he even knows how to change baby's nappies'.

Interestingly, this occurrence shows the presence of the umlaut in *über*-; on a semantic level, it conveys an evaluative meaning close to that of *übermensch* 'superman'.

Although the literature and dictionaries do not seem to recognise *uber*- as a prefix, as already shown in the introduction of this paper it is attested in a web corpus of Italian, which can therefore serve as a source for its description. Given the lack of information on *uber*- in Italian, the aim of this article is to provide a first introductory study in order to shed light on the properties of this morphological element and to check whether it is also used in Italian as a marker of over-the-top intensification. To do so, two sources of data were taken into account: a collection of data extracted from an Italian web corpus and a questionnaire designed for our purpose, both presented in the next section.

3. Methodology

Two methodologies were needed for a comprehensive study of *uber*-. On the one hand, we extracted the occurrences of *uber*- from a large corpus in order to describe its morphological and semantic properties from both a quantitative and qualitative point of view; on the other

ZWJW 2025, 9(2), 28-68

36

¹⁹ https://www.treccani.it/enciclopedia/uber/ (our translation, accessed 28 January 2025).

²⁰ https://www.treccani.it/magazine/lingua_italiana/neologismi/ (our translation, accessed 8 July 2025).

hand, we tried to broaden the view and consider *uber*- in relation to other intensive prefixes through a questionnaire. In what follows, we describe the criteria adopted in both investigations.

3.1 Corpus Analysis

The first methodology used in this work followed a corpus-based approach. Data was extracted from a web corpus of contemporary Italian by using the advanced wordlist function "word starting with [*uber*]" of the SketchEngine interface.²¹ The itTenTen20 corpus²² was chosen according to two main criteria: first of all, it represents the biggest and the most recent collection of Italian data; secondly, it covers the domains of the Internet, thus allowing us to obtain information related to an informal use of the language, where evaluative strategies are more frequently used.

From a formal point of view, univerbated, hyphenated, and space-separated forms were considered in the data extraction. After being extracted, data was manually checked in order to eliminate all occurrences of *uber* that could not be associated with the prefix (e.g. typos or occurrences of the homograph *Uber*). Each occurrence was then annotated following morphological and semantic parameters such as lemma, POS of the word-base, nature of the referent (human, inanimate, both), language of the base (i.e., Italian, English or hybridism) and domain of use. For the examples of youth language, further typologies were identified following the classification proposed by Sobrero (1990; reprised by Cortelazzo 2020) (i.e., informal/colloquial Italian lexemes, dialectal or youth slang lexemes, internationalisms or borrowing from foreign languages, lexemes related to special languages or mass-media). We also took into account some features related to intensification, by marking the presence of other evaluative markers in the same occurrence (e.g. word-bases already intensified). Data collected with the corpus analysis were then combined with those collected by means of a questionnaire specifically created for the purposes of the research, which will be presented in the next section.

-

²¹ Sketch Engine contains 1 trillion words in 800 ready-to-use corpora in more than 100 languages (https://www.sketchengine.eu/ accessed 25 February 2025).

²² itTenTen20 is an Italian corpus made up of texts collected from the Internet and made of 12.4 billion words. It represents the most recent corpus for Italian among those of the TenTen corpus family. (https://www.sketchengine.eu/ittenten-italian-corpus/ (accessed 25 February 2025).

3.2 Questionnaire

The choice to design a questionnaire responds to the need to complement the results obtained from the corpus-based survey. Indeed, since *uber*- is an emerging phenomenon, it is not attested with a high frequency, which hinders a thorough description. Moreover, since the corpus chosen for the analysis consists only of texts extracted from the web, it remains uncertain whether *uber*- is also used outside this domain. To enrich the picture, we decided to administer a questionnaire to native speakers. On the one hand, we wanted to understand how *uber*- fits into the system of intensifying prefixes, i.e., when (and if) it is chosen among other prefixes to intensify an entity/quality/event to the highest degree, which bases it tends to be attached to most often, and how powerful (in terms of intensification) it is considered by speakers. On the other hand, we wanted to relate these results to the sociolinguistic features of the speakers, to investigate whether there were any correlations between the use of *uber*- and sociolinguistic parameters such as age, gender or educational qualification.

For these reasons, we designed a questionnaire whose questions did not only focus on *uber*-, but also on other intensive prefixes already identified in the literature, i.e., *iper*-, *extra*-, *mega*-, *stra*-, *super*-, *turbo*-, *ultra*-. From this list, we excluded *stra*- for formal reasons, as it is the only monosyllabic prefix, and due to its historical development. In fact, as shown by Napoli (2012, 2017), *stra*- is unique among these prefixes, since it was already attested in Old Italian. Consequently, its historical development differs from that of the other prefixes, which have been introduced more recently, primarily through scientific terminology. We also excluded *arci*-, as it was deemed only marginally productive by Iacobini (2004: 151).

The questionnaire is structured into four parts.²³ The first part includes questions regarding social features of the speakers, i.e., age, gender, educational qualification, occupation, geographical area of origin. We considered these parameters to investigate whether the use of *uber*- is limited to a specific age group of speakers (e.g., young people, who generally tend to be more prone to borrow words from English) and to a particular area of Italy, distinguishing between the North-East, North-West, Centre, South, and Islands.

-

²³ The full text of the questionnaire can be found in the Appendix.

In the second part, the questions consist of 18 sentences²⁴ to be completed by inserting one of the prefixes listed in the options²⁵ in front of a base that is asked to intensify to the highest degree. An example is given in Figure 2.

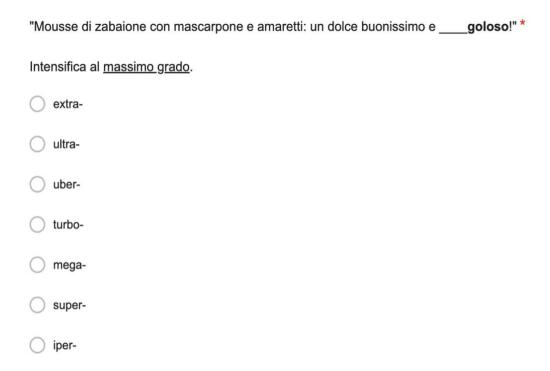


Fig. 2: Example of administered questions (part 2). Translation of the sentence: 'Eggnog mousse with mascarpone and amaretti: a delicious and _____ tempting dessert." Translation of the instruction: 'Intensify to the highest degree'.

The bases required to be intensified were selected on the basis of formal and semantic features. In particular, we selected three gradable (e.g., *goloso* 'tempting') and three non-gradable adjectives (e.g., *milanese* 'Milanese'); two abstract nouns (e.g., *ragione* 'reason'), two nouns referring to animate referents (e.g., *direttore* 'senior manager'), two nouns indicating concrete non-animate referents (e.g., *gelato* 'ice-cream') and three verbs, distinguishing between two indefinite forms (i.e., past participle and the infinite form) and one inflected form (e.g., *consiglia* '(he) recommends', present indicative 3 singular). We also annotated the bases according to the number of syllables, the initial sound (i.e., consonant or vowel), and morphological complexity (i.e., simple or complex words). In order to examine the use

_

²⁴ Each sentence included in the questionnaire was extracted from the Italian web corpus itTenTen20. The sentences extracted from the corpus already include complex bases with one of the prefixes analysed in this study; they were removed in order to allow participants to choose the prefix they considered most appropriate in the context.

²⁵ The prefixes are ordered differently in each question to avoid the speaker perceiving them in order of intensity.

of *uber*- with loanwords as well, we have included three non-Italian words that are well integrated into the Italian lexicon (i.e., Eng./Fr. *chic*, Eng. *cool* and *flop*).

The third part of the questionnaire consists of seven questions where the speaker is asked to choose between two possible contexts in which to use *uber*-. This section aims to collect data on the preferred contexts of use for *uber*-. In particular, speakers had to choose whether to insert *uber*- in formal or informal register sentences, with nouns or (corresponding) adjectives (e.g., *romanzo* 'novel' and *romanzesco* 'novelistic'), with English words or with (corresponding) Italian words. The latter case is illustrated in Figure 3, where there is a choice between two sentences containing the adjective *fast* and the corresponding Italian adjective *veloce*.

In q	quale delle seguenti frasi inseriresti uber - per intensificare?*	
0	Ma solo io non seguo neanche le lezioni per abusare dell'internet	_veloce dell'uni?
0	Ma solo io non seguo neanche le lezioni per abusare dell'internet	_fast dell'uni?
	Entrambe	

Fig. 3: Example of administered questions (part 3). Translation of the sentence: 'But am I the only one who doesn't attend lectures just to take advantage of the university's ______fast internet?'

Finally, in the last section of the questionnaire, we asked respondents to evaluate the intensity of the seven prefixes surveyed as intensifiers on a scale from 1 (weak) to 5 (strong). The data collected in this part of the questionnaire are perceptual and should therefore be analysed with caution, as they reflect the speakers' judgement and not necessarily their use of the prefixes. However, these data still provide us with useful information to understand which prefixes are considered as over-the-top intensifiers in Italian and whether *uber*- is one of them.

4. Analysis

4.1 Results of Corpus Analysis

From the data extraction, we obtained a dataset made up of 311 types and 479 tokens, with a TTR of 0.64, as illustrated in the following Table.

Tab. 2: Dataset under investigation

Туре	Token	Нарах
311	479	247

What clearly emerges from these results is the high number of hapaxes, which amounts to 247. The strong presence of hapaxes suggests that prefixation with *uber*- can be considered an emerging construction in Italian with a good degree of productivity. The potential productivity index (P = 0.51) confirms that *uber*- is a highly creative and still marginally conventionalised prefix in Italian, characterised by a strong tendency to generate novel, low-frequency forms. When comparing these findings with the results obtained by Maitényi (2012: 251) on English and Hungarian,²⁶ it can be observed that Italian occupies a position between English, where the productivity of the construction appears to be declining, and Hungarian, where the prefix exhibits higher levels of potential productivity.

Focusing on orthographic variants, we found that 140 occurrences are univerbated (e.g., *uberfamosi* 'uber+famous'), 118 occurrences are hyphenated (e.g., *uber-amore* 'uber+love'), and 221 occurrences display *uber-* as a separate constituent (e.g., *uber silenzioso* 'uber+quiet'). The lack of a stabilised spelling is not surprising in the context of prefixation, since there is no rule in Italian that suggests a spelling. Interestingly, this result indicates a tendency to write disyllabic prefixes separated from the base.

Considering the POS of the base, *uber*- is mainly combined with nouns and adjectives. Among the nouns with which *uber*- occurs, one can find both abstract (e.g., *uber-femminilità* 'uber+femininity') and concrete nouns (e.g., *ubermotore* 'uber+engine'), Italian words and English loanwords (e.g., *uberspoiler*), and two proper nouns (e.g., *ubergermania* 'uber+Germany'). Adjectives modified by *uber*- are both gradable (e.g., *uber-forte* 'uber+strong') and non-gradable (e.g., *uber-classico* 'uber+ classic'). We also found cases where the base is an adjective already intensified by the elative suffix *-issimo* (e.g., *uberpotentissima* 'uber + super powerful'). Interestingly, we also found *uber*- in combination with verbs (both loanwords from English such as *quotare* 'to quote' and native bases such as *giocare* 'to play') and with

 $^{^{26}}$ By calculating the productivity of the prefix and comparing the data extracted from the COCA corpus over the period 1990-2012, Majtényi (2012) highlight that $\ddot{u}ber$ - is still productive in English, but between 2008-2012 the value is lower than between 1990-1998 (0.81 compared to 1.00). It is important to note that Majtényi's (2012) study was carried out eight years before 2020, the year of the corpus used in this study.

different kinds of lexical units, such as multiword expressions, acronyms, and shortening. The quantitative data are illustrated in Table 3.

Tab. 3: Distribution of types and tokens of uber-words according to the POS of the base

Bases	Types	Tokens	Examples
Adjectives	124	194	uber-facile 'uber+ easy'
Nouns	138	190	uber-demone 'uber+ devil'
Adjectives / Nouns	35	74	ubercattolico 'uber+ catholic'
Verbs	4	4	(io) uberquoto '(I) uber+ quotes'
Other categories (e.g., MWE, acronyms, etc.)	10	17	uber-lol 'uber+LOL'

Focusing on the language of origin of the bases, we noticed that *uber*- is mostly combined with Italian bases, but there is a significant number of instances of words borrowed from English, as shown in Table 4.

Tab. 4: Type and Token distribution in relation to the language of the base

	Uber- + Italian base	Uber- + English base (loanwords registered in the Zingarelli dictionary)	Uber- + English base (words not registered in the Zingarelli dictionary)	Uber- + hybridism (i.e., English bases with an Italian affix)	Uber- + foreign base (not English)
Types	226	35	36	12	2
Tokens	320	74	68	14	3

As the data shows, there are cases where the prefix is combined with non-native bases: these words are almost exclusively from English, but there are 2 types from other languages (i.e., *uber-chic* from French and *ubernietzsche* from German). More specifically, *uber-* combines with English bases that can be classified into three types: English loanwords well integrated into Italian and registered by the *Zingarelli* dictionary, English words occasionally used by speakers but not permanently included in the lexicon, and English bases to which an Italian morphological element (often a suffix) has been added (e.g., *uber-trollata* where the English

word *troll* is derived through the -*ata* suffix, generally used to create event nouns, to refer to 'a typical action by a troll'), which we have defined here as *hybridisms* following Micheli (2023). Alongside the presence of the prefix in combination with non-Italian bases, *uber*-shows significant combinability with native words, suggesting good integration within the Italian prefix repertoire.

Analysing the contexts of use, we found that *uber*- appears to prevail especially in youth registers. By matching the results of data extraction with the parameters proposed by Cortelazzo (2010), it is possible to highlight the variety of bases that is linked to the prefix:

- a) informal/colloquial Italian bases (e.g., *uberfico* 'uber+cool');
- b) internationalisms or borrowing from foreign languages (e.g., *uber+glamorous*);
- c) bases linked to slang or special languages (e.g., *uber-scimmia* 'uber+monkey' related to drug addiction; *ubertrendy* related to fashion);
- d) bases linked to mass-media (e.g., uber-trollata 'uber+troll').

Uber- is mainly used in colloquial and informal contexts such as in (5a-b), which also leads to vulgarity due to the high amount of sex-related lexemes: this is the case of *ubersexual*, with the highest number of tokens in the corpus (10 tokens) and all lexemes linked to *uber-figo* (i.e., 13 tokens for the masculine form; 4 tokens for the feminine; 2 tokens for the derived forms *uber-figata* and *uberfigosa*; 1 token both for *uberfico*_M and *uberfica*_F). An example is provided in (5a) (Liamkina 2007: 143).

(5) a. Poi vabbe', il personaggio uberfigo coinvolto then whatever the character uber+cool involve.PTCP.PST aiuta... help.3SG.PRES

'Then again, the uber-cool character involved helps...

b. Vedremo, personalmente avrei preferito
see.1PL.FUT personally have.AUX prefer.PTCP.PST

un approccio uber-scazzone in stile Orville
an approach uber+cocky in style-Orville

'We'll see, personally I would have preferred an uber-crazy Orville-style attitude'.

Uber- appears also to be used mainly in domains related to special languages, including fashion (e.g., *uberfashionista* 'a person who dresses following the ultimate fashion') and

economy (e.g., *uber-liberista* 'uber+Liberist', *uberinflazionato* 'uber+inflated'). However, the greatest contribution comes from the world of the Internet and mass-media, more specifically to videogames, for a total of 34 tokens. Table 5 collects *uber*- words belonging to the videogame lexicon.

Tab. 5: Uber- words related to the domain of Internet and videogames

uber- words	Tokens
uber-armatura 'uber+armour'	2
uber-cannone 'uber+cannon'	1
uber-cofanetto 'uber+box set'	2
uber-demone 'uber+demon'	1
uber-geek	8
uber-giocatore 'uber+player'	3
uber-grafica 'uber+design'	1
uber-HD	1
uber-pc	8
uber-potenziamento 'uber+enhancement'	1
uber-soldati 'uber+soldiers'	1
uber-trollata 'uber+troll'	3
uber-ufficiale 'uber+officer'	1
uber-upgrade	1

The list includes lexemes from Italian, borrowings from English, and hybridisms. The former refers to concrete referents as characters of the game (e.g., *uber-demone* 'uber+demon') or elements of the setting (e.g., *uber-cannone* 'uber+cannon'), while the other two categories include more abstract bases referring to personal comments made by players, as shown in the following examples.

ZWJW 2025, 9(2), 28–68

44

(6) Non poteva esimersi dall' intervenire a. NEG can.3SG.PAST exempt.INF.REFL from_the intervening in merito alla vicenda anche Kevin Smith, filmmaker uber-geek regards to_the affair also Kevin Smith filmmaker uber+geek 'The uber-geek filmmaker Kevin Smith could not avoid commenting on the story'.

b. è ubertrollata 0 stata una oppure Either be.AUX be.PTCP.PST a uber+troll or chi ha scritto quella pagina have.AUX write.PTCP.PST who that page have.3SG.PRS seri problemi. serious issues.

'Either this was an epic troll, or the person who wrote this page has serious issues'.

Within this group falls the most frequent lemma *uber-geek* (8 tokens, exemplified in 6a) whose base *geek* is recorded as a neologism in the Treccani repertoire with (also) the pejorative meaning 'extreme interest for new technologies'.²⁷ Another lemma recorded as a neologism is the noun *trollata*, included in the hybridism *uber-trollata* (3 tokens, 6b) conveying the meaning of 'disruptive and provocative actions against other users'.²⁸

The corpus-based analysis allows us to make some preliminary remarks on the use of *uber*-. Based on the extracted data, the prefix acts as an intensifier predominantly when combined with nominal and adjectival bases, many of which come from foreign languages (especially English). The contexts in which it is used are almost exclusively informal (except for cases in which it joins lexemes from the economic domain), with a predominance in the domain of video games. Nevertheless, the available data extracted is limited. For this reason, the results obtained from corpus analysis were integrated with those from the questionnaire created for the purposes of the research. The results are presented in the following section.

_

²⁷ https://www.treccani.it/vocabolario/geek (Neologismi)/ (accessed 4 March 2025).

²⁸ https://www.treccani.it/enciclopedia/trollata_(altro)/ (accessed 4 March 2025).

4.2 Results of Questionnaire

4.2.1 Sociolinguistic Features of Respondents

The questionnaire was created using Google Forms²⁹ and spread both on Social Networks (i.e., Instagram³⁰ and Facebook³¹) and in printed format by scanning the related QR Code from 25 October to 20 November 2024. It was filled in by 440 informants,³² for whom we provide some sociolinguistic features.

The sample consists mostly of female informants (78.4%) and people living in North-West Italian regions (55.7%), although all geographical areas are present, as illustrated in more detail in Figure 4.

Provenienza geografica

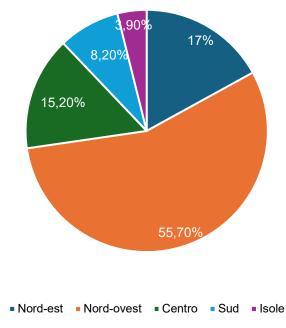


Fig. 4: Distribution of informants per geographical area. Translation of the options: nord-est 'North-East', nord-ovest 'North-West', centro 'Central Italy', sud 'South', isole 'Islands'

The age groups are well represented, although we observe a predominance of informants over 50 years of age (33.4%) and a lower number of informants under 20 years (5.5%): the

46

ZWJW 2025, 9(2), 28–68

_

²⁹ Google Forms is a tool developed by Google to collect information from users by submitting a customized survey.

³⁰ https://www.instagram.com/ (accessed 4 March 2025).

³¹ https://www.facebook.com/?locale=it_IT (accessed 4 March 2025).

³² Since it was impossible to continue or save the questionnaire without answering all questions, all the responses received were considered valid for analysis.

prevalence of a higher age group is linked to the significant number of respondents from Facebook, which today predominantly attracts individuals over the age of 40.

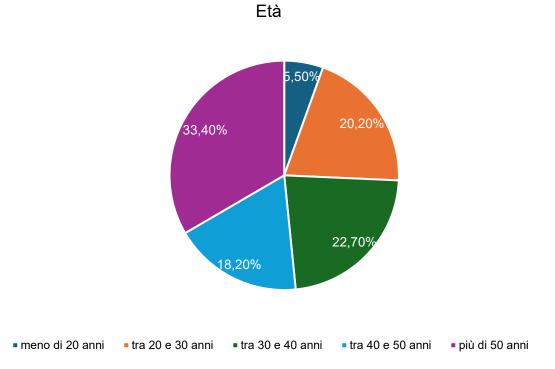


Fig. 5: Distribution of informants per age. Translation of the options: meno di vent'anni 'under 20 years old', tra 20 e 30 anni 'between 20 and 30 years old', tra 30 e 40 anni 'between 30 and 40 years old', tra 40 e 50 anni 'between 40 and 50 years old', più di 50 anni 'over 50 years old'

Considering education, most of the informants have a high school diploma (37.5%) or a master's degree (36.4%), while the few remaining participants have a bachelor's degree (12%), a middle school diploma (8,2%) or a PhD (5,9%). By looking at occupation, there is a predominance of employment in the private (34.1%) and public sector (24.3%); there are also several students (15%), freelancers (13,4%), entrepreneurs (4,3%), and unemployed (8,9%) among the participants.

4.2.2 Formal and Semantic Features of All Prefixes

In this section, we will explore the results obtained from the second part of the questionnaire, consisting of sentences to be filled in with an intensive prefix to intensify a given base to the highest degree. Our focus will therefore be not only on *uber*- but also on the other prefixes under investigation. Considering all sentences regardless of base type, we noticed that the most frequently used prefixes to intensify to the highest degree are *super*- and *mega*-, while the least frequently chosen by the speakers are *uber*- and *turbo*-, as shown in Table 6.

Tab. 6: Prefixes ranked according to how frequently speakers used them to express the highest degree of intensity

super-	mega-	ultra-	iper-	extra-	turbo-	uber-
2890	2139	1420	861	430	127	53

While the prominence of *super*- as the most frequently used prefix is unsurprising, the notably high frequency of mega- is a more intriguing finding, as it is not even classified among intensive prefixes in some studies (e.g., it is absent from Grandi 2017). A closer analysis reveals that mega- is the prefix most frequently selected by speakers both in combination with bases denoting concrete entities (e.g., mega+gelato 'ice cream', selected by 76.8% of the respondents) - which is unsurprising, given its original augmentative value³³ - and with bases referring to human referents (e.g., mega+direttore 'senior manager', 57.3%) and event nouns (e.g., mega+incazzatura 'rage', 64.1%). On the other hand, mega- is selected by speakers at significantly lower rates when used to intensify gradable adjectives for which *super*- is the widely preferred prefix (e.g., mega+goloso 'tasty', 6.4% vs. super+goloso, 55.2%). In the case of relational adjectives, no single prefix stands out as predominant, but super-, ultra-, and iper- are the most commonly selected (e.g., ultra+cattolico 'catholic', 44.1% vs. iper+cattolico, 23.4% vs. super+cattolico, 20%; super+mattiniero 'early-rising', 40.7 vs. ultra+mattiniero, 32.3% vs. iper+mattiniero, 18.2%). Focusing on verbal bases, in all cases, super- is the prefix most frequently selected by speakers (i.e., ho super+pianto 'I have super+cried', 36.6%; super+appoggiare 'to super+support', 46.4%; super+consiglia '(s)he super+recommends', 44.1%), although mega-, ultra-, and hyper- are also employed by a portion of respondents to express the highest degree of intensification (e.g., ho mega+pianto 'I have mega+cried', 27.3%).

Additional valuable insights on intensifying prefixes as a system emerge from the final section of the questionnaire, in which respondents are asked to rate the intensifying strength of individual prefixes on a scale from 1 to 5. As shown in Figure 6, *mega*- is the prefix most frequently rated with 5 points by respondents, indicating that it is perceived as the strongest

_

³³ As noted by an anonymous reviewer, the case of *mega*- differs from that of other prefixes as it is also used by speakers as an augmentative prefix. When *mega*- is attached to concrete bases, it may therefore be unclear whether the speaker intends an augmentative or an intensifying meaning. Despite this, the numerous instances of *mega*- used with non-concrete bases that cannot be physically enlarged confirm its stable function as an intensifying prefix.

intensifying prefix. On the scale based on respondents' judgments, mega- is followed by ultraand *hyper*-, both of which are perceived as conveying a substantial intensifying force. On the other hand, super- appears to be regarded as strong, though not among the strongest, and similar proportions are observed for extra-. The case of turbo-, by contrast, is distinct, as respondents rated its intensifying strength inconsistently. Overall, it was generally perceived as fairly strong (receiving ratings between 3 and 5), but a notable number of participants also assigned it lower scores of 1 or 2. This variation can be attributed to the relatively recent diffusion of turbo- as an intensifying prefix, which may lead to uncertainty among some speakers regarding its intensifying force. A closer look at the sentences in which turbo- is selected by a higher percentage of respondents reveals two notable patterns: one sentence contains a reference to speed (i.e., Stamattina, sfogliando "La stampa" a tutta velocità, durante la mia ____colazione, mi è balzato all'occhio un piccolo trafiletto 'This morning, while quickly leafing through La Stampa during my ____ breakfast, a small article caught my eye', turbo+colazione 'breakfast' 10,5%) - recalling the prefix's original meaning 'turbine' while the other contains a base word belonging to a vulgar, youth-oriented register (i.e., Ma non basta essere una ____figa per diventare Kate Moss! 'But being a ____hottie isn't enough to become Kate Moss!', turbo+figa 'hottie' 5.7%).

Even in the case of *uber*-, speakers exhibit a degree of uncertainty regarding the intensifying force of the prefix, a point that will be examined in more detail in the following section.

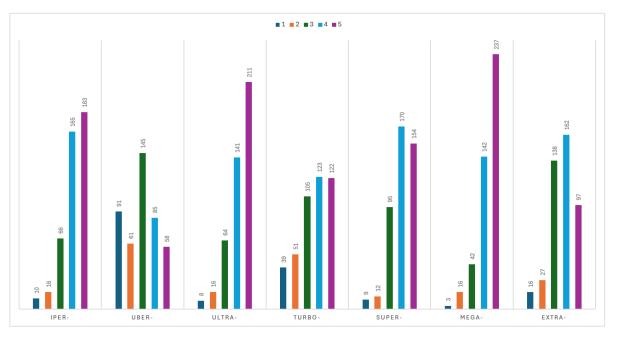


Fig. 6: Ratings of the intensifying force of the selected prefixes/prefixoids

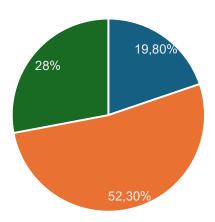
The data presented thus far clearly indicate that *uber*- is not commonly used by speakers as an over-the-top intensifier, with only a small minority employing it in this way. Specifically, 34 speakers, equivalent to 7.7% of the surveyed population, had used *uber*- at least once. However, the small number of observed instances allows us to speculate on possible future developments in the use of *uber*-. Firstly, we found that in all the sentences presented, at least one speaker chose *uber*- as the most intense prefix. More specifically, the sentences showing the highest percentages of *uber*- usage are those containing bases that refer to human beings or adjectives associated with human referents, namely uber+*direttore* 'senior manager' (i.e., 8 respondents, 1.8%) and uber+*milanese* 'Milanese' (i.e., 8 respondents, 1.8%).

To investigate potential correlations between the use of *uber*- and the speakers' social characteristics, as collected in the first part of the questionnaire, a *chi*-square test was conducted. No significant correlations emerged for the variables considered (i.e., age, gender, educational qualification, and geographical origin). The only variable that approached statistical significance is educational qualification (p=0.059). A closer examination of the data revealed that *uber*- is most frequently selected by respondents with a high school diploma. Contrary to expectations — namely, that the use of *uber*- would be concentrated among younger segments of the population — the results suggest that *uber*- is more widely accepted by speakers who have not (yet or ever) obtained an academic degree, regardless of age.

4.2.3 Focus on *uber*-

In the second part of the questionnaire, informants were asked to choose in which of the two sentences (or possibly both) insert *uber*-. In the first two questions, participants had to choose between a formal or informal register sentence. In both cases, the respondents prefer to insert *uber*- within an informal context (41.8% and 52.3%, respectively).

In quale delle seguenti frasi inseriresti **uber-** per intensificare?



- Nell'intervista, inoltre, l'____produttore ha anche ammesso di aver avuto dei colloqui con la Paramount ed Eddie Murphy per un possibile Beverly HillsCop 4
- Ma non lo conosci? Quello è un produttore di Hollywood, avrà vinto chissà quanti premi
- Entrambe

Fig. 7: Distribution of answers for Task 1 of Section 3

Translation of the question: 'In which of the following sentences would you insert uber- to intensify?'

Translation of option 1 (blue): 'In the interview, moreover, the _____ producer also admitted to 'having had talks with Paramount and Eddie Murphy about a possible Beverly Hills Cop 4'

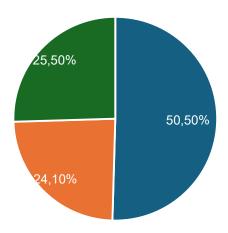
Translation of option 2 (orange): 'But don't you know him? He's a prominent Hollywood _____producer, he must have won countless awards'

Translation of option 3 (green): 'Both'

In the example provided in Figure 7, although the prefix is attached to the same base, i.e., *produttore* 'producer', the two sentences differ in the register (i.e., being informal the red one, more formal the blue one). The majority of speakers choose the more informal and colloquial sentence as the most appropriate situation for the use of the prefix.

In the next tasks, participants had to choose whether to insert *uber*-depending on the POS and the language of the base. As for the former, we observe a predominance of adjectival bases (58% and 44%) than the corresponding nouns (e.g., *romanzeschi* 'novelistic', *imbarazzante* 'embarrassing' and *violento* 'violent' rather than *romanzi* 'novel', *imbarazzo* 'embarrassment' and *violenza* 'violence'). As for the latter, we notice a high predominance (47.3% and 50.5%) for the English bases over the (corresponding) Italian terms, as illustrated in Figure 8.





- UnCENSORED è il luogo delle etichette ___cool, in cui l'arte prende vita indipendentemente dalla sua forma, senza censure
- UnCENSORED è il luogo delle etichette____fighe, in cui l'arte prende vita indipendentemente dalla sua forma, senza censure
- Entrambe

Fig. 8: Distribution of answers for Task 3 of Section 3

Translation of the question: 'In which of the following sentences would you insert uber- to intensify?'

Translation of option 1 (blue) and 2 (orange): 'UnCENSORED is the place for ___cool labels, where art comes to life regardless of its form, without censorship'

Translation of option 3 (green): 'Both'

To summarise, what emerges from the results of Section 3 is the speakers' tendency to use *uber*- within informal contexts, combining it preferably with adjectival bases in English. Another point that arises from the analysis of the responses is the high number of informants who select both sentences as contexts of use of *uber*-: this finding can be interpreted as an indication of the challenges faced by participants in selecting a specific context of use, probably due to a still emerging stage of entry of the prefix in the framework of Italian intensifying strategies and an incomplete familiarity with its meaning and usage. The smallest gap between two answers is recorded in the first question, where the difference between participants choosing the second (e.g., informal context of use) or third context (e.g., both) is only 2%.

The challenges in the classification of *uber*- is further confirmed by the analysis of the results of Task 4, already mentioned in section 4.2.2. In fact, on a scale from 1 (i.e., weak

intensifier) to 5 (i.e., strong intensifier), the majority of informants assign an intermediate score to the prefix in question, as shown in Figure 9.

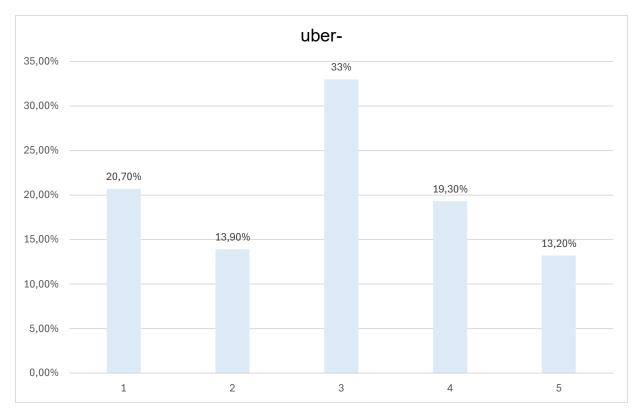


Fig. 9: Distribution of answers concerning the intensifying force assigned to uber-

As can be deduced from the graph, each slot is represented by a conspicuous number of informants, thus making it complex to delineate a common perception related to the intensifying power of *uber*-, in contrast to the other prefixes. More specifically, 33% of the speakers rate *uber*- as an intensifier with a strength of 3, highlighting once again the probable lack of knowledge of the meaning and the use of the prefix as an intensifying marker in Italian. Despite the variety of values assigned, the speakers seem to agree that the prefix cannot be classified as a strong intensifier, since only 13.2% give it a score of 5. As already mentioned, the only prefix showing similar trend is *turbo*-: although more than half of the informants assign very high values to the prefixoid (28% for strength 4 and 27.7% for strength 5, respectively), many speakers rate it with an intermediate intensifying force (23.9%).

5. Discussion and Conclusions

The analysis carried out on *uber*- allows us to outline the following morphological and semantic profile, which can be usefully compared with that of the same prefix in other European languages. Firstly, the corpus-based analysis shows that *uber*- is attested in Italian texts extracted from the web, where it predominantly appears in informal, and at times scurrilous, contexts, as well as in specific domains such as video game language. However, the fact that its use is not restricted to these contexts suggests that *uber*- is not merely a feature of youth jargon but can instead be considered as an element that is becoming part of the repertoire of intensifying prefixes in everyday language. Furthermore, the data extracted from corpora enabled us to assess the potential productivity of the prefix and confirm that it functions as a productive prefix, showing a marked preference for combining with adjectival and nominal bases, including those of English origin (both occasionalisms and loanwords well-established in the lexicon).

The second part of the investigation involved the analysis of a questionnaire administered to native speakers, which allowed us to refine the description of *uber*- and gain a clearer understanding of its place within the system of intensifying prefixes. Firstly, the questionnaire revealed that *uber*- is not generally used by speakers to express the highest degree of intensification and therefore cannot be considered an over-the-top intensifier, as it is in English. However, it is attested as a marker of strong intensification by a limited number of speakers, particularly in informal contexts and when combined with bases referring to human referents. This finding aligns with the results of the corpus-based analysis, confirming the prefix's preference for colloquial registers.

A comparison with other prefixes indicates that *uber*- ranks at the lower end of the intensification scale, whereas *super*- and especially *mega*- occupy the top positions. The strength of *mega*- as an intensifier is supported both by the responses to the questionnaire and by speakers' perceptions, many of whom explicitly regard it as the most forceful prefix. This suggests that future research should focus on *mega*-, as there are currently no quantitative studies devoted to this prefix, whose intensifying value is not yet unanimously acknowledged in the literature on evaluative morphology in Italian. In addition to *mega*-, other markers of

intensification seem interesting to investigate from a quantitative point of view, such as *giga*-.³⁴ Quantitative studies on intensifying prefixes in Italian are, in fact, limited, and it is only recently that they have been examined from the perspective of morphological competition (see Lacić 2025).

Finally, this study allows for some broader reflections on the relationship between Italian and English, which may pave the way for future studies on the contact between the two languages. Indeed, while studies on linguistic contact between Italian and English have mainly focused on the analysis of lexical borrowings (see e.g., Bombi 2015, 2017), the case of *uber*-shows that the connection between the two languages is such that morphological borrowings of derivational affixes also occur. In the borrowability scale proposed by Matras (2007: 61), this case occupies the penultimate position and is attested only in well-established contact situations. The case of *uber*- thus leads us to shift our focus to the phenomenon of hybridism, which enables us to examine how contact operates within the boundaries of the word.

References

Amiot, Dany. 2004. Haut degré et préfixation. Travaux linguistiques du Cerlico 17. 91-104.

Athanasiadou, Angeliki. 2007. On the subjectivity of intensifiers. *Language Sciences* 29(4). 554–565. DOI: 10.1016/j.langsci.2007.01.009.

Baayen, R. Harald. 2009. Corpus linguistics in morphology: morphological productivity. In Anke Lüdeling & Merja Kytö (eds.), *Corpus linguistics. An International Handbook*, 899–919. Berlin & New York: de Gruyter. DOI: 10.1515/9783110213881.2.899.

Berthelon, Christiane. 1955. L'expression du haut degré en français contemporain: essai de syntaxe affective. Berne: A. Francke.

Bolinger, Dwight. 1972. Degree Words. Berlin & Boston: de Gruyter.

Bombi, Raffaella. 2015. Il contatto anglo-italiano e i riflessi nel lessico e nei processi di "formazione delle parole". In Carlo Consani (ed.), *Contatto interlinguistico fra presente e passato*, 379–396. Milano: LED.

Bombi, Raffaella. 2017. Anglicisms in Italian. Typologies of language contact phenomena with particular reference to word-formation processes. In Massimo Cerruti, Claudia Crocco & Stefania Marzo (eds.), *Towards a new standard: theoretical and empirical studies on restandardization of Italian*, 269–292. Berlin: de Gruyter. DOI: 10.1515/9781614518839-010.

Bonacchi, Silvia. 2017. What does Reduplication Intensify? The Semantics and Pragmatics of Reduplicated Forms in Italian and their Equivalents in German. In Maria Napoli & Miriam Ravetto (eds.), *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*, 289–303. Amsterdam & Philadelphia: John Benjamins. DOI: 10.1075/slcs.189.15bon.

³⁴ We thank an anonymous reviewer for pointing out the use of *giga*- as an intensifier. The prefix is indeed attested in the Italian web corpus itTenTen20 (e.g., *Sarò pure giga-ignorante ma imbecille no* 'I may be giga-ignorant, but imbecile I am not').

- Booij, Geert & Matthias Hüning. 2014. Affixoids and constructional idioms. In Ronny Boogaart, Timothy Colleman & Gijsbert Rutten (eds.), *Extending the scope of Construction Grammar*, 77–105. Berlin & New York: de Gruyter.
- Bylinina, Lisa & Yasutada Sudo. 2015. Varieties of intensification. *Natural Language & Linguistic Theory* 33. 881–895. DOI: 10.1007/s11049-015-9291-y.
- Cortelazzo, Manlio. 2020. *Giovanile, linguaggio*. https://www.treccani.it/enciclopedia/linguaggio-giovanile_%28Enciclopedia-dell%27Italiano%29/ (accessed 5 February 2025).
- Costa, Marcella. 2017. Augmentatives in Italian and German. From contrastive analysis to translation. In Maria Napoli & Miriam Ravetto (eds.), *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*, 353–370. Amsterdam & Philadelphia: John Benjamins, DOI: 10.1075/slcs.189.18cos.
- De Santis, Cristiana. 2011. *Reduplicazione espressiva*. https://www.treccani.it/enciclopedia/reduplicazione-espressiva_(Enciclopedia-dell'Italiano)/ (accessed 13 March 2025).
- Dewell, Robert B. 2011. *The Meaning of Particle/Prefix Constructions in German*. Amsterdam & Philadelphia: John Benjamins. DOI: 10.1075/hcp.34.
- Dressler, Wolfgang U. & Lavinia Merlini Barbaresi. 1994. *Morphopragmatics. Diminutives and Intensifiers in Italian, German, and Other Languages*. Berlin & New York: de Gruyter. DOI: 10.1515/9783110877052.
- Gardani, Francesco. 2018. On morphological borrowing. *Language and Linguistics Compass* 12(10). 1–17. DOI: 10.1111/lnc3.12302.
- Gerben de Boer, Minne. 2003. Fortuna del prefisso 'iper'. In Nicoletta Maraschio & Teresa Poggi Salani (eds.), Italia linguistica anno Mille Italia linguistica anno Duemila: Atti del XXXIV Congresso internazionale di studi della Società di linguistica italiana (SLI), Firenze, 19–21 ottobre 2000, 521–530. Roma: Bulzoni.
- Grandi, Nicola. 2002. Morfologie in contatto. Le costruzioni valutative nelle lingue del Mediterraneo. Milano: FrancoAngeli.
- Grandi, Nicola. 2011. Renewal and innovation in the emergence of Indo-European evaluative morphology. *Lexis Journal in English Lexicology* 6. 5–25. DOI: 10.4000/lexis.403.
- Grandi, Nicola. 2017. Intensification processes in Italian. In Maria Napoli & Miriam Ravetto (eds.), *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*, 55–77. Amsterdam & Philadelphia: John Benjamins. DOI: 10.1075/slcs.189.04gra.
- Grandi, Nicola & Claudio Iacobini. 2008. L'affissazione valutativa nei verbi dell'italiano. In Emanuela Cresti (ed.), *Prospettive nello studio del lessico italiano*, *Atti del IX Congresso Internazionale della Società di Linguistica e Filologia Italiana*, 483–490. Firenze: Firenze University Press. https://www.torrossa.com/de/resources/an/2270309?digital=true (accessed 12 March 2025).
- Grossmann, Maria & Franz Rainer (eds.). 2004. *La formazione delle parole in italiano*. Tübingen: Niemeyer. DOI: 10.1515/9783110934410.
- Izert, Małgorzata. 2012. Méga et giga: les nouveaux intensificateurs dans leur emploi familier en français et en polonais. In Bohdan Krzysztof Bogacki, Joanna Cholewa, Agata Rozumko (eds.), Formal and Semantic Aspects of Linguistic Research/Aspects sémantiques et formels dans les recherches linguistiques, 81–92. Białystok: Wydawnictwo Uniwersytetu w Białymstoku.

- Kilgarriff, Adam, Vít Baisa, Jan Bušta, Miloš Jakubíček, Vojtěch Kovář, Jan Michelfeit, Pavel Rychlý & Vít Suchomel. 2013. The Sketch Engine: Ten Years On. *Lexicography* 1(1). 7–36. DOI: 10.1007/s40607-014-0009-9.
- Krištofíková, Hana. 2012. Adverbiaux d'intensification et constructions appréciatives en français: observation de la variation intergénérationnelle. Brno: Masarykova univerzita (Magisterská diplomová práce). https://is.muni.cz/th/wangf/ (accessed 14 March 2025).
- Lacić, Ivan. 2025. InTens A dataset of Italian Intensified derivatives. Description and application in a productivity studio. In Richard Huyghe, Megan Prudent & Justine Salvadori (eds.), Proceedings of the Fifth International Workshop on Resources and Tools for Derivational Morphology (4–5 September 2025 University of Fribourg, Switzerland), 73-86.
- Langacker, Ronald W. 1987. Foundations of Cognitive Grammar I: Theoretical prerequisites. Stanford: University Press.
- Liamkina, Olga. 2007. Semantic Structure of the German Spatial Particle über. *Journal of Germanic Linguistics* 19(2). 115–160. DOI: 10.1017/S1470542707000050.
- Majtényi, Melinda. 2012. The productivity of the prefix *über* in English and Hungarian: A cross-linguistic, corpus-based study. *Argumentum* 8. 244–261.
- Matras, Yaron. 2007. The borrowability of grammatical categories. In Yaron Matras & Jeanette Sakel (eds.), *Grammatical borrowing in cross-linguistic perspective*, 31–74. Berlin: de Gruyter.
- Micheli, M. Silvia. 2022. Ibridismi nella formazione di parola dell'italiano contemporaneo. Analisi di un repertorio di neoformazioni. *Giornale di storia della lingua italiana* 1(1). 149–163. DOI: 10.6093/gisli9586.
- Micheli, M. Silvia 2023. The emergence of approximative values in the Italian prefixes *semi-* and *para-*. *Zeitschrift für Wortbildung / Journal of Word Formation* 7(1). 156–176.
- Micheli, M. Silvia. to appear. Evaluative morphology. In Adam Ledgeway & Martin Maiden (eds.), *The Oxford Handbook of the Italian Language*. Oxford: Oxford University Press.
- Migliorini, Bruno. 1963. Fortuna del prefisso super-. In Bruno Migliorini (ed.), *Saggi sulla lingua del Novecento*, 61–69. Firenze: Sansoni.
- Moya, Mario. 2021. Lexical borrowings in Present-Day English: The case of über. https://www.researchgate.net/publication/348713929_Lexical_borrowings_in_Present-Day_English_The_case_of_uber (accessed 11 April 2025).
- Montermini, Fabio. 2008. *Il lato sinistro della morfologia: la prefissazione in italiano e nelle lingue del mondo*. Milano: FrancoAngeli.
- Napoli, Maria. 2012. Uno stra-prefisso: l'evoluzione di stra- nella storia dell'italiano. *Rivista Italiana di Linguistica e Dialettologia* XIV. 89–112.
- Napoli, Maria. 2013. On Italian past participles with *-issimo*: The superlative of events between intensification and pluractionality. *Linguistica e Filologia* 33. 85–126.
- Napoli, Maria. 2017. Nomi in *stra-* in italiano. Intensificazione tra semantica e pragmatica. In Alain Lemarechal, Peter Koch & Pierre Swiggers (eds.), *Actes du XVII Congrès international de linguistique et de philologie romane* (Nancy, 15–20 juillet 2013), 95–105. Nancy: ATILF.
- Napoli, Maria & Miriam Ravetto. 2017a. Types of intensified meanings in Italian and German. In Maria Napoli & Miriam Ravetto (eds.), *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*, 327–352. Amsterdam & Philadelphia: John Benjamins.
- Napoli, Maria & Miriam Ravetto (eds.). 2017b. *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*. Amsterdam & Philadelphia: John Benjamins. DOI: 10.1075/slcs.189.

- O'Dell, Felicity. 2016. Creating new words: affixation in neologisms. *ELT Journal* 70(1). 94–99. DOI: 10.1093/elt/ccv054.
- Paradis, Carita. 2008. Configurations, construals and change: expressions of DEGREE. *English Language and Linguistics* 12. 317–343.
- Piunno, Valentina. 2023. Intensifying constructions in Italian. Types, function and representation. In Jean-Pierre Colso (ed.), *Phraseology, constructions and translation. Corpus-based, computational and cultural aspects*, 399–408. Louvain-la-Neuve: PUL.
- Prieto, Victor Moises. 2005. *Spanish evaluative morphology: pragmatic, sociolinguistic, and semantic issues.* PhD thesis. University of Florida.
- Rainer, Franz. 1983. L'intensificazione di aggettivi mediante -issimo. In Dardano Maurizio, Wolfgang Dressler & Gudrum Held (eds.), *Akten des 2. Österreichisch-italienischen Linguistentreffens*, 94–102. Tübingen: Narr.
- Rainer, Franz. 2015. Intensification. In Peter O. Müller, Ingeborg Ohnheiser, Susan Olsen & Franz Rainer (eds.). *Word-formation: An international handbook of the languages of Europe*, 1339–1351. Berlin, München & Boston: de Gruyter. DOI: 10.1515/9783110246278-033.
- Rainer, Franz. 2025. Intensification. In Peter O. Müller, Susan Olsen & Franz Rainer (eds.), *Word-Formation. Semantics and Pragmatics*, 271–284. Berlin, München & Boston: de Gruyter.
- Ravetto, Miriam, 2023. I prefissi intensificativi nel parlato: un confronto tra italiano e tedesco. In Marina Castagneto & Miriam Ravetto (eds.), *La Comunicazione Parlata / Spoken Communication*, 537–564. Roma: Aracne.
- Salzmann, Katharina. 2017. A pragmatic view on intensification. Expansions in German and Italian. In Maria Napoli & Miriam Ravetto (eds.), *Exploring Intensification: Synchronic, Diachronic and Cross-Linguistic Perspectives*, 231–250. Amsterdam & Philadelphia: John Benjamins.
- Schröter, Melani. 2021. The wanderlust of German words and their pragmatic adaptation in English. *Journal of Pragmatics* 18. 63–75. DOI: 10.1016/j.pragma.2021.06.005.
- Sobrero, Alberto A. 1990. Varietà linguistiche giovanili fra passato e futuro. In Graziano Martignoni (ed.), *Seduzioni di normalità*. *Linguaggi giovanili e anni Ottanta*, 97–109. Comano: Edizioni Alice.
- Verdelli, Martina. 2023. Turbo-composti: L'espressione morfologica dell'intensificazione per mezzo dell'elemento formativo turbo- in italiano e francese. *L'Analisi Linguistica e Letteraria* 31(1). 5–26. https://www.analisilinguisticaeletteraria.eu/index.php/ojs/article/view/498 (accessed 10 September 2025).
- Wacksler, Rachelle. 2012. Super, Uber, So, and Totally: Over-the-top Intensification to Mark Subjectivity in Colloquial Discourse. In Nicole Baumgarten, Inke Du Bois & Juliane House (eds.), *Subjectivity in language and discourse*, 17–31. Bingley: Emerald Group Publishing.
- Wierzbicka, Anna. 1986. Italian Reduplication: Cross-Cultural Pragmatics and Illocutionary Semantics. *Linguistics* 24 (2). 287–316. DOI: 10.1515/ling.1986.24.2.287.
- Wouden, Van der, Ton & Ad Foolen 2017. A most serious and extraordinary problem. Intensification of adjectives in Dutch, German, and English. *Leuvense Bijdragen* 101. 82–100.

Appendix: Questionnaire

Dati sociolinguistici

Età

- meno di 20 anni
- tra 20 e 30 anni
- tra 30 e 40 anni
- tra 40 e 50
- più di 50

Genere

- femmina
- maschio
- preferisco non dichiarare

Titolo di studio

- licenza media
- diploma di scuola superiore
- laurea triennale
- laurea magistrale
- dottorato di ricerca

Provenienza geografica

- Nord-est (Emilia Romagna, Veneto, Friuli Venezia Giulia, Trentino Alto Adige)
- Nord-ovest (Piemonte, Lombardia, Liguria, Valle d'Aosta)
- Centro (Toscana, Lazio, Marche, Umbria)
- Sud (Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria)
- Isole

Occupazione

- studente/ssa
- impiegato/a nel settore pubblico
- impiegato/a nel settore privato
- libera professione
- imprenditore/trice
- disoccupato/a

Parte 1. In questa sezione ti proporremo una frase con uno spazio da riempire in cui dovrai inserire l'elemento che secondo te intensifica al massimo grado il concetto che segue. "Mousse di zabaione con mascarpone e amaretti: un dolce buonissimo e ____goloso!" Intensifica al massimo grado. extraultrauberturbomegasuperiper-"A breve vi proporrò un weekend ____economico ad Istanbul sfruttando i nuovi voli". Intensifica al massimo grado. superiperultrauberturbomegaextra-"Ma non basta essere una ____figa per diventare Kate Moss!" Intensifica al massimo grado. uberiperultrasuper-

ZWJW 2025, 9(2), 28–68 60

mega-

turbo-

extra-

M. SILVIA MICHELI & MARTINA VERDELLI

	nevica, ma dentro il locale la serata si preannuncia calda e affollata, di un pubblico moda—milanese".
Intens	ifica al <u>massimo grado</u> .
•	iper-
•	mega-
•	ultra-
•	super-
•	turbo-
•	extra-
•	uber-
	occorre essere teologi, cardinali ocattolici per portare avanti questi piccoli passi del sentiero di vita".
Intens	ifica al <u>massimo grado</u> .
•	iper-
•	mega-
•	uber-
•	super-
•	extra-
•	ultra-
•	turbo-
"Un ca bagagl	aro saluto a Claudio, disponibilissimo al nostro arrivo mattiniero per lasciare i i".
Intens	ifica al <u>massimo grado</u> .
•	ultra-
•	uber-
•	iper-
•	mega-
•	super-
•	turbo-
•	extra-

OLD AND NEW INTENSIFYING PREFIXES IN ITALIAN: THE CASE OF UBER-

'Mi permetto di dire che su questo punto gli economisti hanno ragione ".
Intensifica al <u>massimo grado</u> .
• mega-
• super-
• ultra-
• uber-
• extra-
• turbo-
• iper-
'Scusa, lo sfogo che ho avuto l'altro giorno qui nel forum era dovuto principalmente ad una incazzatura che avevo con una delle mie coinquiline".
Intensifica al <u>massimo grado</u> .
• uber-
• iper-
• mega-
• ultra-
• turbo-
• super-
• extra-
'Un potente quanto misterioso direttore prepara soldati e strategie militari apposta per poterli catturare e vendere al miglior offerente".
Intensifica al <u>massimo grado</u> .
• super-
• mega-
• uber-
• extra-
• ultra-
• turbo-
• iper-

M. SILVIA MICHELI & MARTINA VERDELLI

"Sarà, ma per essere [dei/degli] professoroni , questi qui non sanno nemmeno fare un semplice database".
Intensifica al <u>massimo grado</u> .
• iper-
• ultra-
• uber-
• mega-
• turbo-
• extra-
• super-
"Ho voglia di prendermi uno di quei gelati assurdi grandissimi con tanto di panna e biscotto."
Intensifica al <u>massimo grado</u> .
• uber-
• iper-
• super-
• mega-
• ultra-
• turbo-
• extra-
"Stamattina, sfogliando "La stampa" a tutta velocità, durante la miacolazione, mi è balzato all'occhio un piccolo trafiletto".
Intensifica al <u>massimo grado</u> .
• ultra-
• iper-
• mega-
• uber-
• turbo-
• extra-
• super-
"Io "Titanic" al cinema l'ho visto 3 volte e per 3 volte ci hopianto!".

Intensifica al <u>massimo grado</u> .
• uber-
• extra-
• super-
• iper-
• ultra-
• mega-
• turbo-
"Non posso cheappoggiare il concetto".
Intensifica al <u>massimo grado</u> .
• extra-
• super-
• uber-
• iper-
• mega-
• turbo-
• ultra-
"E vuoi non ascoltare il tuo macellaio di fiducia che ticonsiglia il coniglio, che sto giro lo ha buonissimo, morbidissimo e che si scioglie in bocca?".
Intensifica al <u>massimo grado</u> .
• iper-
• mega-
• super-
• turbo-
• uber-
• ultra-
• extra-
"In questo negozio è possibile trovare tutto ciò che si vuole, dalla lineechic alle linee casual create dai grandi stilisti italiani".

ZWJW 2025, 9(2), 28-68 64

Intensifica al massimo grado.

M. SILVIA MICHELI & MARTINA VERDELLI

• iper-
• uber-
• mega-
• super-
• ultra-
• turbo-
• extra-
"Il pullman non sarà un mezzo cool per girare l'isola ma fa egregiamente il lavoro a cui è dep- utato".
Intensifica al <u>massimo grado</u> .
• uber-
• iper-
• mega-
• super-
• extra-
• ultra-
• turbo-
"Il film è di fatto un flop ".
Intensifica al <u>massimo grado</u> .
• iper-
• turbo-
• ultra-
• extra-
• mega-
• super-
• uber-
Parte 2. In questa sezione ti chiediamo in quale delle due frasi proposte inseriresti l'elemento uber

65

In quale delle seguenti frasi inseriresti **uber**- per intensificare?

OLD AND NEW INTENSIFYING PREFIXES IN ITALIAN: THE CASE OF UBER-

•	Ecco allora un altro, ennesimo caso di diritti all'acqua calpestati dai signori del fracking ('fratturazione idraulica'), i quali amano sempre ripetere che è tutto a posto, i loro pozzi sonocementificati e quindi non ci sono perdite e tutto quello che capita di brutto è solo un caso
•	Mi fa schifo l'idea di vivere in quartiericementificati, piuttosto me ne vado a vivere in campagna!
•	Entrambe
In qua	le delle seguenti frasi inseriresti uber - per intensificare?
•	Nell'intervista, inoltre, l'produttore ha anche ammesso di "aver avuto dei colloqui con la Paramount ed Eddie Murphy per un possibile Beverly Hills Cop 4
•	Ma non lo conosci? Quello è unproduttore di Hollywood, avrà vinto chissà quanti premi
•	Entrambe
In qua	le delle seguenti frasi inseriresti uber - per intensificare?
•	Ed è un po' unromanzo , nel senso che ricompariranno anche alcuni personaggi vecchi in veste di comprimari di passaggio (tipo i Despero), ma soprattutto nel senso che è un romanzo interminabile ed eterno
•	La vicenda ha assunto trattiromanzeschi, sembravano personaggi di un libro di Tolstoj
•	Entrambe
In qua	le delle seguenti frasi inseriresti uber - per intensificare?
•	L'unico rossetto a prova di limone: non sbava, non scompare, ma soprattutto non riappare su di lui o sulle sue felpe (giacche, camicie, etc.) situazioneimbarazzante, ve l'assicuro
•	Non puoi capire cheimbarazzo ieri sera, mi ero completamente dimenticata del compleanno di Sara!
•	Entrambe
In qua	le delle seguenti frasi inseriresti uber - per intensificare?
•	Riguardo al trailerviolento, mi sembra che voglia ricalcare la violenza fine a se stessa e "meccanica" delle serie tv
•	Riguardo al trailer violento, mi sembra che voglia ricalcare laviolenza fine a se stessa e "meccanica" delle serie tv
•	Entrambe

In quale	delle seguenti	frasi inserires	sti uber - per	intensific	are?							
• 1	• Ma solo io non seguo neanche le lezioni per abusare dell'internetveloce dell'uni?											
• 1	• Ma solo io non seguo neanche le lezioni per abusare dell'internetfast dell'uni?											
• I	• Entrambe											
In quale delle seguenti frasi inseriresti uber - per intensificare?												
	UnCENSORED è il luogo delle etichette mente dalla sua forma, senza censure				_cool, in cui l'arte prende vita indipendente-							
	UnCENSORED è il luogo delle etichettefighe, in cui l'arte prende vita indipendent mente dalla sua forma, senza censure											
• I	Entrambe											
Parte 3. Ti chiediamo di valutare con un punteggio da 1 a 5 in che misura questi elementi sono intensificatori deboli (cioè intensificano, ma non in maniera decisa) o forti (cioè intensificano con forza).												
iper-												
	1	2	3	4	5							
debo	le O	0	\circ	0	0	forte						
uber-												
	1	2	3	4	5							
debo	le O	0	0	0	0	forte						
ultra-												
	1	2	3	4	5							
debo	le O	0	0	0	\circ	forte						
turbo-												
	1	2	3	4	5							
debo	le O	0	0	\circ	\circ	forte						

super-						
	1	2	3	4	5	
debole	0	0	0	0	\circ	forte
mega-						
	1	2	3	4	5	
debole	\circ	\circ	\circ	\circ	\circ	forte
extra-						
	1	2	3	4	5	
debole	\circ	\circ	\circ	\circ	\circ	forte

M. Silvia Micheli
Università di Milano Statale
Dipartimento di Studi letterari, filologici e linguistici
Via Festa del Perdono 7
I–20122, Milano, Italy
maria.micheli@unimi.it

Martina Verdelli
Università di Bergamo
Dipartimento di Lettere, filosofia e comunicazione
Via Pignolo 123
I–24121, Bergamo, Italy
martina.verdelli@unibg.it



This is an open access publication. This work is licensed under a Creative Commons Attribution CC-BY 4.0 license. To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/