

Expressivity and Psycholinguistics

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Abstract. Language is used for a lot more than merely describing the world. We also use it to express emotions, feelings and attitudes. In the last few decades, linguists and philosophers of language have fostered a growing interest in the study of the expressive function of language and, in particular, of negative expressives – i.e., those terms that express the negative attitude of an agent (typically the speaker) towards a target object, individual, group or event. They include different classes of linguistic phenomena, such as: interjections (*Ouch!*), exclamations (*Shit!*), vocatives (*You idiot!*), epithets (*bastard*), slurs (*wop*), adjectives (*fucking*), verbs, suffixes and prosodic features including intonation, timing and stress, etc. Negative expressives are quite special as they exhibit unique semantic, syntactic and grammatical properties that distinguish them from classical descriptive terms. Some of the issues raised by linguistic studies on expressives can only be investigated theoretically, but many others necessarily require an empirical approach. In this regard, the empirical evidence provided in recent years by experiments have provided valuable insights. In this chapter, we offer an overview of these works. What emerges from this heterogeneous review is that philosophical and linguistic investigations on expressivity need to integrate empirical methods with theoretical exploration, in a broad interdisciplinary research project that can shed light on the complex phenomena of social meanings.

1. Introduction

The study of expressivity in language and, in particular, of negative expressives – i.e., those terms that do not (only) describe the world but negatively evaluate it – has received a lot of attention from philosophers and linguists in the past decades (as evidenced by the many entries in this handbook). Researchers have proposed different ways in which expressive meaning can be described, with debates revolving around whether all expressives share the same linguistic properties, what aspects of an expressive's meaning can be said to be part of its semantics, what syntactic properties expressives display, and how such properties can be couched in general theories of language (among many other issues). As a whole, the many questions raised by the study of expressives challenge a naive conception that views language as a neutral tool for describing the world. However, while theoretical approaches can provide tentative answers to these questions, it is ultimately necessary to tackle these issues from different scientific perspectives in order to strengthen the theoretical views and, importantly, in order to test between competing theoretical alternatives.

One such perspective is that of experimental psycholinguistics. Psycholinguistics, as the subfield of linguistics that studies the acquisition, production and comprehension of language, seeks to understand language in cognitive terms, appealing to mental representations and to the mechanisms that operate on said representations. When it comes to understanding language comprehension, contemporary psycholinguistic accounts agree on various things. For example, that it is incremental: language users do not wait until the end of an utterance in order to generate hypotheses regarding its meaning and the meaning of its parts. Instead, comprehenders quickly retrieve information from their mental lexicon and integrate it with expectations generated by context to predict upcoming linguistic information, influencing all stages of utterance comprehension (see reviews by Huettig et al., 2011; Knoeferle, 2019; Tanenhaus & Trueswell, 2006). This results in comprehension being an intricate interplay between prediction (understood as the generation of hypotheses about possible incoming linguistic input) and integration (see Ferreira and Chantavarin, 2018). Further, considering that communication often occurs under severe time pressure (e.g., given turn-taking constrains, see Levinson & Torreira, 2015), this entire process must occur in the blink of an eye.

How does the study of expressives fit into such a view of language comprehension? For starters, it is important to understand the relationship between theoretical descriptions of expressive language and the mental representations that language comprehenders create on the fly: Is there a difference in the mental representation of expressive language relative to descriptive language? What aspects of

expressive meaning do language users automatically retrieve from memory, and what must be constructed inferentially? Are different forms of expressive language processed differently? If so, does this map onto categorical differences postulated by theoreticians? How do the properties of expressive meaning described by theoreticians map onto the online processing of expressives? These are some of the questions that a psycholinguistic approach to the study of expressivity in language can help us elucidate. In this chapter, we offer a brief overview of the works that have approached the study of expressives from a psycholinguistic perspective, with a particular emphasis on how they relate to theoretical questions on the matter.

2. Negative Expressives

2.1 *The expressive function*

Traditionally, language has been viewed as tool we use to describe the world. Language users refer to objects and individuals to predicate properties and produce declarative statements that describe states of affairs. The content expressed by a proposition, according to classical semantics, can thus be described in terms of truth-conditions: understanding the meaning of an uttered sentence amounts to comprehending which fact acts as a truth-maker for the corresponding proposition (Wittgenstein 1921, Tarski 1944, Davidson 1984). Yet, throughout the 20th century, linguists and philosophers of language have stressed the fact that language can fulfill various functions. For example, since the seminal work of Frege (1893), with the concept of “tone”, with Karl Bühler’s language theory (1934), and with Roman Jakobson’s model of communicative functions (1963), many authors have recognized that language also has an expressive function, namely, the capacity to not only describe the world but also to evaluate it. For instance, the expression “Damn!” expresses a sense of astonishment towards someone or something.

In relatively recent times, theoretical linguistics has witnessed a growing interest in the expressive function of language, with a particular focus on *negative expressives*, namely, all those linguistic phenomena that inform the audience about the speaker’s negative attitude towards a particular target, be it an object, an individual, a group or an event (Gutzmann 2019). Negative expressives, in natural languages, can occur at various levels of linguistic analysis. A speaker’s negative attitude can be communicated through prosodic cues, such as the pitch due to emphatic pronunciation of the noun “dog” in (1a). It can be done at a morphological level, seeing that many languages make use of expressive prefixes, infixes, or suffixes (Zwicky and Pullum 1987). For instance, in Italian, this occurs via suffixes like *--accio, -ucolo, -oide* etc., which can impart an expressive value to neutral terms such as *cane > cagn-accio* in (1b) (Scalise 1984). Other languages use similar morphological means, such as Russian (Steriopo 2009), Nepali (Driem 2020), many South-Asian languages (Williams 2021) as well as Bantu, West Atlantic, Walman, Sanskrit, Germanic, Romance, Slavic, and others (Forti 2011). From a syntactic point of view, appositive structures (as well as relative clauses) can sometimes facilitate expressive interpretations. For instance, (1c) might convey irritation towards the dog and to its owner.

- (1) a. The dog is on the couch
- b. The dog (*-accio*)^{EXP SUFFIX} is on the couch
 Il cagn -accio è su- l divano
- c. The dog, your dog, is on the couch

It is however at a lexical level that the widest range of negative expressives can be found. The nominal construction “That idiot” or the vocative “idiot” in (2a) and (2b), for example, are instances of epithets which denote a certain individual and express a negative attitude of the speaker towards them:

- (2) a. That idiot Luca broke the vase
- b. Idiot! Come here

Furthermore, the attributive adjectives in (3a) and (3b) predicate a property and convey a negative attitude of the speaker towards the referent of the nouns “dog” and “thesis” respectively:

- (3) a. Keep your damn dog on a leash
- b. Finish your damn thesis!

Similar considerations apply to verbs such as “to shit”, and “to fuck”, or to adverbs like “stupidly” and “foolishly”.

2.2 Descriptive terms vs expressive terms: Theory and experiments

Though similar on the surface to regular descriptive terms (such as *black, tall, homosexual, Italian*), negative expressives exhibit various properties that set them apart (see Kaplan 1999, Potts 2005, 2007, Macia 2002, Schlenker 2007, Tonhauser et al. 2013). Semanticists have tried to explain what kind of meaning is attached to such words and, although from different perspectives, most classical approaches converge at least on one main claim about the expressive content associated with them. Consider (4):

- (4) That bastard John is late
 - a. John is late
 - b. S has a negative attitude towards John

When a speaker S utters (4), they convey the *descriptive content* (4a) – i.e., the truth-conditional content conveyed by the assertion – but the negative expressive communicates the additional *expressive content* (4b). For that reason, one widely recognized characteristic of expressive content is ‘independency’. In other words, the content (4b) serves as a sort of comment on the main point of the utterance (4a). Hence, according to this view, the expressive content constitutes a separate level of meaning with respect to the descriptive content, that doesn’t play a truth-functional role. For that reason, most expressives function as expletives: if we omit “That bastard” from (4), the truth-conditional content (4a) remains unaltered, but the emotional comment (4b) disappears. Therefore, expressive content is typically considered as a secondary emotive comment of the speaker on what is said, a not-at-issue content that counts as a (quasi)independent speech act with respect to the at-issue content conveyed by the assertion (Frazier, Dillon, and Clifton 2015).

Recently, however, McCready (2010) and Gutzmann (2011) have proposed that certain expressive terms may have a denotation, but they come with additional expressive content evaluating their referent. The idea is based on the old Fregean intuition that certain terms, such as “dog” and “cur”, can have the same sense and reference but differ in terms of coloring or *tone*. According to this view, while classical expressives like interjections or negative adjectives such as “damn” or “fucking” uniquely communicate a perspectival expressive content, some epithets such as “idiot”, “jerk” and “bastard”, as well as slurs like “wop”, function as *mixed-expressives*, that simultaneously convey descriptive and expressive meaning – i.e., they denote an individual (or a group) that is the target of the expressive attitude.

The empirical evidence supports the theoretical distinction between expressive and descriptive terms. First evidence of this comes from the fact that understanding expressives, contrary to descriptive terms, generates a strong emotional response. This is believed to be the case because most expressives are also considered to be taboo words – terms whose use is prohibited and sanctioned by society in many circumstances. As such, when faced with an expressive term, a comprehender becomes aware that some societal norm is being violated. This was investigated by Bowers and Pleydell-Pearce (2011), who looked at the emotional responses elicited by two categories of terms: swear words like “fuck” or “cunt” and neutral terms like “glue” or “drum”. In their experiment, both items were presented as either full words or in a euphemistic version, with the initial letter of the word only – i.e., “f-word”, “c-word”, “g-word”, “d-word” – which were explained to participants to be synonymous of the full words. The experimental task consisted in repeating aloud the words shown on a screen and performing a type of lexical-decision task in which participants decided if the words counted as swear words or not. The researchers measured participants’ electrodermal activity, which tracks variations in the electrical characteristics of the skin due to sweating and is believed to be an index of emotional arousal: The results showed that when swear words were presented in full, it elicited a larger electrodermal response relative to the swear-word euphemisms, with the neutral controls and their euphemisms eliciting the overall smallest reactions. Importantly, the difference in response between the full swear words and their euphemisms was statistically significant, but not that between full neutral terms and their euphemistic counterparts. This suggests that even if participants recognized that every swear word and its euphemism are synonyms (given the similar responses collected in the lexical-decision task), the

emotional response that they elicited was different. According to Bowers and Pleydell-Pearce this different emotional reaction cannot depend on the meaning of the terms. Rather, they hypothesize that taboo words have properties that have to do with their phonological or orthographic realization, namely, the negative emotional response elicited by expressives could be evoked by their phonological realization.

Other experimental studies have also suggested that expressives (in as much as they are taboo words) are processed differently relative to descriptive terms (Jay 2009). For example, it has been shown that it is easier to remember taboo words rather than non-taboo words and that, because of their associated emotional arousal, taboo words are retrieved more easily from memory than non-taboo words are (Anderson and Phelps, 2001, 2002; Anderson, 2005; Kensinger and Corkin, 2004; Sharot and Phelps, 2004). It has been argued that taboo words, and expressives in particular, tend to require more attentional resources than neutral words or compliments because of their offensive nature. Evidence for this claim comes from a lexical-decision task in which participants perform worse with insults than with compliments (Carretié et al 2008). In an EEG experiment, processing expressives resulted in an early positivity (P2) effect relative to processing neutral terms and compliments (Struksma et al. 2022). This effect persisted despite extended repetition. Expressives also elicited slower performances in a Stroop task relative to neutral controls (Siakaluk et al 2011). Furthermore, it has been shown that subjects with aphasia, with Alzheimer’s disease, and with dementia can sometimes retain the ability to curse (Van Lancker and Cummings 1999; Jay 2000; 2009) – for example, Broca’s famous Aphasia patient Leborne was unable to produce language, except for the syllables “tan-tan” and the expression “Sacre nom de dieu! (“Holy name of God!”). Taken together, these findings support the fundamental theoretical claim regarding the differences in meaning between descriptive and expressive terms, and are consistent with the claim that taboo words and non-expressive (descriptive) terms involve different types of mental representations¹.

3. Slurs

3.1 *The semantics of slurs*

Slurs are terms that can be highly offensive, but they differ from other expressives in that they insult and discriminate someone simply because they belong to a minority group. Therefore, the offense is not only directed at the person who is the target of a slur but also at the entire group to which they belong. This peculiarity is reflected in the fact that slurs, unlike other expressives, appear to have neutral counterparts, i.e. expressions that refer to the same target group without conveying any offense (but see Neufeld, 2019, for an essentialist theory of slurs that argues against any identity in the meaning of slurs and their apparent neutral counterparts). For example, slurs like “wop” and “faggot” have corresponding neutral counterparts such as “Italian” and “homosexual”, respectively. Thus, the use of a slur conveys two distinct types of information: a descriptive content, the reference to the target group, and an expressive content, the derogation towards that group. Take for example the utterance (5), which includes the derogatory epithet “wop”. (5) conveys two contents: (5a) expresses the inclusion of an individual into a target group denoted by the epithet and (5b) conveys the expression of a derogatory attitude towards that target group²:

- (5) Filippo is a wop
 - a. Filippo is Italian
 - b. Italians are despicable

The semantic relationship between (5) and (5a)-(5b) has attracted the attention of philosophers of language and linguists. The fundamental questions can be paraphrased as follows: what is the relationship between (5) and (5a)? Do they convey the same truth-conditional content? And is the offensive component conveyed by the slur in (5b) part of the meaning of (5)?

¹ They also require different types of experimental methodologies to be properly investigated. For a discussion, see Spotorno & Bianchi (2015).

² Slurs (as well as generic insults) are present in many languages. Consider the case of derogatory terms targeting Italians only: “Spaghettifresser” in Germany, “macaroni” and “rital” in France, “macaronar” in Romanian, “wog” In Australian English, “Bachicha” in Chilean Spanish (Sulpizio et al. 2024).

One of the characteristics of slurs that has been discussed in the theoretical literature is the *hyper-projectivity* of their denigrating content (Camp 2018: 39), namely, the fact that their derogatory content seems to resist all kinds of semantic embedding – this is the classical projection test, also called P-family test, proposed by Chierchia & McConnell-Ginet (2000). For example, if Camilo utters (5), even without providing any information about Filippo’s geographical origins, he would communicate contempt towards Italian people, and in particular for Filippo, as an Italian. But even if Camilo were to say “Filippo is not a wop”, “Is Filippo a wop?”, “Filippo might be a wop”, “If Filippo is a wop, then I won’t invite him to my party”, etc., the derogatory component – i.e., (5b) – would survive. Interestingly, hyper-projectivity seems to characterize slurs, but not generic insults that do not attack a target group but are instead said of a particular individual. For instance, if Camilo says “Filippo is a jerk”, he certainly conveys a negative attitude towards Filippo which, however, would be absent if Camilo were to say “Filippo is not a jerk”, “Is Filippo a jerk?”, etc.

Various theories in the linguistic and philosophical literature attempt to explain the hyper-projectivity of slurs, by invoking a series of well-known pragmatic phenomena characterized by projection, such as presuppositions (Schlenker 2007, Cepollaro 2015) or conventional implicatures (Potts 2005, 2007), by appealing to other pragmatic phenomena like speech acts (Langton 2012) or by defending the thesis that the derogatory potential of slurs does not depend on their meaning but on social factors (Anderson and Lepore 2013). The central question at the theoretical/experimental interface on slurring terms is therefore when (and why) the derogatory content is activated and in which contexts is it suppressed. Importantly, there is still little experimental research on slurring terms, especially addressing their processing with online measures (Spotorno and Bianchi 2015); yet, free speech analysis (Embrick and Henricks, 2013), corpora-based research (Beaton and Washington, 2014) and classical rating and decision tasks have provided first evidence about the contexts in which speakers use derogatory epithets, with which frequency and about how they consciously react to their use.

3.2 Experimental evidence from indirect reports

A critical property of slurs is therefore that their derogatory content survives when they are embedded under the scope of a different logical, illocutionary or modal operator. What about other sorts of embeddings, like indirect speech, where a speaker reports someone else’s slurring utterance? The theoretical question is whether *verba dicendi*, such as “tells that”, “says that”, “utters that”, “asserts that” block the derogatory content of a slur or if in these cases it still scopes out. For example, when Camilo utters (5) he expresses a bad attitudes towards Italians. What if Ira reports Camilo’s words by saying “Camilo said that Filippo is a wop”? Is the derogatory attitude towards Italians attributed also to Ira, the utterer, or solely to Camilo? Some authors have argued that the slurring content gets blocked (Schlenker 2007), namely, the derogatory attitude is not attributed to the utterer too, others argued that in indirect reports, slurs extend the derogatory attitude to the utterer too – which would explain why slurring terms might count as offensive even when they are simply mentioned (Anderson and Lepore 2013). Yet, if we look at neutral descriptive terms, nothing of the sort seems to happen: if Camilo says “Filippo is a musician” and Ira reports “Camilo said that Filippo is a musician” the belief that Filippo is a musician is attributed to Camilo only. The same applies to presuppositions that get plugged under the scope of verbs of saying, while it is not the case for conventional implicatures, which tend to survive. More generally, different types of meaning behave differently when they occur in indirect speech. As a result, experimental evidence is needed in this debate to understand if and how slurs encode their expressive content.

Cepollaro and colleagues (2019) directly addressed this issue in an experiment investigating the “perceived offensiveness” of slurs, labels (the neutral counterparts), and generic insults in two conditions: direct speech (S: “X is S”) and indirect speech (Z: “S said that X is S”). Participants were asked to indicate on a Likert scale how offensive they found the speaker's reference, ranging from 1 (not offensive at all) to 7 (highly offensive). The results suggest that in indirect speech, the perceived offensiveness of slurs and insults is lower (similarly) relative to direct speech, but it is not entirely absent. The data does not directly speak in favor of a theory or another; yet, these results do challenge the claim that slurs are invariably offensive in all their occurrences, suggesting that *verba dicendi* reduce the perceived offensiveness of slurs, even if they do not completely eliminate it.

3.3 The comprehension of reclaimed slurs

A slur derogates the target because of their group membership. Reclamation or re-appropriation is the phenomenon for which the members of an oppressed group take back control of slurring words used to attack them. As such, they count as a form of non-derogatory, in-group uses of the slurs (Tirrell 1999, Cepollaro & Zeman 2020, Cepollaro & López de Sa 2022, Jeshion 2020). This phenomenon raises many questions at a theoretical level: does reclamation modify the literal meaning of slurs? If so, how? What is the connection between derogation and re-appropriative uses? What conditions must be met to reclaim a slur? Beyond these theoretical issues, the experimental literature has focused on one central issue: does the derogatory content of slurs survive in their in-group occurrences? In other words, do reclaimed slurs continue to convey derogatory contents?

The evidence in this regard is mixed. Some suggest that the mere use of a negatively emotionally charged words can trigger an automatic affective response, independently of the social intention of the speaker (Tomasello 2008, Jay 2009); in fact, offensive words like “bastard” or “slut” seem to evoke the same emotional response regardless of who’s the target of the offense, and how the term is used in a certain social context (Singer et al 2006; Struksma et al. 2022). Furthermore, results from EEG and electrodermal activity experiments suggest that (without actual interaction) the emotionally negative response caused by an insult (compared to a compliment), is not affected by massive repetition and is consistent across time, regardless of who is being evaluated. Yet, other event-related potential experiments have provided evidence suggesting that the context in which an insult is delivered can affect its expressive potential and make its effects even stronger. For example, Otten et al (2016) showed that insults, compared to compliments, elicited more prominent N400 and LPP amplitudes when insults were presented in isolation in an EEG experiment. On the contrary, when insults were received in front of a laughing crowd, the difference in N400 disappeared, while that in LPP (indicating emotional processing) augmented. These results suggest that the effect entailed by the production of a pejorative expressive varies across contexts and, in particular, it involves a stronger and longer emotional response when in the presence of a laughing crowd.

Most of these studies focus on generic insults or negatively charged words and do not include derogatory epithets directly. One notable exception is the work of Galinsky and colleagues (2013), who investigated the appropriation of slurs and, in particular, the relationship between perceived power and self-labeling with a derogatory group term. They first asked participants to indicate a derogatory label used to refer the group they belong to. They then examined the consequences of self-slurring for both the self and observers. The researchers found that self-labelers perceived themselves as more powerful after self-labeling, and observers perceived them and their group as more powerful. Participants were also asked to rate a series of slurring utterances on a Likert scale to express how likely they were to refer to themselves using that utterance. Slurring labels were deemed to be less negative after the self-labeling task, and this reduction of stigma was predicted by their perceived power. Importantly, this effect was observed for slurs only and not for neutral descriptive terms (e.g., *woman*) or majority-group labels (e.g., *straight*). Overall, these results suggest that reclamative uses of slurs partly attenuate the epithets’ derogatory force and favor self-empowerment. This provides first evidence corroborating the hypothesis that re-appropriative uses partly attenuate the discriminatory value of a slur.

The idea that self-labeling reduces the stigma conveyed by a slur is supported by further psychological evidence (Wang et al. 2017). One of the reasons why in-group members use stigmatizing group labels is that the use of self-labels and group identification positively re-enforce each other. Whitson et al. (2017) conducted three rating tasks involving a three-item ‘willingness to self-label’ scale – i.e., a scale that measures how likely a participant is to use a given label to refer to themselves. The researchers found that group identification increased self-labeling with a stigmatizing group label. Moreover, those participants who self-labeled with a slur targeting their group perceived themselves as more identified with said group.

Overall, the few empirical studies on the issue suggest that reclamation can affect the way slurs are perceived, contrasting the spread of stereotypes in a linguistic community and other negative consequences of hate speech on members of both target and non-target groups.

4. Generic expressives

4.1. Properties of generic expressives

Unlike slurs which target individuals and groups in virtue of their belonging to a certain social group, particularistic or generic expressives such as “jerk”, “bastard”, “fucking” or “damn” are expressives that target individuals alone, regardless of any social group (Saka 2007). In the semantic literature, negative expressives have mostly been discussed in their nominal use, that is, when they modify the DP in sentences of the form “That jerk N VP” (Kaplan 1999, Potts 2005, 2007, Sauerland 2007, Schlenker 2007, Tonhauser, et al. 2013, Gutzmann 2015, Hess 2018). For example:

- | | |
|--|------------------------|
| (6) That <i>damn</i> Kaplan was promoted | (Kaplan 1999) |
| (7) That <i>bastard</i> Kresge is famous | (Potts 2007) |
| (8) That <i>damn bastard</i> John | (Sauerland 2007) |
| (9) That <i>bastard</i> Marko stole my horse | (Tonhauser et al 2013) |

Some theories explain the expressive content of these terms by appealing to different semantic and pragmatic distinctions. For example, Potts (2005, 2007) proposes to analyze the expressive contents of these expressions in terms of conventional implicatures, i.e. non-at-issue contents conventionally attached to certain lexical items. In his view, these secondary contents indicate that the speaker feels negatively about the target. They are independent from ordinary descriptive content, they always refer to the utterance situation, and they are evaluated from the perspective of some particular agent, who is typically the speaker. A different but sympathetic proposal has been advanced by Schlenker (2007), who analyzes expressives as triggers of a special kind of presupposition, along the following lines³:

[[That jerk x F]]^c is defined iff the speaker in c has a negative attitude toward x ;
if defined, then [[That jerk x F]]^c = [[x F]]^c

The presupposition triggered by “jerk” is special in that it is indexical and attitudinal. It is attitudinal because it conveys information concerning the attitudes of an agent. It is indexical because the agent in question is the speaker of the context of utterance. An interesting consequence is that such a presupposition is “self-fulfilling”, in the sense that it is accommodated automatically. By uttering the phrase “that jerk”, speakers communicate that they are in the correct state of mind that satisfies the presupposition that they have a negative attitude towards the target.

Most of the accounts of expressives on the market, hence, seem to converge on one main claim: the content associated with expressives is attitudinal and agent-oriented. In other words, the expressive content is perspective-dependent, as it expresses an agent’s attitude, typically, that of the speaker. This means that “In contrast to descriptive predicates, expressive[s] always seem to be evaluate[d] from the perspective of an attitude holder, which seems to default to the speaker but can also be instantiated by another salient attitude host” (Gutzmann 2019: 16). Thus, expressives are taken to communicate how an agent (typically the speaker) feels rather than how a target is.

According to most accounts of expressives, a second claim follows from the speaker-orientedness of the expressive content: the use of expressives imposes no strong contextual felicity constraint. Conventional implicatures, for example, as foreground contents, do not require any backgrounded information. Presuppositions, on the other hand, usually do, but not in this case, since, as explained, they are self-fulfilling. Tonhauser, Beaver, Roberts and Simons (2013) support this hypothesis by analyzing expressives as lexical items associated with projective contents that do not impose what they call a “strong contextual felicity constraint”. That means that using expressives like “damn” or “bastard” do not require that the context set – i.e., the common ground – should entail any information before the utterance time as to whether the speaker or anyone else has a bad attitude towards the target. For Tonhauser et al. (2013), this trait distinguishes expressives from other kinds of items associated with projective contents, such as, for example, a presupposition trigger like the focus particle “too”.

Other semantic properties have been attributed to expressives; for instance: independence, non-displaceability, descriptive ineffability, immediacy, and repeatability (Potts 2005, 2007, Sauerland 2007, Schlenker 2007, Hess 2018). But a particular aspect that characterizes expressives like negative expressive adjectives, which seems to support their speaker-orientedness, is their attachment flexibility:

³ Macià (2002) also defends a presuppositional view, according to which the expressive presupposition is either entailed by the context, or needs to be accommodated.

expressive adjectives admit non-local interpretations that are disjointed from the adjective's morpho-syntactic realization (Gutzmann, 2019). Consider for example (10):

- (10) The fucking cat is on the table
- a. The dog is on the fucking table
 - b. The cat is on the table
 - c. S has a negative attitude towards the cat being on the couch

The interpretation (10c) of (10) can also be obtained when “fucking” occurs in prenominal position with respect to “table”, as in (10a). Critically, this is not the case for any other adjective type, including evaluative adjectives. In fact, if one replaces “fucking” with “beautiful” or “black” in (10) and (10a), the non-local reading (10c) is no more derivable.

4.2 The nature of expressive content

The properties that expressives do and do not display are at the center of a debate on the cognitive nature of expressive meaning. Frazier et al. (2015) argue that the link between an assertion and its expressive content is derived via a pragmatic inference. According to their “speech act hypothesis” an expressive like *fucking* represents a distinct speech-act with respect to the assertion of the at-issue content. Gutzmann (2019), on the contrary, rejects this view and argues that the argument extension which generates the nonlocal reading is possible only in certain syntactic environments.

To test between accounts and gain a richer understanding of the cognitive mechanisms responsible for deriving expressive meaning, experimental evidence is needed. Two questions in particular are of interest: first, what does expressive content consist of? Is expressive content invariably speaker-oriented and context-independent? Second, how and when does the hearer understand that the expressive adjective conveys the speaker's negative attitude?

The idea that the expressive content of generic expressives is invariably speaker-oriented has been recently questioned in a series of experimental studies. Harris and Potts (2009), for example, tested the observation made by Amaral et al. (2007), contra Potts (2005), that expressives do not always reflect the speaker's perspective. In Harris and Potts (2009) participants were presented two-sentences: the first one was manipulated to generate four conditions, while the target sentence contained a negative epithet in a definite description. Here is a sample item:

Suppose you and I are talking and I say:

- A. My classmate Sheila said that her history professor gave her a low grade.
- B. My classmate Sheila said that her history professor gave her a really low grade.
- C. My classmate Sheila said that her history professor gave her a high grade.
- D. My classmate Sheila said that her history professor gave her a really high grade.

Target sentence: The jerk always favors long papers.

Participants had to answer to the following question task “Whose view is it that the professor is a jerk?” and they could opt between different options: “Mine (*Speaker*); Sheila's (*Subject*); Mine and Sheila's (*Speaker-and-Subject*)” Harris and Potts found that the Speaker choice was preferred across conditions; it was highly preferred (88%) in conditions C and D, while in conditions B and C, it reached 54%, against 17% Subject responses and 29% Speaker-and-Subject responses. On the basis of these results, they noted that “non-speaker-oriented readings are possible for expressives, if the right contextual factors are present” and that “such readings do not require syntactic embedding” (Harris & Potts 2009, p. 20). Subsequent experimental studies in Kaiser (2015) replicated some of these findings, but also introduced a new task, in which participants were asked to resolve a potentially ambiguous pronoun. Kaiser compared two conditions, only one of which included an expressive. Here is a sample item:

- A. Arthur hollered at Eric at the restaurant. He didn't care about using foul language in a room full of people.
- B. Arthur hollered at Eric at the restaurant. That ignorant jerk; he didn't care about using foul language in a room full of people.

Participants were then asked “Who didn't care about using foul language?” and were given a 6-point scale ranging from “Definitely Arthur” (subject) to “Definitely Eric” (object). Kaiser found that while in the A condition the pronoun was, as expected, ambiguous, in the B condition, “participants [were] more likely to interpret the pronoun as referring to the preceding object (a sign of them having shifted

to the perspective of the preceding subject)” (Kaiser 2015:365). Consequently, this study provides further evidence that the content of expressives like “jerk” does not always reflect the speaker’s attitudes, but sometimes reflects those of some salient agent.

Importantly, both Harris and Potts (2009) and Kaiser (2015) only challenge the assumption of speaker-orientedness, or what Gutzmann (2019) calls “speaker linking” – which was endorsed by Potts (2005), Schlenker (2007) and Tonhauser et al. (2013) – but not the deeper assumption of agent-orientedness. That is to say, in the alternative interpretations of expressives that their studies bring to light, the content of expressives is still attitudinal and agent-oriented: it reflects the negative attitudes of an agent toward the target of the expressive, even though the agent is different from the speaker.

Together with speaker-orientedness, the idea that expressives are contextual independent has also been recently challenged on empirical grounds. Cepollaro, Domaneschi and Stojanovic (2020), for example, investigated whether the Italian expressive “stronzo” (equivalent to the English “jerk”) imposes a strong contextual felicity constraint. For that purpose, they asked participants to rate various sentences for acceptability on a 1-to-5 points Likert scale. The first point of comparison was between the expressive “stronzo” vs. non-expressive controls, such as Lombardian or veterinarian. The second point of comparison was between nominal uses (viz. “quello stronzo/quel lombardo di Marco”; “that jerk/Lombardian Marco”) and predicative uses (viz. “Marco è stronzo/lombardo”; “Marco is a jerk/Lombardian”). The third point of comparison was between supporting and neutral contexts; that is to say, contexts that entail the content associated with the expression under consideration (e.g., it is part of the context that the target is a jerk, or Lombardian) and those that do not. What they found was that the acceptability ratings for expressives were much lower in neutral than in supporting contexts, to a greater extent than non-expressive terms. This difference in acceptability was particularly striking for referentially used expressives, but also quite significant for predicative uses, too. This led them to conclude that contrary to Claim 2, felicitous uses of negative expressives do impose certain contextual constraints.

Bross (2021) investigated the syntactic flexibility of negative expressive adjectives occurring in sentences where they modify the DP, such as “The dog ate the damn cake”. The expressive content of these sentences can have different readings: a local interpretation, where the complement that the head projects on is internal to the syntactic constituent (i.e., “S has a negative attitude towards the cake”), an “argument hopping” (i.e., “S has a negative attitude towards the dog”), a non-local interpretation at the sentence-level (i.e., “S has a negative attitude towards the fact that the dog ate the cake”) and a matrix-clause interpretation (“Peter said that the dog ate the cake”) when a negative expressive adjective appears in an embedded clause such as “Peter said that the dog ate the damn cake”. Participants were presented with context-sentence pairs in German and were asked whether they would consider these interpretations of the target sentence to be acceptable or not in a specific context. Although the results show a lot of variation, data collected suggest that argument hopping is available in about 50% of the cases, while the sentence-level extension was possible in approximately 60% of the cases and argument hopping into a matrix clause in approximately 30% of the cases. This partly speak in favor of a pragmatic account à la Frazier et al. (2015) for which, in principle, all these readings exist and partly speak against the syntactic account. According to Gutzmann (2019), in fact, predicts that expressive adjectives in root clauses including positively evaluating adverbs (such as “fortunately”) only allow a local interpretation, and argument hopping is not possible. Moreover, this syntactic account predicts that an expressive adjective in an embedded clause cannot be used to express a negative evaluation towards a referent or a proposition expressed in the matrix clause. Hence, the syntactic constraints proposed by the syntactic view do not seem to drive the interpretation of expressive adjectives.

Overall, these works suggest that expressive content might not be as stable across uses as it is commonly assumed. Thus, well-known properties such as speaker-orientedness, contextual independence and projectivity do not invariably characterize negative expressives but rather depend on syntactic, semantic and pragmatic factors. However, the above-mentioned studies deal with comprehenders’ overt intuitions as captured by rating and acceptability studies, providing only indirect evidence of how expressives are mentally represented during comprehension. To better understand how independency, speaker orientedness, attachment flexibility and other properties of expressives impact the mental representations generated when comprehending expressives, we must turn to evidence from psycholinguistic experiments on processing.

To this effect, Donahoo et al (2022) investigate the processing of the attachment properties of negative expressives. In a EEG experiment, they explored the ERP components elicited by descriptive adjectives in nominal constructions like the “black dog”, compared to nominal constructions with expressive adjectives (e.g., “damn dog”) and pseudowords (e.g., “flerg dog”). They found that, when expressives are combined with a noun, they elicit a different event-related potential response relative to descriptive adjectives, but a similar response relative to nonsense adjectives. In particular, they observed a biphasic N400/P600 pattern that was more prominent for descriptive adjectives than for expressive adjectives and pseudowords, indicating that when listeners hear “black dog” they immediately integrate the meaning of the adjective into the noun meaning and derive a conceptual representation for black dogs. Conversely, when they hear “damn dog” or “flerg dog” they stop processing and see what referent the adjective might apply to, so they don’t immediately attach the morphological properties of the adjective to the noun. This proposed “wait and see” strategy suggests that during processing of expressives syntactic attachment is delayed or suspended. Although Donahoo and collaborators did not investigate expressives with different syntactic realizations, this can be seen as preliminary evidence for the nonlocality of the interpretation of expressives.

The problem of understanding what it means for expressive adjectives to be speaker-oriented and syntactically flexible in on-line language processing was addressed directly by Ronderos and Domaneschi (2023). In particular, they addressed two questions: first, is it effortful for comprehenders to derive the speaker’s negative attitude conveyed by an expressive adjective, or is it a rapid, automatic process? Second, do hearers understand the speaker’s attitude regardless of the expressive’s syntactic position? Importantly, they conducted their experiment on Italian, which (contrary to, e.g., English) is a language that typically requires the adjective to carry an explicit morphological marker indicating an agreement in gender and number between an adjective and the noun that it refers to (e.g., in “il maledetto cane”, which stands for “the damn dog”, the suffix *-o* in *maledett-o* agrees in gender and number with the masculine singular noun *cane*). In an eye-tracking study using a visual-word paradigm, they showed that expressive content is rapidly integrated with information about the speaker’s attitude, resulting in the anticipation of an upcoming referent regardless of the expressive’s syntactic realization. They interpret these results as providing empirical support for the claims in the theoretical literature regarding speaker-orientedness and syntactic flexibility: Only when participants had information regarding a speaker’s attitude were they able to predict the correct discourse referent, and this occurred regardless of an expressive’s syntactic position (and even if the expressive had a morphological marker that disagreed with the pragmatically intended target referent). The authors propose that comprehenders use expressives as ostensive cues that allow for automatic retrieval of the speaker’s negative attitude during on-line language comprehension.

5. Open issues

The studies reviewed in this chapter illustrate the growing interest in experimentally testing theories of expressive language use. Beyond evaluating existing theoretical claims, these studies also open new questions regarding the mental representations of expressive terms. One such example is the relationship between expressive terms and their taboo component. As discussed in section 2.2, expressive terms are often also terms that are considered to be socially inappropriate (and thus generate a ‘taboo effect’), which can account for the emotional response that comprehenders exhibit when hearing them. However, is an emotional response solely caused by the taboo component, or is expressive content in itself (i.e., the recognition of a speaker’s negative attitude) also responsible for the comprehender’s emotional reaction? Further, would such an emotional response signal that the comprehender recognizes that a socially prohibited word is being used? Or is it the case that they themselves consider the use of such a word to be inappropriate? Further studies should more closely examine how the taboo component and expressive status of a term interact in order to better understand how they are mentally represented.

One potential way of teasing apart these components would be to turn to one of the other pillars of psycholinguistics (that have mostly been sidelined in this review), namely language acquisition. Work in developmental pragmatics has shown that 2-year-olds can track a speaker’s knowledge state when understanding referential expressions (Moll and Tomasello, 2006). By the age of five, children also display rapid sensitivity to their conversational partner’s perspective during language processing (Nadig & Sedivy, 2002). These findings (together with many other showing children’s early pragmatic

abilities; see Falkum, 2019 for an overview) would suggest that young children should be able to understand expressive meaning, in as much as they are attuned to monitoring a speaker's beliefs and intentions (and should thus also be able to track a speaker's attitudes). But what about children's sensitivity to the societal norms that elicit a taboo effect? Preschool children show an understanding of the normative character of conventional games (Rakoczy et al., 2008) and even create and follow their own arbitrary social norms by the age of five (Göckeritz et al., 2014). They also enforce societal norms themselves and likely view them as something that need be obeyed by all (Rakoczy and Schmidt, 2013; Schmidt and Tomasello, 2012). However, this might mainly apply to social conventions and norms of coordination in the context of playing a game, and not to general moral norms (Göckeritz et al., 2014), which are the ones that would give rise to a taboo effect. Investigating children's sensitivity to moral norms and their comprehension of expressive meaning might therefore shed light both on how a taboo effect emerges during development, as well as how taboo and expressive components of meaning relate to one another.

One important open issue that requires attention is the role of the social context during comprehension of expressive language. As mentioned in section 3.3, there is mixed evidence regarding what role the intention of a speaker plays during the comprehension of insults: While some claim that insults elicit similar emotional responses regardless of a speaker's intention (Tomasello 2008, Jay 2009), one study found that the social context (i.e., whether an insult was said in isolation or accompanied by a laughing crowd) modulates comprehension of insults, so that perceiving a laughing crowd elicited stronger emotional responses (Otten et al., 2016). Considering how most of the studies presented here examined the comprehension of expressives in the absence of a social context, it remains to be seen how such a context would impact existing findings, specifically with regard to how they relate to theoretical accounts. For example, is the speaker-orientedness of an expressive perceived differently when the participant in an experiment is also the recipient of the expressive utterance? How would this change if the participant were not alone, but instead heard an expressive term in the presence of other participants? Considering how the use of expressive language is a social phenomenon, future studies should take into account the social context in which participants are exposed to expressive language when designing their experiments.

6. Conclusions

In summary, experimental psycholinguistics has provided researchers with the tools to test theoretical accounts of expressive language comprehension. The most prominent set of findings in this regard suggests that expressive content is most likely represented differently in the mind relative to descriptive content. This offers support to contemporary theoretical accounts that posit a different dimension of meaning for expressive content. The understanding of this dimension of meaning is highly sensitive to how comprehenders perceive the world around them: Differences in processing slurs, for example, appear as a function of what the comprehender believes the intentions of the speaker to be, as well as whether slurs are understood in isolation or in the context of social co-presence (in the form of a laughing audience, as shown by Otten et al., 2016). Further, the processing of negative expressive adjectives is highly sensitive to how comprehenders represent the mental states of the speaker, with eye-tracking evidence pointing to the rapid retrieval of a speaker's attitudes when comprehending negative expressive adjectives (Ronderos & Domaneschi, 2023). Taken together, these findings make it clear that future psycholinguistic work on expressive meaning must consider the social context in which speakers and comprehenders are embedded. Such studies could help constrain existing theoretical accounts (by establishing when and how social parameters steer processing, for example). Importantly, they can also provide empirical basis for further theorizing about the nature of expressive meaning and how it is shaped by interaction, participant roles, and the relationship between speaker and addressee.

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