



Francis, Naomi & Grosz, Patrick Georg & Patel-Grosz, Pritty. 2023. THROW. *Glossa: a journal of general linguistics* 8(1), pp. 1–33. DOI: <https://doi.org/10.16995/glossa.8455>



Open Library of Humanities

THROW

Naomi Francis, Leibniz-Zentrum Allgemeine Sprachwissenschaft, DE, francis@leibniz-zas.de

Patrick Georg Grosz, University of Oslo, NO, p.g.grosz@iln.uio.no

Pritty Patel-Grosz, University of Oslo, NO, pritty.patel-grosz@iln.uio.no

This paper provides a detailed description of the distribution of an utterance-accompanying or utterance-replacing *throwing away* gesture (see Bresse & Müller 2014; 2017), THROW, and proposes a formal analysis of its contribution. We argue that this gesture conveys dismissal, which we model as the marking of the question addressed by a preceding discourse move as unimportant. This work extends the growing body of linguistic work on formal gesture semantics to discourse-management gestures; moreover, we find that the dismissal meaning encoded by THROW is unlike other discourse-management operators in being unable to operate on propositional content that it accompanies.

Glossa: a journal of general linguistics is a peer-reviewed open access journal published by the Open Library of Humanities. © 2023 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

OPEN ACCESS



1 Introduction

This paper investigates the semantic contribution of the *throwing away* gesture, henceforth THROW. This gesture consists of a single downward flap of a raised hand at the wrist, as illustrated in **Figure 1**.¹ Within the extensive descriptive literature on pragmatic/interactive gestures (see, e.g., Bavelas et al. 1992; Kendon 2004; Abner et al. 2015; Müller 2017; Wehling 2017), THROW has been discussed, in particular, in recent work by Bressem and Müller (2014; 2017) and Tessendorf (2016). The aim of our paper is to contribute a formal semantic analysis to the body of knowledge on THROW, situated in the newly emerging tradition of formal gesture semantics (Lascarides & Stone 2009a; b; Ebert & Ebert 2014; Schlenker 2018a; b; Esipova 2019).



Figure 1: THROW

Existing work on THROW has been limited to descriptions of its intuitive effect; Bressem and Müller (2014; 2017) describe THROW as a negative assessment marker belonging to a family of gestures that metaphorically clear unwanted (discourse) objects from the gesturer’s environment. In this paper, we put the distribution and contribution of THROW under the microscope, focusing on uses of THROW that accompany or replace an entire utterance.² We argue that THROW encodes dismissal, as opposed to other kinds of negative assessment (e.g., denial, disgust, disapproval). A concrete example is given in (1), where underlining indicates the approximate temporal alignment of the subscripted gesture; dotted (e.g., tomorrow) underlining marks the preparatory phase, where the hand is raised from its rest position, and regular underlining (e.g., Sunday) signifies the stroke, where the hand is lowered. By virtue of the THROW gesture, (1B)

¹ Because THROW is a manual gesture, it can in principle combine with a variety of facial gestures. To isolate THROW’s contribution, we attempted to focus our investigation on cases where this gesture is accompanied by a (relatively) neutral facial expression, similar to the example at this URL (last accessed on 27 December 2021): <https://giphy.com/gifs/latenightseth-seth-meyers-late-night-lnsM-H3arX25535xQ6ETguW>. Depending on the context, this may not always be achievable; see also footnote 20 on uses of THROW that are accompanied by a smile.

² See Bressem & Müller (2017: 5) for a possibly different use of the throwing away gesture co-occurring with phrases below the clause level; they argue that, for example, a use of THROW accompanying the numeral phrase *two years* signals that the exact duration spelled out by the accompanying speech is irrelevant. It should be noted, however, that they do not provide the preceding discourse context for this example, so it is not clear that this case could not be captured under our analysis.

dismisses A's statement (or, as we will argue, the question addressed by A's statement, as spelled out in (1B-ii)). In doing so, THROW intuitively has a very similar pragmatic function to spoken language discourse markers such as *who cares*, *whatever*, *so what* or *pah*, as illustrated in (2B), to which we return in Section 4.³

- (1) A: It's getting late.
 B: Tomorrow is Sunday_{THROW}
 i. B's speech asserts: *tomorrow is Sunday*
 ii. B's THROW conveys: *it is unimportant whether or not it's getting late*
- (2) A: It's getting late.
 B: Who cares/Whatever/So what/Pah, tomorrow is Sunday!

The restricted flavour of THROW's contribution is illustrated by the contrast in (3): THROW is compatible with the speaker's dismissal of A's worry in (3B₁) but incompatible with the affirmation of that worry in (3B₂), even if the speaker of (3B₂) is taken to be expressing disapproval or disgust at A's behaviour. Note that the use of THROW in (3B₁) does not deny that A forgot to pay their bill.

- (3) A: Ack! I think I forgot to pay my credit card bill.
 B₁: It'll be fine_{THROW}
 B₂: That's not good_{#THROW}

We propose that THROW has a discourse-managing function; it specifies how a discourse participant relates to the content of the discourse, like a wide range of expressions such as VERUM operators (e.g., Ladd 1981; Buring & Gunlogson 2000; Romero & Han 2004; Romero 2006; Krifka 2017), discourse particles (e.g., German *doch*, *ja*; see Zimmermann 2011; Gutzmann 2013; 2015; Repp 2013; Grosz 2020), commitment-related intonational contours (e.g., Gunlogson 2003; Malamud & Stephenson 2015; Rudin 2018; J. Heim 2019), confirmationals like *eh* and *huh* (e.g., Wiltschko & Heim 2016; Wiltschko 2021), and emotive markers (e.g., *alas*, *fortunately*; see, e.g., Rett 2021; for earlier research on interjections such as *alas*, see Ameka 1992; Norrick 2009; Goddard 2014; Riemer 2014; Sauter 2014; on evaluative adverbs such as *fortunately*, see Ernst 2007; 2009; Liu 2012).

The goal of this paper is twofold. Its theoretical goal is to propose a first concrete and precise formal semantic analysis of the THROW gesture. The empirical goal is to provide a

³ An anonymous reviewer raises the question of whether THROW is an *emblem* (defined, e.g., by Abner et al. 2015: 442 as “‘frozen’ gestural forms that have conventional meanings”). For the purposes of our paper, the question of whether THROW is an emblem or not is inconsequential in that we would, for instance, expect an analysis of *pah* in (2) to be very similar in its nature to the analysis that we propose for THROW, even though *pah* is clearly a conventionalized expression of the English language, with the first occurrence in the Oxford English Dictionary traced back to 1592. See <https://www.oed.com/view/Entry/136033> (accessed 12 June 2022).

detailed description of THROW's distribution and its contribution in discourse which includes negative evidence (i.e., data about where THROW *cannot* be used, or what it *cannot* mean) in addition to positive evidence (i.e., data about where THROW *can* be used, and what meanings *are* compatible with it). While positive evidence has already been adduced from corpora in the existing literature, this paper makes an important contribution to a complete picture of THROW. Our aim is for our semantic analysis and empirical description to be precise enough that they can be used to generate testable hypotheses that are relevant to linguistic theory, and which can be evaluated in future experimental studies.

In line with Schlenker (2018b) and related work, we assume that (i) language users have introspective intuitions about the use of utterance-accompanying gestures,⁴ and (ii) the exploration of carefully constructed examples is a valuable part of the process of generating hypotheses. Such constructed examples and introspective data supplement meticulous corpus work, which has revealed the presence of a THROW gesture in a range of languages including French (Calbris 2011), German (Bressem & Müller 2017), Indonesian (Siahaan 2021), and Polish Sign Language (PJM), German Sign Language (DGS), and Russian Sign Language (RZY) (Kuder 2022). All of our examples, unless otherwise indicated, are constructed, and the reported judgements reflect intuitions from at least four speakers of English; we only included examples where the intuitions were clear and unanimous, and we did not include borderline cases. As far as we can tell, the core intuitions on the semantics of THROW that we report are stable across the speakers of British English, North American English and German who were consulted; this observation does not preclude, of course, that the gesture is used differently in other languages, and that there are nuances in its use that vary even within a given language community or cultural group.⁵

This paper is organized as follows: Section 2 lays out our proposed semantics for THROW and applies it to a range of representative examples; Section 3 illustrates the merits of the proposal by extending it to a variety of case studies that go beyond the initial set of examples; Section 4 addresses similarities and differences between THROW and elements of spoken language; Section 5 discusses consequences of our proposal for theories of speech-accompanying gesture and discourse-managing meanings.

⁴ Gestures are in this respect parallel to language; see Sprouse and Almeida (2012; 2013), Sprouse et al. (2013), and Chen et al. (2020) for validation of introspective data in linguistics.

⁵ In this connection, it is worth pointing out that the anonymous reviewers also largely agreed with the central judgements in the manuscript, but reported divergent judgments in some individual cases. For an illustration of the type of divergent judgments that the reviewers reported, a reader may consider examples (11) and (12) in Section 2.3. While we report identical inferences from THROW in both (11) and (12), one reviewer notes that (11) expresses a more general dismissal for them, whereas (12) expresses a more specific dismissal. A different reviewer reports difficulties with the interpretation of examples (15)–(17), (26B₂), and (40). For the sake of systematicity, we are only considering the judgements we elicited with the methodology that we established.

2 Proposal

2.1 Cashing out dismissal

We analyze THROW as an operator that communicates discourse-managing intentions of the person gesturing, in the spirit of Romero & Han (2004), Farkas & Bruce (2010), and Repp (2013), among many others. We also draw on Rett’s (2021) approach to emotive markers (e.g., *alas*, *unfortunately*); like these markers, THROW signals an agent’s evaluative attitude towards something in the discourse.⁶ However, we do not claim that THROW is necessarily emotive. We rather assume a notion of evaluativity in the spirit of, e.g., Ernst (2009: 512), where evaluatives include emotive expressions such as *unfortunately* and *amazingly* as well as less clearly emotive expressions such as *mysteriously*, *conveniently*, or *appropriately* – and see Degaetano-Ortlieb (2015) on a discussion of *importantly* and *notably* in the context of evaluativity.

Our proposal is that THROW signals a negative evaluation that amounts to dismissal. At its core, we take dismissal to consist of marking something as unimportant. There are in principle several ways of thinking about unimportance in discourse – for example, in terms of low expected utility (e.g. van Rooy 2003; 2004; Bergen et al. 2016; see Daniels 2019), or irrelevance to conversational goals, among other possibilities. Here, we will treat unimportance as a primitive.

2.2 Formal rendition of the analysis

We propose that the use of THROW is governed by the discourse conditions in (4). Note that the utterance u_n hosting THROW can be devoid of accompanying speech (which we write as \dots_{THROW}), i.e., THROW has a speech-replacing (or *pro-speech*) use, as well as a speech-accompanying (*co-speech*) use, using the terminology introduced in Schlenker (2018a; b).

(4) **Discourse conditions for utterance u_n containing THROW:**

- (i) a preceding utterance u_k addresses a question Q
- (ii) u_n ’s author considers the question Q unimportant

The analysis in (4) has two core components: a target question (Q) that THROW retrieves from the preceding discourse context, (4-i), and the attitude that THROW communicates regarding this target question, (4-ii). This question-based approach builds on the well-established view that utterances by and large (and, in particular, declarative utterances) evoke alternatives that amount to a question that is being answered (see, e.g., Roberts 2012; Büring 2003; Beaver & Clark 2008: 37).⁷ We remain agnostic as to whether the unimportance evaluation in (4-ii) is

⁶ We do not aim to engage with the question of whether emotions are evaluative, but rather assume that the expression of an emotion or emotive attitude towards x entails some sort of evaluation of x . We refer a reader who is interested in this question to J. M. Müller (2017) and the literature cited therein.

⁷ We do not implement our analysis in terms of Questions Under Discussion (QUDs), but such an implementation would be compatible with our approach; see, e.g., Roberts (2012), Beaver et al. (2017).

limited to the author, or whether the author conveys that people in general would consider this question unimportant – an issue that also arises for predicates of personal taste such as *tasty* or *fun* (see Lasersohn 2005; Stephenson 2007; Pearson 2013).

We will discuss both of the components in (4-i) and (4-ii) in turn, in Sections 2.3 and 2.4, respectively. Before doing so, we wish to highlight an important distinction between an utterance u_k that provides the target question Q vs. an accompanying utterance u_a , which combines with THROW to yield u_n (i.e., $u_n = u_a + \text{THROW}$), illustrated in (5B₁/5B₂). When THROW occurs on its own, as in (6B), $u_n = \text{THROW}$.

- (5) A: It's getting late. $u_k = \text{it's getting late}$
 $\leadsto Q = \llbracket \text{whether it is getting late} \rrbracket = \{\text{it is getting late, it is not getting late}\}$
 B₁: Tomorrow is Sunday_{THROW} $u_a = \text{tomorrow is Sunday}$
 B₂: It's only 3am_{THROW} $u_a = \text{it's only 3 am}$
- (6) A: It's getting late. $u_k = \text{it's getting late}$
 $\leadsto Q = \llbracket \text{whether it is getting late} \rrbracket = \{\text{it is getting late, it is not getting late}\}$
 B: ..._{THROW} $u_a = \emptyset$

The only utterance that is relevant for whether the discourse conditions in (4) are fulfilled is the preceding u_k utterance, which we focus on in Sections 2.3–2.5. The absence of the accompanying u_a utterance from (4) is by design; as we will see in Section 2.6, u_a makes its discourse contribution independently from THROW, with the main restriction that the discourse contribution of u_a cannot be at odds with the dismissal that THROW communicates, as we saw in example (3).

It is worth pointing out that a *co-speech* realization of THROW, where the gesture is synchronous with the accompanying utterance, can be hard to distinguish from a *pro-speech* (or *pre-speech*) realization where THROW precedes the accompanying utterance. These realizations are most easily distinguished in examples where the accompanying speech has a prosodic peak near the end of the sentence, as in (7). Here, a pro-speech THROW will be realized before *I*, as indicated in (7B₁), whereas the stroke of a co-speech THROW will be aligned with the word containing the nuclear accent, *baNAnas*, as in (7B₂) (see, e.g., Ebert et al. 2011). The two realizations appear to have identical effects in (7B₁–B₂).

- (7) A: I'm sorry there was nothing for dinner.
 B₁: ..._{THROW} I ate baNAnas
 B₂: I ate baNAnas_{THROW}

Going forward, when we probe for the semantic contribution of THROW, the most conservative approach is to look at THROW without an accompanying utterance, as the presence of an accompanying utterance will often trigger additional inferences. For instance, in (5B₁), we infer

that B's dismissal is justified by the accompanying assertion that *tomorrow is Sunday*, which suggests that it does not matter if it gets late on a Saturday night. By contrast, in (5B₂), we infer that B's dismissal is justified by the accompanying assertion that *it's only 3am*, which suggests that 3am does not count as late. These inferences are not contributed by THROW, nor does THROW operate on them in any meaningful way. They simply coalesce with the THROW contribution in the pragmatics. The inclusion of an accompanying u_a utterance thus introduces a confound into an investigation of THROW proper. In Sections 2.3 and 2.5, we only consider uses of THROW without an accompanying utterance; in Section 2.4, we revisit predictions on the u_k - u_a interplay, and we return to u_a in Section 2.6.

2.3 The target of THROW

We began with the informal intuition that THROW comments on something that has been said in the preceding discourse. There are in principle several ways to cash out this idea formally: we could say that THROW targets i) a proposition, ii) a question, or iii) a speech act. In (4), we have chosen option (ii), for the following reasons.

2.3.1 Comparing a question-based approach to a proposition-based approach

One reason to model THROW as commenting on a question (Q) rather than a proposition (p) is that THROW is not restricted to contexts where the previous discourse move was a (proposition-denoting) declarative, or makes a unique proposition salient; it can equally well respond to interrogatives denoting non-biased questions (i.e., sets of propositions). Taking THROW to evaluate the question addressed by a preceding utterance allows us to capture both kinds of cases in a uniform way. To see this, consider the following two contexts, (8) and (9), in which Q amounts to a polar question (*p-or-not-p*). If u_k is a declarative with unmarked sentential stress, as in (8A₁/8A₂), its at-issue content is one of the two congruent answers to $\{p, \neg p\}$, as indicated in (8B); if u_k is a polar question, as in (9A), it directly supplies $\{p, \neg p\}$, as indicated in (9B). In (8) and (9), u_k is the utterance that immediately precedes the THROW utterance, but we will also see examples where this is not the case (specifically, example (30) in Section 2.6).

- (8) A₁: Sam isn't coming to the party.
 A₂: Sam is coming to the party.
 B: \dots_{THROW} (\leadsto whether or not Sam is coming is unimportant)
- (9) A: Is Sam coming to the party tonight?
 B: \dots_{THROW} (\leadsto whether or not Sam is coming is unimportant)

By commenting on the question $\{p, \neg p\}$ addressed by a declarative u_k , as in (8), THROW indirectly comments on the proposition p contributed by u_k . We make the following plausible assumption:

If a question is unimportant, it follows that each of the answers it contains is also unimportant.⁸ This is why, when the preceding utterance is a declarative, THROW is often felt to be dismissing the proposition that the declarative expresses rather than the issue it addresses. We apply this reasoning to (8) as follows: both in response to (8A₁) and in response to (8A₂), B communicates (via THROW) that it is unimportant *whether or not A is coming*. B thereby implies that it is unimportant *that A is not coming* when responding to (8A₁), and that it is unimportant *that A is coming* when responding to (8A₂). The same reasoning applies to all examples in which THROW seems to directly dismiss a proposition.

A question-based approach is corroborated further by the observation that not just any proposition p that arises in the discourse can be dismissed by THROW in this indirect way. If u_k is a declarative, we correctly predict that p must be the at-issue content of u_k rather than, say, implicated or presupposed, since it is the at-issue content of declaratives that is generally taken to answer an implicit question (see, e.g., Beaver et al. 2017). This restriction is supported by discourses like (10), where A's utterance plausibly makes salient (at least) the three propositions in p_1 - p_3 ; we observe that B's use of THROW can only be understood as dismissing the entailed proposition (p_1) by communicating that $\{p_1, \neg p_1\}$ is unimportant; it cannot be understood as dismissing p_2 or p_3 . While this generalization would need to be stipulated under a proposition-targeting account, where p_2 or p_3 should also be accessible, it falls out for free on the view that THROW targets the question addressed by a preceding utterance.

- (10) A: I saw a cat under C's car yesterday.
 $p_1 = A \text{ saw a cat under C's car yesterday.}$ (entailment)
 $p_2 = A \text{ did not see more than one cat under C's car yesterday}$ (implicature)
 $p_3 = C \text{ has a car.}$ (presupposition)
- B: \neg_{THROW} \leadsto B dismisses p_1
 \nrightarrow B dismisses p_2
 \nrightarrow B dismisses p_3

Our analysis predicts that THROW should also be acceptable in response to *wh*-questions, as confirmed by (11); similarly, when THROW is used in response to a declarative with narrow focus, illustrated in (12), then the relevant Q can be retrieved by virtue of question-answer congruence (cf. Beaver & Clark's 2008: 37 *Focus Principle*). This is in line with the general assumption that the set of alternatives denoted by a question, (11A), and the set of alternatives made salient by a possible answer to that question, (12A), are identical and generated by substituting other

⁸ Readers who are skeptical about the idea that an unimportant question implies that each answer is also unimportant may wish to consider examples such as the corpus example (i). As far as we can tell, either of the (constructed) continuations in (ii) would give rise to a contradiction, and hence infelicity, in line with our assumption.

- (i) The question of whether alien life exists is unimportant. (COCA, WEB 2012)
(ii) #... but if alien life {does/doesn't} exist, then that is important!

elements of the same type for the *wh*-element (*who*) or focus constituent (Sam_f), respectively (see, e.g., Rooth 1992). Therefore, the relevant alternatives for both (11A) and (12A) amount to {Sam told Mel about the party, Alex told Mel about the party, Ming told Mel about the party, ...}.

- (11) A: Who told Mel about the party?
 B: \dots_{THROW} (\leadsto it is unimportant who told Mel about the party
 \approx ‘who cares’, ‘it doesn’t matter’, ...)
- (12) A: $[SAM]_f$ told Mel about the party!
 B: \dots_{THROW} (\leadsto it is unimportant who told Mel about the party
 \approx ‘who cares’, ‘that doesn’t matter’, ...)⁹

The ability to occur in response to *wh*-questions sets THROW apart from emotive markers that do in fact target propositions; such emotive markers can only comment on questions that make a unique proposition salient (Rett 2021: 317). The lack of such a requirement for THROW lends further credence to the view that THROW comments on questions rather than propositions.

It is worth noting that (11) further corroborates the observation in (10), that THROW targets at-issue content. It is commonly assumed that *wh*-questions trigger an existential presupposition, i.e., (11A) has the presupposition that *someone told Mel about the party* (see Katz & Postal 1964; Keenan & Hull 1973, and much subsequent work). In parallel to (10), (11B) seems to lack a reading where THROW targets this existential presupposition, thereby communicating that it is unimportant whether someone told Mel about the party.

We predict that THROW will be acceptable in response to any discourse move that addresses a question. For example, imperatives can be taken to address a *decision problem* (i.e., a question of the form *What should x do?* – see Kaufmann 2012); thus, THROW can be used felicitously as in (13B) to convey B’s indifference to the obligation assigned to them by A’s imperative.

- (13) A: Be careful!/Clean your room!/Don’t forget to call your mother!
 B: \dots_{THROW}
Possible interpretations:
 \leadsto it is unimportant what I should do

If there are multiple questions that an utterance could in principle address, we expect THROW to be able to target each of them. An example that fits this profile is given in (14).

- (14) A: Nobody told me that there’s a party today.
 B: \dots_{THROW}
Possible interpretations:
 i. \leadsto it is unimportant whether there’s a party today
 ii. \leadsto it is unimportant whether anybody told A that there’s a party today

⁹ The use of THROW in (12B) can also communicate that A’s utterance is obviously false, in which case THROW roughly amounts to ‘No way!’ or ‘Sam wouldn’t do that!’ We return to such readings in Section 2.5.

Although we could in principle stipulate that THROW only targets direct speech acts, its non-ambiguity in (15) falls out for free if THROW targets questions. In a similar vein, it is possible to construct examples with imperatives where THROW clearly does not target a speech act. For example, in (17), A's utterance performs the speech act of warning; the use of THROW in (17B₁) is not interpreted as conveying that B considers it unimportant that A has warned B to avoid a salient area at night. Instead, THROW is interpreted as conveying that B considers it unimportant whether B should do so, as brought out by the contrast in (17B₂) vs. (17B₃). This is precisely the reading that is predicted on the question-targeting account.

- (17) A: Avoid this area at night! Speech act: warning
 B₁: \dots _{THROW} Question addressed (cf. (13)): *What should B do?*
 B₂: I'm not going out_{THROW} at night anyway
 \leadsto it doesn't matter whether I should avoid this area at night
 B₃: #Sam already warned_{THROW} me, so I absolutely will.
 \leadsto it doesn't matter that/whether you are warning me to avoid this area

In the remainder of this paper, we will focus on dialogues where the preceding utterance u_k is a polar question, as in (9), or a declarative with neutral sentential stress, as in (8), for ease of exposition. Having established how THROW retrieves its attitudinal target, we can now zoom in on the attitude that THROW communicates.

2.4 The evaluative attitude expressed by THROW

Let us review the details of how the proposal applies when THROW responds to a declarative. In (3), repeated here as (18), A's assertion of *I think I forgot to pay my credit card bill* addresses the question $\{A \text{ forgot to pay } A\text{'s credit card bill, } A \text{ didn't forget to pay } A\text{'s credit card bill}\}$. B₁'s response of *It'll be fine* contextually entails that whether or not A paid their bill is not a serious issue. These are precisely the discourse conditions that make THROW felicitous in (18B₁). On the other hand, the response of *That's not good* in (18B₂) affirms that forgetting to pay a bill is a serious matter; this is in conflict with what THROW requires, hence THROW's infelicity. While some combinations of THROW and accompanying utterances may simply trigger a search for an explanation of why the gesturer uttered the accompanying speech (see example (29B₂) in Section 2.6), such an explanation is out of reach in (18B₂) due to the incompatibility of the gestural content and the speech content. When THROW is not accompanied by speech, as in (18B₃), it contributes an underspecified dismissive attitude non-exhaustively paraphrasable as *don't worry* or *who cares*.

- (18) A: Ack! I think I forgot to pay my credit card bill. (= p)
 B₁: It'll be fine_{THROW}
 B₂: #That's not good_{THROW}
 B₃: \dots _{THROW} ($\leadsto \{p, \neg p\}$ is *unimportant* \approx 'don't worry', 'who cares', ...)

When the preceding utterance is a polar question, as in (19), repeated from (9), the analysis works exactly the same way, except that the question dismissed by THROW is overtly pronounced by A. Here, THROW dismisses A's question rather than answering it; B's gesture cannot be construed as providing a negative answer to A's question (i.e., THROW cannot mean 'no' in (19)).

- (19) A: Is Sam coming to the party tonight?
 B: \dots_{THROW} ($\neg \{p, \neg p\}$ is *unimportant*
 \approx 'Who cares about him?', 'Who cares about parties?', etc.)

As in (19B₃), the precise flavour of the dismissal contributed by THROW is underspecified in the absence of speech. In (19B), in particular, the *source* of unimportance is underspecified; it could be that B does not care about B's husband, but it could also be that B does not care about parties, among other conceivable readings.

The proposed analysis predicts that THROW will generally be incompatible with accompanying u_a utterances expressing sincere interest or concern about the targeted issue. This is exemplified by the infelicity of THROW in (20B) below.

- (20) A: I think I'm going to quit my job.
 B: #That's huge news_{THROW} tell me more!

Likewise, THROW is inappropriate (or at best extremely rude/flippant) in situations where weighty matters are under discussion and discourse participants are expected to treat what is said as important. For example, consider (21), where A is a police officer interviewing B as a suspect in a serious crime,¹⁰ or (22), where A is performing a sincere, well-planned marriage proposal to their partner B.¹¹

- (21) A: Did you murder Professor Plum?
 B: Yes/No_{#THROW}

- (22) A: Will you marry me?
 B: Yes/No_{#THROW}

¹⁰ Here, (21) is intended to be pronounced without narrow focus. It is worth pointing out that the addition of narrow focus, as in (i), gives rise to a similar effect to the one discussed in connection with (12). Here, narrow focus again makes salient a *wh*-question, which can be dismissed as shown in (ii).

- (i) Did [YOU]_F murder Professor Plum?
 (ii) Yes_{THROW} but that is the wrong question. What you should be asking is: Why?
 (THROW \rightarrow it is unimportant who murdered Professor Plum)

¹¹ An anonymous reviewer reports that THROW is acceptable for them in (22B) with an interpretation that amounts to "of course". They suggest that such a reading would be similar to the insincere uses that we discuss in Section 3.3, which indeed seems highly plausible to us.

In this section, we have already raised the issue of underspecification and interpretational flexibility when it comes to the sources of unimportance. We now present a case study that further elaborates on these.

2.5 Underspecification/flexibility of unimportance

There are many possible sources of unimportance. The proposed analysis is compatible with this flexibility; a THROW dismissal may take on flavours of indifference, (indirect) denial, etc. depending on the context. For example, B's use of THROW in (23) will, all else being equal, most naturally be interpreted as dismissing the question addressed by A's assertion on the grounds that B believes A's answer to be obviously false, and thus highly uninformative (cf. an utterance of *nah*, *no way*, or *whatever, man*).

- (23) Context: *A is staying at B's place. B owns a dog, and both A and B know that the dog is not allowed into B's bedroom.*
 A: Your dog is lying on your bed.
 B: ..._{THROW}

If, however, we adjust the context as in (24) so that B has, exceptionally, allowed the dog into the bedroom, B's use of THROW can instead be interpreted as dismissing the question of whether the dog is on B's bed as unimportant because both answers are compatible with B's rules that day, and thus neither answer is noteworthy (cf. an utterance of *yeah, I know* or *it's fine*).

- (24) Context: *A is staying at B's place. B owns a dog, and both A and B know that the dog is not allowed into B's bedroom. However, today there are contractors working in B's kitchen and so, unbeknownst to A, B has temporarily suspended the bedroom rule.*
 A: Your dog is lying on your bed.
 B: ..._{THROW}

Crucially, when THROW communicates the denial of p (as in (23)), we predict that it does so *by way of dismissing p* – e.g., on the grounds that it is obviously false. This is supported by the observation that THROW cannot be used to provide a direct negative answer (\approx *no*) to a polar question in examples such as (9) above, as spelled out explicitly in (25). To the extent that (25B) may imply that Sam is not coming, this would once again be a case of *dismissing nonsense* (\approx *whether Sam is coming or not is unimportant, because it is obviously false*), parallel to (23).

- (25) A: Is Sam coming to the party tonight?
 B: ..._{THROW} (\neq No, he is not coming.)

2.6 Illocutionary independence of THROW

An important feature of our analysis that we have not yet explicitly discussed is the independence of THROW from the utterance u_u that it accompanies (if there is one). We propose that this is

a virtue of our analysis, since THROW appears to encode an illocutionary act that is separate from any accompanying speech, giving rise to an interpretation along the lines of Krifka's (2001) speech act coordination. THROW can be accompanied by u_a utterances with a variety of clause types, and it behaves uniformly regardless of what spoken content (if any) it accompanies. This is illustrated in (26); in each of B's responses, THROW appears to dismiss A's observation that B's phone buzzed (the u_k) as unimportant.

- (26) A: Your phone buzzed.
 B₁: I'll deal with it later_{THROW}
 B₂: Were you saying_{THROW} something?/What were we talking_{THROW} about?
 B₃: Ignore_{THROW} it/Let them wait_{THROW}
 B₄: Pfft_{THROW}/Echh_{THROW}
 B₅: ..._{THROW}

Our analysis of THROW in (4) holds that THROW does not directly interact with or operate on the accompanying u_a utterance. Given the different semantic properties of, say, declaratives (26B₁), questions (26B₂), and imperatives/hortatives (26B₃) (see, e.g., Portner 2004), the flexibility of THROW to combine with more or less any type of u_a utterance corroborates this approach by making it implausible that THROW comments on the u_a utterance that it accompanies. THROW thus crucially differs from the iconic gestures that Schlenker (2018a; b) discusses in that it does not seem to give rise to any non-trivial interactions with accompanying speech. To see this, consider (27); the intended, but unavailable, reading is loosely modelled after Schlenker's cosuppositional readings, where the contribution of THROW would be conditionalized on a positive answer to B's question. However, such a use of THROW, in which it would compositionally interact with the question operator in the form of the non-trivial projective behaviour that (27B-i) spells out, is impossible.

- (27) A: Alex can't come to your birthday party.
 B: Is Sam_{THROW} coming?
 i. *intended, but unavailable:*
 if Sam is coming, then it is unimportant whether or not Alex is coming
 ii. *available:*
 [it is unimportant whether or not Alex is coming] and [I am asking you if Sam is coming]

The unavailability of the reading in (27B-i) sharply contrasts with the availability of that in (27B-ii). In the latter, THROW's contribution is pragmatically conjoined with B's request for information about whether something else is the case (namely: *Is Sam coming?*), giving rise to the speech act coordination [it is unimportant whether or not Alex is coming] and [I am asking you if Sam is coming]. We may intuit that B conveys a causal link along the lines of *because Sam might be/is coming, it is unimportant whether or not Alex is coming*, but this is plausibly an inference

based on standard pragmatic reasoning, possibly involving discourse relations (see, e.g., Hobbs 1979; Lascarides & Asher 1993; Kehler 2002; Asher & Lascarides 2003; Jasinskaja & Karagjosova 2020; see also Lascarides & Stone 2009a; b; Hunter 2019 on the role of discourse relations in gesture-speech interaction). Crucially, no compositional interaction between THROW and the u_a is required to derive this effect. Parallel reasoning applies to the interpretation of (28), the declarative variant of (27).

- (28) A: Alex can't come to your birthday party.
 B: Sam_{THROW} is coming!
 (*available*: it is unimportant whether or not Alex is coming)

Example (29) further illustrates indirect interactions between THROW and the accompanying utterance u_a . Here, the inferred discourse relations (see, e.g., Hobbs 1979; Lascarides & Asher 1993; Kehler 2002; Asher & Lascarides 2003; Jasinskaja & Karagjosova 2020) between A's utterance and B's utterance impact the combinability of u_a with THROW, as illustrated in (29). In (29B₁), the inclusion of *only* signals a disagreement between B and A, indicating the discourse relation *Contrast*; this disagreement is compatible with the dismissal that THROW communicates, and in fact supports B's dismissal of A's statement. By contrast, the spoken utterance in (29B₂) elaborates on A's utterance without a clear sense of contrast, indicating the discourse relation *Elaboration*. We maintain that THROW is in fact acceptable in (29B₂) as well, but the orthogonal contributions of THROW and the accompanying u_a (= *it's 3am*) trigger a search for an explanation: why did B elaborate on A's statement by asserting *it's 3am* while at the same time expressing dismissal by means of THROW? This gives rise to a slight oddness of (29B₂), indicated by the single question mark.

- (29) A: It's getting late.
 B₁: It's only 3am_{THROW} Discourse relation (A-B₁): Contrast
 B₂: ? It's 3am_{THROW} Discourse relation (A-B₂): Elaboration

If THROW encodes a separate illocutionary act that is interpreted in conjunction with the illocutionary act associated with an accompanying utterance, this makes further predictions about the type of speech that THROW can accompany. Specifically, we expect THROW to accompany main clause material and not embedded speech. No such requirement holds for the preceding u_k utterance, as we saw in (14). Predicted exceptions are cases where THROW accompanies speech below the root-clause level that has illocutionary force in its own right, and thus hosts 'embedded root clause phenomena'.

This prediction is confirmed by the distribution of THROW when it accompanies the antecedents of factual vs. hypothetical conditionals. Factual conditionals presuppose that someone believes that the antecedent proposition is true (Iatridou 1991, Haegeman 2003); on the basis of such observations, the antecedent of a factual conditional has been argued to possess

illocutionary force separate from that of the consequent (see, in particular, Haegeman 2003: 334–336, who argues, building on Declerck & Reed 2001, that such antecedents “echo someone else’s speech act”). THROW is acceptable when accompanying the antecedents of factual conditionals, as illustrated in (30), but not in connection with the antecedents of hypothetical conditionals like (31), which lack this special property.¹²

- (30) A: There’s a typo in my handout.
 B: No one will notice.
 A: If no one will notice_{THROW} then I’ll just leave it as it is.
- (31) A: There’s a typo in my handout. Can you take a look at it? If no one will notice_{#THROW} then I’ll just leave it as it is. But if it’s noticeable, I’ll go and correct it.

In this respect, THROW resembles a range of speaker-oriented natural language expressions (see, e.g., Green 1976: 383–384; Repp 2013; Grosz 2020), which are restricted to root contexts in the sense of Hooper and Thompson (1973). An illustration is given in (32), where (32a) is a factual conditional, which allows for German *schon* in its discourse particle reading, while the hypothetical conditional in (32b) disallows it. The THROW examples (30) and (31) mirror the (32a)–(32b) distinction.

- (32) *German* (Brauß 1994: 112)
- a. Wenn es **schon** Frost gibt, könnte es wenigstens auch schneien.
 if it SCHON frost gives could it at.least also snow
 ‘If there is frost [as we know], it could at least snow as well.’
- b. Wenn es (***schon**) Frost gibt, erfrieren die Rosen.
 if it (*SCHON) frost gives freeze the roses
 ‘If there is frost, then the roses freeze.’

Note that in (30) THROW does not appear to dismiss the question addressed by B’s immediately preceding utterance of *no one will notice* (which also happens to be the question addressed by the antecedent proposition of the conditional uttered by A). Instead, A plausibly dismisses the question *whether there is a typo in A’s handout or not*, which A had addressed earlier.¹³ As a

¹² A reviewer notes that these examples also differ in that (30) is a dialogue while (31) is a monologue. A monologue version of (30) would also be acceptable, to the extent that performing extended monologues aloud is acceptable; the relevant example is given below as (i).

(i) A: There’s a typo in my handout. (Thankfully,) no one will notice. (And) if no one will notice_{THROW} then I’ll just leave it as it is.

¹³ There is an interesting, non-trivial question of when THROW has to target the immediately preceding utterance as its u_n , which was the case in most of the examples that we have looked at so far, and when it can reach back further and target an earlier utterance. We suspect that it is specifically the nature of factual conditionals, namely that they echo a preceding statement, that allows THROW to reach back further when it accompanies such a conditional. Since A’s factual conditional in (30) echoes B’s statement, this seems to make B’s statement unavailable for being targeted by THROW, which in turn allows THROW to target A’s earlier statement instead. We leave a further exploration of these observations open for future research.

consequence, A's use of THROW in (30) makes the same communicative contribution that B would make in (33), quite parallel to our earlier example (3). Here, the statement that no one will notice can be pragmatically construed as the explanation for why the presence/absence of a typo is unimportant.¹⁴

- (33) A: There's a typo in my handout.
 B: No one will notice_{THROW}
 (↪ it is unimportant whether there is a typo in your handout or not)

2.7 Non-at-issue status

Since THROW encodes a separate illocutionary move (making its own contribution to the discourse), we predict that it shares properties with other discourse-managing devices that have been given similar analyses. This prediction has already been confirmed by our comparison of THROW and German discourse particles in examples (30)–(33), which showed that both exhibit a restriction against accompanying—or occurring in—embedded (non-root) clauses. We proceed to show that, like German discourse particles, English emotive markers (e.g., Rett 2021) and a range of other expressives (e.g., Gutzmann 2013), the contribution of THROW cannot be targeted by direct denials, i.e., denials by virtue of *No*, ... or *That's not true*, ... The response in (34A₁) can directly deny the truth-conditional content of (34B)'s speech, but it is not possible to use (34A₂) for directly denying the dismissal conveyed by the THROW gesture in (34B). However, the dismissal conveyed by THROW can be targeted in the same way in which other non-at-issue meanings can be targeted, e.g., by virtue of *Hey, wait a minute!* (see Shanon 1976 and von Fintel 2001), or its short form *Hey!*, in (34A₃); these have been argued to target “a wide range of non-at-issue meanings” (Potts 2012: 2521).

- (34) A: Did you remember to pay the electricity bill?
 B: Yeah_{THROW}
 A₁: That's not true; I looked at the account just now, and there's been no payment!
 A₂: #That's not true; (you think that) this is serious/important/worth discussing!¹⁵
 A₃: (Hey!) This is really important!

¹⁴ Finally, a reader may wonder if there are restrictions on whether THROW accompanies material that makes an at-issue contribution vs. a non-at-issue contribution. Although the material that THROW accompanies is arguably at-issue in each of (27)–(33), this is not entailed by our analysis. To see that THROW can accompany non-at-issue content, consider (i). Potts & Roeper (2006) argue that expressive small clauses such as *You fool!* (or, in (i), *You loser!*) are utterances that have a one-dimensional expressive meaning; by definition, such a meaning is non-at-issue. As shown, there are no restrictions against THROW co-occurring with such a non-at-issue utterance.

(i) A: It's getting late.
 B: You loser!_{THROW} (↪ whether or not it's getting late is unimportant)

¹⁵ A reader may wonder if this is the best paraphrase for the contribution of THROW. However, the challenge to find a suitable paraphrase in itself is reminiscent of the ineffability of expressive content discussed by Potts (2005; 2007); see Blakemore (2011) for more detailed discussion.

The unacceptability of (34A₂) confirms that THROW encodes non-at-issue meaning. In Rett's (2021) terms, THROW encodes illocutionary non-at-issue meaning (in contrast to descriptive non-at-issue meaning), in that it encodes an agent's attitude toward some descriptive content in the discourse.

3 Extension to further uses

3.1 Self-directed uses

The analysis spelled out in (4) does not require that the preceding utterance (u_k) is uttered by someone other than the individual who produces THROW. This is desirable, because THROW can be used in monologues like (35).

(35) It's getting late. Ech, another half hour of YouTubing won't hurt_{THROW}

Here, as in the dialogues examined in Section 2, the speaker's use of THROW with the second sentence dismisses the importance of the question addressed by the first. The speaker signals (to themselves) that whether it is getting late or not is unimportant; this is presumably because, as they go on to assert, staying up for another half hour will not be harmful. In this way, the speaker raises a fact that could in principle serve as motivation for going to bed; upon consideration, they decide that the lateness issue is unimportant, and so THROW is licensed. The dialogue case in (36) seems to exhibit the same behaviour.

(36) A: It's getting late.

B: Ech, another half hour of YouTubing won't hurt_{THROW}

The distribution of THROW in monologues thus further supports our analysis; we now take this as our cue to explore what appear to be discourse-free uses in the next section.

3.2 (Apparently) discourse-free uses

The discourse conditions in (4) make reference to a prior utterance. We specified that there does not need to be an overtly expressed utterance u_a that accompanies THROW; this was necessary to account for cases of pro-speech THROW (i.e., cases where THROW is produced without accompanying speech). In this subsection, we note that the preceding utterance u_k that supplies the question dismissed by THROW may likewise be phonologically empty. To see that this is needed, consider an example like (37).

(37) Context: *A is carrying a pile of dirty clothes from the hamper to the washing machine. A looks back and notices that they have dropped a sock.*

A: ..._{THROW}

Here, THROW is perfectly felicitous despite the absence of an overt preceding u_k utterance. This can easily be understood as the self-directed use of THROW outlined in Section 3.1 combined with silent self-talk. If, as Eckardt & Disselkamp (2019) argue, speakers use language in their

internal cognitive processes, it should not surprise us that THROW can target the resulting silent utterances. Plausibly, the speaker’s internal monologue in (37) looks something like this:

- (38) Context: *A is carrying a pile of dirty clothes from the hamper to the washing machine. A looks back and notices that they have dropped a sock.*
 A: Oh, I dropped a sock.
 A: \dots_{THROW} (\leadsto whether or not I dropped a sock is unimportant)

With the internal monologue filled in, A’s use of THROW is no longer surprising; it dismisses the current location of the sock as an unimportant issue.

3.3 Insincere uses

Like other meaningful expressions, THROW need not be used sincerely. Depending on the context and the content of the utterance that it accompanies, THROW can be deployed to produce irony, humour, or politeness. Since THROW is by its very nature a negatively evaluative expression, we expect irony to give rise to a positive meaning, much in line with ironic compliments (i.e., negative remarks such as *you really did do an awful job* that are used ironically for giving praise; see Kreuz & Glucksberg 1989; Kreuz & Link 2002, and Giustolisi & Panzeri 2021: 293 for recent discussion).

While THROW is not used to *give* compliments, one environment where THROW is particularly common is *in response to* compliments, as in (39).¹⁶ The intuition about such examples is that B accepts the compliment but uses THROW to display modesty.

- (39) A: You’re really great, you know.
 B₁: Oh, shucks_{THROW}
 B₂: Oh, you_{THROW}
 B₃: Oh, pfft/psh_{THROW}
 B₄: Aww_{THROW}
 B₅: \dots_{THROW}

In each of B’s responses, the use of THROW strictly speaking requires that B considers the question of whether they are great to be unimportant. If sincere, this dismissal of A’s compliment would be rather rude. However, it is most naturally understood here as a form of polite pretence; modesty demands that we minimize praise of ourselves. In this case, B’s use of THROW can be seen as a violation of Grice’s (1975) Maxim of Quality (part of the Cooperative Principle) to satisfy Leech’s (1983) Maxim of Modesty (part of the Politeness Principle).¹⁷

¹⁶ There is an abundance of naturally occurring examples for this use of THROW, including the GIF at the following URL (last accessed on 27 December 2021): <https://giphy.com/gifs/burn-cameo-oFeUVZfiuim9G/>.

¹⁷ One question is whether the Maxim of Quality can be straightforwardly applied to the type of non-at-issue content that THROW deploys; we leave this issue open for future research.

Another environment where ironic uses of THROW show up is in greetings where the pretended dismissal via THROW is interpreted as an intimacy-generating device, as illustrated in (40). Here, Sam's use of THROW once again literally dismisses (the question raised by) Alex's discourse-initial utterance; yet instead of creating a social rift, it seems to serve as a term of endearment. What happens here is very much like the interaction in (41), where Sam's use of *you old devil* in (41b) should literally insult Alex but instead serves as a friendly epithet. Note that THROW can be added to this response quite naturally, as in (41c).

- (40) a. Alex: Hey, it's good to see you Sam!
 b. Sam: Hey Alex!_{THROW} How have you been?
- (41) a. Alex: Hey, it's good to see you Sam!
 b. Sam: Alex, you old devil! How have you been?
 c. Sam: Alex, you old devil!_{THROW} How have you been?

THROW differs from other gestures, including in particular facial expressions, which are known to signal that accompanying speech is to be interpreted ironically (Giustolisi & Panzeri 2021). Such an effect is illustrated in (42), where SICK-FACE stands for a facial expression signalling physical disgust (see Yoder et al. 2016: 303) which thus conveys that the accompanying assertion of tastiness is insincere. By contrast, in (39)–(41), the contribution of THROW itself is understood to be insincere – that is, the dismissal that THROW communicates is to be understood in an ironic way (as appreciation).

- (42) This food is delicious_{SICK-FACE}

This reverse behaviour of gesture and speech with regards to irony can be made even clearer in (43), a variant of (39). Here, THROW does not mark that B's statement that A is a darling is insincere. In fact, the opposite is the case: B's statement that A is a darling serves to mark that B's use of THROW is insincere. To our knowledge, this behaviour of THROW is systematic.

- (43) A: You're really great, you know.
 B: Oh, you're such a darling_{THROW}

For present purposes, we here conclude our discussion of the behaviours of THROW and return to a separate issue, flagged in Section 1, namely the question of whether there are natural language counterparts of THROW, and how they compare in their meaning contribution and use.

4 Comparison to spoken material

The notion of discourse management is not new; there are a variety of elements of spoken language – whether spoken morphemes, covert operators, syntactic configurations, or intonational melodies – that have been argued to contribute information about how a discourse participant

relates to the content of the discourse. This class includes illocutionary and discourse-managing operators, which signal the speaker's goals/intentions for how the discourse should develop (e.g., ASSERT, VERUM, FALSUM; see Romero & Han 2004; Krifka 2008; Repp 2013; Cohen & Krifka 2014; Krifka 2017; Frana & Rawlins 2019, i.a.). This class also includes emotive markers, which signal the speaker's emotive attitude toward a proposition (e.g., mirative intonation, Finnish *-pä*, English *alas*, *fortunately*; see Rett 2021).

Of these, our analysis most closely resembles that of Rett (2021), with the difference that THROW encodes a non-emotive evaluative attitude (dismissal) rather than an emotive attitude (e.g., regret, disappointment, surprise). Rett's analysis is couched in a version of Farkas & Bruce's (2010) Table model, with the notion of discourse commitments expanded to capture non-doxastic attitudes. Rett (2021: 330) proposes that the presence of the emotive marker *alas*, (44), for a sentence *S* with content *p* and author *a*, adds to *a*'s public discourse commitments the commitment that *a* is disappointed that *p*.

(44) Alas, Jane lost the race. (Rett 2021: 328)

An important difference between THROW and *alas* is the obligatory illocutionary independence of the former from material that it accompanies, which was discussed in Section 2.6. This, in itself, is not a hindrance to comparing the two approaches, since Rett also allows for dialogic uses of *alas*, illustrated in (45). The effect of *alas* in (44) and (45B) is equivalent; it conveys that the speaker is disappointed that Jane lost the race. This indicates that it must be possible for the content *p* that *alas* targets to be part of the preceding discourse.

(45) A: Jane lost the race.
B: Alas! (Rett 2021: 329)

Freestanding uses of THROW behave much like freestanding uses of *alas*; however, THROW is unable to do what *alas* does in (44). This is illustrated by the fact that (47) is not equivalent to (46B); in (47), unlike (46B), THROW cannot be understood to be commenting on the importance of whether or not it is getting late. Rather, (47) would have to respond to some preceding utterance (u_k) that is dismissed on the basis of it getting late. What (47) emphasizes is a property that sets THROW apart from other discourse-managing devices: its lack of interaction with the spoken material (u_a) that it accompanies. As discussed in Section 2.6, discourse-managing THROW does not comment on the information associated with the co-occurring utterance.

(46) A: It's getting late.
B: \dots_{THROW} (\sim whether or not it's getting late is unimportant)

(47) It's getting late_{THROW} (not equivalent to (46B))

A natural language expression that seems to pattern like THROW in this respect is the interjection *pah* (IPA: [pʰaʰ]), as illustrated by the non-equivalence of (48B) and (49).¹⁸ Both THROW and *pah* thus fundamentally differ from discourse particles and interjections of the *alas*-type, which typically operate on the proposition encoded by their accompanying utterance.

(48) A: It's getting late.
B: Pah! (↷ whether or not it's getting late is unimportant)

(49) Pah, it's getting late. (not equivalent to (48B))

Moreover, the parallels between THROW and *pah* also concern their semantic contribution. Like THROW, *pah* appears to contribute dismissal, and like THROW, *pah* dismisses something that precedes the utterance hosting it. This is illustrated in (50) below; (50B₁) below is a near-equivalent of our earlier example (3B₁). Moreover, (50B₂) is as deviant as the corresponding (3B₂) example.

(50) A: Ack! I think I forgot to pay my credit card bill.
B₁: Pah, it'll be fine.
B₂: #Pah, that's not good.

As far as we can tell, *pah* is the closest English-language counterpart to the THROW gesture (with further candidates in *who cares*, *whatever* and *so what* in their uses as conventionalized discourse markers).

(51) Doctors? Pah! Doctors are for wusses.
(web blog; stored in COCA and retrieved on Dec. 7, 2021 from <https://www.escapeartistes.com/2012/07/11/just-a-tummy-bug/>)

If we allow Rett's "sentence S" to be a preceding utterance u_k addressing a question Q , our analysis can be translated into Rett's (2021: 330) terms as follows: for an author a and a sentence S that addresses the question Q , THROW (and, in parallel, *pah*) adds to a 's public discourse commitments the commitment that a dismisses Q (or, equivalently: that a considers Q unimportant). Note, in this connection, that our choice of treating *unimportance* as a primitive in the statement that a considers Q unimportant (cf. Sections 2.1 and 2.2) is comparable to Rett's approach, which takes a is disappointed that p as a primitive.

To conclude this section, a reader may wonder if the content contributed by THROW exhibits properties attested for more familiar linguistic content, such as a discourse participant's ability to

¹⁸ We direct readers who may not have *pah* in their active vocabulary to the relevant entry on Wiktionary: https://en.wiktionary.org/wiki/pah#Etymology_1 (last accessed on 17th December 2021). The Oxford English Dictionary traces *pah* back to 1592 and defines it as an interjection "expressing disgust or disdain". Source: "pah, int. and adj.". OED Online. December 2021. Oxford University Press. <https://www.oed.com/view/Entry/136033?rskey=hbGfZ-a&result=2&isAdvanced=false> (accessed 17 Dec. 2021)

make reports about the content that THROW contributes, the possibility to refer to this content with a propositional anaphor, or scope interactions with natural language operators such as quantifiers or negation. Based on the parallels discussed in this section, we expect that the respective properties of THROW are quite similar to those of the expressive interjection *pah*. As far as we can tell, this expectation is confirmed. In (52), A is reporting to C on the dismissive content of B's THROW/*pah* utterance.

- (52) A: It's getting late.
 B: ..._{THROW}/Pah!
 A turns to C: I can't believe that B just plainly dismissed the issue/question of whether it is getting late!

In contrast, example (53) shows that the content of THROW/*pah* cannot be picked up by the propositional anaphor *that* (see e.g. Webber 1988; Asher 1993; Asher & Lascarides 2003; Krifka 2013; Snider 2017).

- (53) A: It's getting late.
 B: ..._{THROW}/Pah!
 A: #You don't know **that**.
 (intended: 'You don't know that it's unimportant whether it's getting late.')

Finally, in line with comparable expressives discussed by Gutzmann (2013), such as *ouch*, *oops* and *oh*, there is no evidence that THROW/*pah* scopally interact with natural language operators.

5 Discussion and conclusions

5.1 Summary of main findings

This paper has analyzed the THROW gesture as an operator that marks discourse objects (namely questions) as unimportant. It contributes to a growing body of work that applies formal linguistic tools to the study of meaningful gesture (e.g., Lascarides & Stone 2009a; b; Ebert & Ebert 2014; Schlenker 2018a; b; Esipova 2019). However, most formal semantic work in this area has focused on deictic and iconic gestures, with notable exceptions including Ippolito's (2019) work on the gestural marking of non-canonical questions in Italian, Francis' (2021) work on gestural objection to discourse moves, and Leparle's (2021) work on the gestural tracking of discourse topics. We thus take the present work to be part of a much needed filling-in of the theoretical landscape of pragmatic gesture uses. Such formal semantic work on gestures like THROW complements the rich work on pragmatic gesture that has long been underway in other traditions, including Bavelas et al. (1992), Kendon (1995), Müller (2004), Sweetser & Sizemore (2008), Wehling (2017), Cooperrider et al. (2018), and many others.

In addition to providing us with a better picture of how language works in its full multimodal form, the particular evaluative meaning conveyed by THROW is not like other discourse-level

meanings that have been described in the formal semantics literature as of now. This paper has presented what is, to our knowledge, the first semantic analysis of a gestural dismissal operator in natural language. Moreover, the proposed meaning is not only expressed gesturally; the striking parallelism between THROW and *pah* suggests that this meaning is also encoded in spoken language. This dismissal meaning is special among discourse-management operators in that it cannot interact with spoken material that it accompanies; THROW and *pah* operate on discourse objects (questions) but cannot comment on the discourse object that hosts them (i.e., on the accompanying speech). This obligatory illocutionary independence raises an important question for future research; why do dismissal operators have this property when other discourse-management operators (such as VERUM, discourse particles, *alas* and *fortunately*) do not?

5.2 Towards a broader understanding of dismissal operators

We have argued that THROW and *pah* convey a very general kind of dismissal. This is not the only dismissal meaning that natural language could encode; there could be other operators in this semantic field encoding more specialized flavours of dismissal (e.g., relating to the source of unimportance), targeting different kinds of semantic objects, combining dismissal with other meaning components, or making their contribution in an at-issue fashion. Future work that examines a broader array of dismissal operators will hopefully allow us to pinpoint which of the properties identified here are unique to THROW/*pah* and which belong to this semantic class more generally. For example, one might imagine that the puzzling illocutionary independence of THROW/*pah* is a consequence of their meaning. Perhaps it is not useful to dismiss one's own utterance; if one believes that a question is unimportant, it may not be fully cooperative to address it. However, preliminary investigation suggests that the picture may not be so simple. For example, English *shm*-reduplication (e.g., *table-shmable*; see, e.g., Nevins & Vaux 2003; Grohmann & Nevins 2004) appears to comment on its base, in contrast to the illocutionary independence of question-targeting THROW and *pah*. This is illustrated by (54), where *table-shmable* seems to convey something along the lines of *who cares about tables?* (rather than *who cares whether Sam is building a table?*, though this may be implied). It is an open question whether B's dismissal targets the stem *table-* in B's own utterance or the previous occurrence of *table* in A's utterance.

- (54) A: Sam is building a table.
 B: Table-shmable! Call me when Sam has built something worthwhile.

As we consider (54), we observe that THROW/*pah* have a parallel use. This paper explicitly limited its scope to uses of THROW that accompany or replace entire utterances, as these uses strike us as distinct from uses in which THROW attaches to a word or phrase (see footnote 2). Turning our gaze to the latter, we observe that both (pro-speech) THROW and *pah* have uses

in which they follow a single word, and which pattern exactly like *shm*-reduplication, in (55B₁) and (55B₂), respectively. Here, THROW/*pah* seems to dismiss the noteworthiness of *table* in the given context, paralleling what we saw in (54). Numerous examples of the sort in (55B₂) can be found in large corpora such as *Google Books*, e.g., for strings such as “computers, pah”, “progress, pah”, or “intelligence, pah”, among many others. Such uses of THROW/*pah* are potentially distinct from the ones we analyzed in this paper in that their dismissal always seems to target the accompanying material (i.e., the word that precedes them); however, a unified analysis may still be possible, which treats (55B₁) on a par with the equally echoic (30), in that THROW in (55B₁) comments on the question *is Sam building a table?* Regardless, we conjecture, based on the parallels between (54) and (55), that the correct analysis of the semantics of *shm*-reduplication (whichever that may be) can be unified with the analysis of examples of the type in (55).¹⁹

- (55) A: Sam is building a table.
 B₁: Table! ..._{THROW} Call me when Sam has built something worthwhile.
 B₂: Table, pah! Call me when Sam has built something worthwhile.

Other items in spoken English that may plausibly encode dismissal include discourse markers such as *whatever* (see, e.g., Kleiner 1998; Benus et al. 2007), *meh* (see, e.g., Schultz 2019: 5), *hmpf* (see e.g. Hougaard 2019: 102), and the doubled response particle *yeah yeah*, to name a few. With an analysis of THROW in hand, we are now in a better position to conduct fine-grained comparisons between operators within this semantic field.

This paper represents a first step toward understanding this kind of meaning; there is, of course, much more to do. For example, we have restricted our investigation to cases where THROW responds to declaratives and questions; it remains to be seen how the analysis can be adjusted to deal with cases where THROW responds to other kinds of discourse moves (e.g., imperatives, exclamatives). While we have so far treated *pah* as a spoken equivalent to THROW, further investigation is needed to determine whether they do in fact pattern together in all environments. Finally, THROW’s status as a pragmatic manual gesture means that it is articulatorily possible for it to coincide with other gestures (e.g., facial expressions)²⁰ and spoken pragmatic operators (e.g., discourse and emotive markers); how the discourse-management labour is divided among these channels is an open question.

¹⁹ Observe that native speakers of English generally do not accept co-speech THROW in this context, as indicated by ‘#’ in (i-B), only pro-speech THROW, as in (55B₁); this observation highlights a cross-linguistic difference between English and German, worth exploring in future research, as German speakers accept the German counterpart of (i-B).

(i) A: Sam is building a table.
 B: #Table_{THROW}! Call me when Sam has built something worthwhile.

²⁰ For example, insincere uses of the type discussed in Section 3.3 are often accompanied by a smile: <https://giphy.com/gifs/CoachJoshWood-Ft7adwBzipO9AKwcnb> (last accessed 28 Dec 2021)

Acknowledgements

We are very grateful to Jana Bressem and Philippe Schlenker for valuable written comments. For helpful discussion, we thank the audiences at *Semantics and Linguistic Theory 32*, the DGfS 44 workshop *Visual Communication: New Theoretical and Empirical Developments (ViCom)*, and Cecilia Poletto's research seminar at the University of Frankfurt. Finally, we thank the Glossa reviewers and the handling editor Ana Aguilar-Guevara for the time they dedicated to reviewing and editing this article. We are particularly grateful to Ana for exceptionally helpful constructive feedback and exchanges which significantly improved the paper. This research was supported by funding from the Faculty of Humanities career development grant at the University of Oslo [PI: Patel-Grosz] and the Horizon 2020 ERC Advanced Grant 787929 SPAGAD: Speech Acts in Grammar and Discourse.

Competing interests

The authors declare that they have no competing interests.

References

- Abner, Natasha & Cooperrider, Kensy & Goldin-Meadow, Susan. 2015. Gesture for linguists: A handy primer. *Language and Linguistics Compass* 9. 437–449. DOI: <https://doi.org/10.1111/lnc3.12168>
- Ameka, Felix. 1992. Interjections: The universal yet neglected part of speech. *Journal of Pragmatics* 18. 101–118. DOI: [https://doi.org/10.1016/0378-2166\(92\)90048-G](https://doi.org/10.1016/0378-2166(92)90048-G)
- Asher, Nicholas. 1993. *Reference to abstract objects in English: A philosophical semantics for natural language metaphysics*. Dordrecht: Kluwer.
- Asher, Nicholas & Lascarides, Alex. 2003. *Logics of conversation*. Cambridge: Cambridge University Press.
- Bavelas, Janet B. & Chovil, Nicole & Lawrie, Douglas A. & Wade, Allan. 1992. Interactive gestures. *Discourse Processes* 15. 469–489. DOI: <https://doi.org/10.1080/01638539209544823>
- Beaver, David & Clark, Brady. 2008. *Sense and sensitivity: How focus determines meaning*. Malden, MA and Oxford: Wiley-Blackwell. DOI: <https://doi.org/10.1002/9781444304176>
- Beaver, David & Roberts, Craige & Simons, Mandy & Tonhauser, Judith. 2017. Questions Under Discussion: Where information structure meets projective content. *Annual Review of Linguistics* 3. 265–284. DOI: <https://doi.org/10.1146/annurev-linguistics-011516-033952>
- Benus, Stefan & Gravano, Augustin & Hirschberg, Julia Bell. 2007. Prosody, emotions, and... 'whatever'. *Interspeech 2007*. 2629–2632. DOI: <https://doi.org/10.21437/Interspeech.2007-691>
- Bergen, Leon & Levy, Roger & Goodman, Noah. 2016. Pragmatic reasoning through semantic inference. *Semantics and Pragmatics* 9(20). DOI: <https://doi.org/10.3765/sp.9.20>
- Blakemore, Diane. 2011. On the descriptive ineffability of expressive meaning. *Journal of Pragmatics* 43. 3537–3550. DOI: <https://doi.org/10.1016/j.pragma.2011.08.003>

- Brauß, Ursula. 1994. *Lexikalische Funktion der Synsemantika*. Tübingen: Gunter Narr.
- Bressem, Jana & Müller, Cornelia. 2014. The family of Away gestures: Negation, refusal, and negative assessment. In Müller, Cornelia & Cienki, Alan & Fricke, Ellen & Ladewig, Silva H. & McNeill, David & Bressem, Jana (eds.), *Body – language – communication. An international handbook on multimodality in human interaction* (HSK 38.2), 1592–1604. Berlin: De Gruyter Mouton. DOI: <https://doi.org/10.1515/9783110302028.1592>
- Bressem, Jana & Müller, Cornelia. 2017. The “Negative-Assessment-Construction” – A multimodal pattern based on a recurrent gesture? *Linguistic Vanguard* 3. 20160053. DOI: <https://doi.org/10.1515/lingvan-2016-0053>
- Büring, Daniel. 2003. On D-trees, beans and B-accents. *Linguistics and Philosophy* 26. 511–545. DOI: <https://doi.org/10.1023/A:1025887707652>
- Büring, Daniel & Gunlogson, Christine. 2000. Aren’t positive and negative polar questions the same? Ms. UCSC/UCLA.
- Calbris, Geneviève. 2011. *Elements of meaning in gesture* (Gesture Studies 5). Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/g5>
- Chen, Zhong & Xu, Yuhang & Xie, Zhiguo. 2020. Assessing introspective linguistic judgments quantitatively: the case of *The syntax of Chinese*. *Journal of East Asian Linguistics* 29. 311–336. DOI: <https://doi.org/10.1007/s10831-020-09210-y>
- Cohen, Ariel & Krifka, Manfred. 2014. Superlative quantifiers and meta-speech acts. *Linguistics and Philosophy* 37. 41–90. DOI: <https://doi.org/10.1007/s10988-014-9144-x>
- Cooperrider, Kensy & Abner, Natasha & Goldin-Meadow, Susan. 2018. The Palm-Up puzzle: Meanings and origins of a widespread form in gesture and sign. *Frontiers in Communication* 3. 23. DOI: <https://doi.org/10.3389/fcomm.2018.00023>
- Daniels, Micky. 2019. Focus over a speech act operator: A revised semantics for ‘our even’. *North East Linguistic Society (NELS)* 49. 187–198.
- Declerck, Renaat & Reed, Susan. 2001: *Conditionals: A comprehensive empirical analysis*. Amsterdam: Mouton de Gruyter. DOI: <https://doi.org/10.1515/9783110851748>
- Degaetano-Ortlieb, Stefania. 2015. Evaluative meaning and cohesion: The structuring function of evaluative meaning in scientific writing. *Discours* 16. 3–29. DOI: <https://doi.org/10.4000/discours.9053>
- Ebert, Cornelia & Evert, Stefan & Wilmes, Katharina. 2011. Focus marking via gestures. *Sinn und Bedeutung (SuB)* 15. 193–208. <https://ojs.ub.uni-konstanz.de/sub/index.php/sub/article/view/372>.
- Ebert, Cornelia & Ebert, Christian. 2014. Gestures, demonstratives, and the attributive/referential distinction. Talk given at *Semantics and Philosophy in Europe (SPE 7)*, 28 June. <https://semanticsarchive.net/Archive/GJYzkwN/EbertEbert-SPE-2014-slides.pdf>.
- Eckardt, Regine & Disselkamp, Gisela. 2019. Self-addressed questions and indexicality: The case of Korean. *Sinn und Bedeutung (SuB)* 23. 383–398. DOI: <https://doi.org/10.18148/sub/2019.v23i1.539>

- Ernst, Thomas. 2007. On the role of semantics in a theory of adverb syntax. *Lingua* 117. 1008–1033. DOI: <https://doi.org/10.1016/j.lingua.2005.03.015>
- Ernst, Thomas. 2009. Speaker-oriented adverbs. *Natural Language and Linguistic Theory* 27. 497–544. DOI: <https://doi.org/10.1007/s11049-009-9069-1>
- Esipova, Masha. 2019. *Composition and projection in speech and gesture*. New York, NY: New York University dissertation. <https://ling.auf.net/lingbuzz/004676>
- Farkas, Donka & Bruce, Kim. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27. 81–118. DOI: <https://doi.org/10.1093/jos/ffp010>
- Frana, Ilaria & Rawlins, Kyle. 2019. Attitudes in discourse: Italian polar questions and the particle *mica*. *Semantics and Pragmatics* 12(16). 1–48. DOI: <https://doi.org/10.3765/sp.12.16>
- Francis, Naomi. 2021. Objecting to discourse moves with gestures. *Sinn und Bedeutung (SuB)* 25. 267–275. DOI: <https://doi.org/10.18148/sub/2021.v25i0.936>
- Giustolisi, Beatrice & Panzeri, Francesca. 2021. The role of visual cues in detecting irony. *Sinn und Bedeutung (SuB)* 25. 292–306. DOI: <https://doi.org/10.18148/sub/2021.v25i0.938>
- Goddard, Cliff. 2014. Interjections and emotion (with special reference to “surprise” and “disgust”). *Emotion Review* 6. 53–63. DOI: <https://doi.org/10.1177/1754073913491843>
- Green, Georgia M. 1976. Main clause phenomena in subordinate clauses. *Language* 52. 382–397. DOI: <https://doi.org/10.2307/412566>
- Grice, Paul. 1975. Logic and conversation. In Cole, Peter & Morgan, Jerry (eds.), *Syntax and Semantics, Vol. 3: Speech Acts*, 41–58. New York, NY: Academic Press. DOI: https://doi.org/10.1163/9789004368811_003
- Grohmann, Kleantes K. & Nevins, Andrew I. 2004. On the syntactic expression of pejorative mood. *Linguistic Variation Yearbook* 4. 143–179. DOI: <https://doi.org/10.1075/livy.4.05gro>
- Grosz, Patrick Georg. 2020. Discourse particles. In Gutzmann, Daniel & Matthewson, Lisa & Meier, Cécile & Rullmann, Hotze & Zimmermann, Thomas (eds.), *The Wiley Blackwell companion to semantics*. Hoboken, NJ: Wiley-Blackwell. DOI: <https://doi.org/10.1002/9781118788516.sem047>
- Gunlogson, Christine. 2003. *True to form: Rising and falling declaratives as questions in English*. London and New York: Routledge. DOI: <https://doi.org/10.4324/9780203502013>
- Gutzmann, Daniel. 2013. Expressives and beyond: an introduction to varieties of use-conditional meaning. In Gutzmann, Daniel & Gärtner, Hans-Martin (eds.), *Beyond expressives: Explorations in use-conditional meaning*, 1–58. Leiden: Brill. DOI: https://doi.org/10.1163/9789004183988_002
- Gutzmann, Daniel. 2015. *Use-conditional meaning: Studies in multidimensional semantics*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780198723820.001.0001>
- Haegeman, Liliane. 2003. Conditional clauses: External and internal syntax. *Mind & Language* 18(4). 317–339. DOI: <https://doi.org/10.1111/1468-0017.00230>
- Harris, Daniel W. & Fogal, Daniel & Moss, Matt. 2018. Speech acts: The contemporary theoretical landscape. In Fogal, Daniel & Harris, Daniel W. & Moss, Matt (eds.), *New work on speech acts*, 1–39. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/oso/9780198738831.003.0001>

- Heim, Johannes. 2019. *Commitment and engagement: The role of intonation in deriving speech acts*. Vancouver, BC: University of British Columbia dissertation. DOI: <https://doi.org/10.14288/1.0380772>
- Hobbs, Jerry R. 1979. Coherence and coreference. *Cognitive Science* 3. 67–90. DOI: https://doi.org/10.1207/s15516709cog0301_4
- Hooper, Joan B. & Thompson, Sandra A. 1973. On the applicability of root transformations. *Linguistic Inquiry* 4. 465–497.
- Hougaard, Tine T. 2019. Interjections, phonetics, and the body. *Scandinavian Studies in Language* 10. 98–109. DOI: <https://doi.org/10.7146/sss.v10i1.114673>
- Hunter, Julie. 2019. Relating gesture to speech: reflections on the role of conditional presuppositions. *Linguistics and Philosophy* 42. 317–332. DOI: <https://doi.org/10.1007/s10988-018-9244-0>
- Iatridou, Sabine. 1991. *Topics in conditionals*. Cambridge, MA: Massachusetts Institute of Technology dissertation. <https://dspace.mit.edu/handle/1721.1/13521>
- Ippolito, Michela. 2019. Gestures as markers on non-canonical questions. *Amsterdam Colloquium (AC)* 22. 574–583.
- Jasinskaja, Katja & Karagjosova, Elena. 2020. Rhetorical relations. In Gutzmann, Daniel & Matthewson, Lisa & Meier, Cécile & Rullmann, Hotze & Zimmermann, Thomas Ede (eds.), *The Wiley Blackwell companion to semantics*. Hoboken, NJ: Wiley-Blackwell. DOI: <https://doi.org/10.1002/9781118788516.sem061>
- Katz, Jerrold J. & Postal, Paul M. 1964. *An integrated theory of linguistic descriptions*. Cambridge, MA: The MIT Press.
- Keenan, Edward & Hull, Robert. 1973. The logical presuppositions of questions and answers. In Petöfi, János S. & Franck, Dorothea (eds.), *Präsuppositionen in Philosophie und Linguistik*, 441–466. Königstein im Taunus: Athenäum.
- Kaufmann, Magdalena. 2012. *Interpreting imperatives*. Dordrecht: Springer. DOI: <https://doi.org/10.1007/978-94-007-2269-9>
- Kehler, Andrew. 2002. *Coherence, reference, and the theory of grammar*. Stanford, CA: CSLI Publications.
- Kendon, Adam. 1995. Gestures as illocutionary and discourse markers in Southern Italian conversation. *Journal of Pragmatics* 23. 247–279. DOI: [https://doi.org/10.1016/0378-2166\(94\)00037-F](https://doi.org/10.1016/0378-2166(94)00037-F)
- Kendon, Adam. 2004. *Gesture: Visible action as utterance*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511807572>
- Kleiner, Brian. 1998. Whatever – its use in ‘pseudo-argument’. *Journal of Pragmatics* 30. 589–613. DOI: [https://doi.org/10.1016/S0378-2166\(98\)00030-7](https://doi.org/10.1016/S0378-2166(98)00030-7)
- Kreuz, Roger & Glucksberg, Sam. 1989. How to be sarcastic: The echoic reminder theory of verbal irony. *Journal of Experimental Psychology: General* 118(4). 374–386. DOI: <https://doi.org/10.1037/0096-3445.118.4.374>

- Kreuz, Roger & Link, Kristen. 2002. Asymmetries in the use of verbal irony. *Journal of Language and Social Psychology* 21(2). 127–143. DOI: <https://doi.org/10.1177/02627X02021002002>
- Krifka, Manfred. 2001. Quantifying into question acts. *Natural Language Semantics* 9. 1–40. DOI: <https://doi.org/10.1023/A:1017903702063>
- Krifka, Manfred. 2008. Basic notions of information structure. *Acta Linguistica Hungarica* 55. 243–276. DOI: <https://doi.org/10.1556/ALing.55.2008.3-4.2>
- Krifka, Manfred. 2013. Response particles as propositional anaphors. *Semantics and Linguistic Theory (SALT)* 23. 1–18. DOI: <https://doi.org/10.3765/salt.v23i0.2676>
- Krifka, Manfred. 2017. Negated polarity questions as denegations of assertions. In Lee, Chungmin & Kiefer, Ferenc & Krifka, Manfred (eds.), *Contrastiveness in information structure, alternatives and scalar implicatures*, 359–398. Dordrecht: Springer. DOI: https://doi.org/10.1007/978-3-319-10106-4_18
- Kuder, Anna. 2022. Palm-up and throw-away gestures in Polish, German and Russian Sign Language – A corpus-based study. Presentation at DGfS workshop *Visual Communication. New Theoretical and Empirical Developments*, 24 February 2022.
- Ladd, Robert. 1981. A first look at the semantics and pragmatics of negative questions and tag questions. *Chicago Linguistic Society (CLS)* 17. 164–171.
- Laparle, Schuyler. 2021. Tracking discourse topics in co-speech gesture. In Duffy, Vincent G. (ed.), *Digital human modeling and applications in health, safety, ergonomics and risk management: Human body, motion and behavior (Lecture Notes in Computer Science 12777)*, 233–249. Cham: Springer. DOI: https://doi.org/10.1007/978-3-030-77817-0_18
- Lascarides, Alex & Asher, Nicholas. 1993. Temporal interpretation, discourse relations, and commonsense entailment. *Linguistics and Philosophy* 16. 437–493. DOI: <https://doi.org/10.1007/BF00986208>
- Lascarides, Alex & Stone, Matthew. 2009a. Discourse coherence and gesture interpretation. *Gesture* 9. 147–180. DOI: <https://doi.org/10.1075/gest.9.2.01las>
- Lascarides, Alex & Stone, Matthew. 2009b. A formal semantic analysis of gesture. *Journal of Semantics* 26. 393–449. DOI: <https://doi.org/10.1093/jos/ffp004>
- Lasersohn, Peter. 2005. Context dependence, disagreement, and predicates of personal taste. *Linguistics and Philosophy* 28. 643–686. DOI: <https://doi.org/10.1007/s10988-005-0596-x>
- Leech, Geoffrey. 1983. *Principles of pragmatics*. London and New York: Longman Group Ltd.
- Liu, Mingya. 2012. *Multidimensional semantics of evaluative adverbs*. Leiden and Boston: Brill. DOI: <https://doi.org/10.1163/9789004248496>
- Malamud, Sofia & Stephenson, Tamina. 2015. Three ways to avoid commitments: Declarative force modifiers in the conversational scoreboard. *Journal of Semantics* 32(2). 275–311. DOI: <https://doi.org/10.1093/jos/ffu002>
- Müller, Cornelia. 2004. The Palm-Up-Open-Hand: A case of a gesture family? In Müller, Cornelia & Posner, Roland (eds.), *The semantics and pragmatics of everyday gestures*, 233–256. Berlin: Weidler Verlag.

- Müller, Jean Moritz. 2017. How (not) to think of emotions as evaluative attitudes. *Dialectica* 71. 281–308. DOI: <https://doi.org/10.1111/1746-8361.12192>
- Nevins, Andrew I. & Vaux, Bert. 2003. Metalinguistic, shmetalinguistic: The phonology of shm-reduplication. *Chicago Linguistic Society (CLS)* 39(1). 702–721.
- Norricks, Neal R. 2009. Interjections as pragmatic markers. *Journal of Pragmatics* 41. 866–891. DOI: <https://doi.org/10.1016/j.pragma.2008.08.005>
- Pearson, Hazel. 2013. A judge-free semantics for predicates of personal taste. *Journal of Semantics* 30. 103–154. DOI: <https://doi.org/10.1093/jos/ffs001>
- Portner, Paul. 2004. The semantics of imperatives within a theory of clause types. *Semantics and Linguistic Theory (SALT)* 14. 235–252. DOI: <https://doi.org/10.3765/salt.v14i0.2907>
- Potts, Chris. 2005. *The logic of conventional implicatures*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199273829.001.0001>
- Potts, Chris. 2007. The expressive dimension. *Theoretical Linguistics* 33(2). 165–198. DOI: <https://doi.org/10.1515/TL.2007.011>
- Potts, Chris. 2012. Conventional implicature and expressive content. In Maienborn, Claudia & von Stechow, Klaus & Portner, Paul (eds.), *Semantics: An international handbook of natural language meaning*, Vol. 3 (HSK 33.3), 2516–2535. Berlin: De Gruyter Mouton. DOI: <https://doi.org/10.1515/9783110253382.2516>
- Potts, Christopher & Roeper, Tom. 2006. The narrowing acquisition path: From expressive small clauses to declaratives. In Progovac, Ljiljana & Paesani, Kate & Caselles, Eugenia & Barton, Ellen (eds): *The syntax of nonsententials: Multi-disciplinary perspectives*, 183–201. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/la.93.09pot>
- Repp, Sophie. 2013. Common ground management: Modal particles, illocutionary negation and VERUM. In Gutzmann, Daniel & Gärtner, Hans-Martin (eds.), *Beyond expressives: Explorations in use-conditional meaning*, 231–274. Leiden: Brill. DOI: https://doi.org/10.1163/9789004183988_008
- Rett, Jessica. 2021. The semantics of emotive markers and other illocutionary content. *Journal of Semantics* 38. 305–340. DOI: <https://doi.org/10.1093/jos/ffab005>
- Riemer, Nick. 2014. Comment: Interjections and expressivity. *Emotion Review* 6. 64–65. DOI: <https://doi.org/10.1177/1754073913494892>
- Roberts, Craig. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5. 1–69. DOI: <https://doi.org/10.3765/sp.5.6>
- Romero, Maribel. 2006. Biased yes/no questions: The role of VERUM. *Sprache und Datenverarbeitung* 30. 9–24.
- Romero, Maribel & Han, Chung-hye. 2004. On negative yes/no questions. *Linguistics and Philosophy* 27. 609–658. DOI: <https://doi.org/10.1023/B:LING.0000033850.15705.94>
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1. 75–116. DOI: <https://doi.org/10.1007/BF02342617>
- Rudin, Deniz. 2018. Rising imperatives. *Semantics and Linguistic Theory (SALT)* 28. 100–119. DOI: <https://doi.org/10.3765/salt.v28i0.4408>

- Sauter, Disa A. 2014. Comment: Evidence for basicness from noise-like interjections of emotions. *Emotion Review* 6. 65–66. DOI: <https://doi.org/10.1177/1754073913494893>
- Schlenker, Philippe. 2018a. Gesture projection and cosuppositions. *Linguistics and Philosophy* 41. 295–365. DOI: <https://doi.org/10.1007/s10988-017-9225-8>
- Schlenker, Philippe. 2018b. Iconic pragmatics. *Natural Language & Linguistic Theory* 36. 877–936. DOI: <https://doi.org/10.1007/s11049-017-9392-x>
- Schultz, Julia. 2019. The impact of Yiddish on the English language: An overview of lexical borrowing in the variety of subject areas and spheres of life influenced by Yiddish over time. *English Today* 35. 2–7. DOI: <https://doi.org/10.1017/S0266078418000494>
- Shanon, Benny. 1976. On the two kinds of presupposition in natural language. *Foundations of Language* 14. 247–249.
- Siahaan, Poppy. 2021. Recurrent gestures associated with negativity. Presentation at *International Society for Gesture Studies - Hong Kong*, online seminar series, 27 August 2021.
- Snider, Todd. 2017. *Anaphoric reference to propositions*. Ithaca, NY: Cornell University dissertation. DOI: <https://doi.org/10.7298/X4C24TNB>
- Sprouse, Jon & Almeida, Diogo. 2012. Assessing the reliability of textbook data in syntax: Adger's Core Syntax. *Journal of Linguistics* 48. 609–652. DOI: <https://doi.org/10.1017/S0022226712000011>
- Sprouse, Jon & Almeida, Diogo. 2013. The empirical status of data in syntax: A reply to Gibson and Fedorenko. *Language and Cognitive Processes* 28. 222–228. DOI: <https://doi.org/10.1080/01690965.2012.703782>
- Sprouse, Jon & Schütze, Carson T. & Almeida, Diogo. 2013. A comparison of informal and formal acceptability judgments using a random sample from *Linguistic Inquiry* 2001–2010. *Lingua* 134. 219–248. DOI: <https://doi.org/10.1016/j.lingua.2013.07.002>
- Stephenson, Tamina. 2007. *Towards a theory of subjective meaning*. Cambridge, MA: Massachusetts Institute of Technology dissertation. <https://dspace.mit.edu/handle/1721.1/41695>
- Sweetser, Eve & Sizemore, Marisa. 2008. Personal and interpersonal gesture spaces: Functional contrasts in language and gesture. In Tyler, Andrea & Kim, Yiyoun & Takada, Mari (eds.), *Language in the context of use: Cognitive and discourse approaches to language and language learning*, 25–52. Berlin: Mouton de Gruyter. DOI: <https://doi.org/10.1515/9783110199123.1.25>
- Tessendorf, Sedinha. 2016. Actions as sources of gestures. In Fernández-Villanueva, Marta & Jungbluth, Konstanze (eds.), *Beyond language boundaries: Multimodal use in multilingual contexts*, 34–54. Berlin: De Gruyter. DOI: <https://doi.org/10.1515/9783110458817-003>
- van Rooy, Robert. 2003. Questioning to resolve decision problems. *Linguistics and Philosophy* 26. 727–763. DOI: <https://doi.org/10.1023/B:LING.0000004548.98658.8f>
- van Rooy, Robert. 2004. Utility of mention-some questions. *Research on Language and Computation* 2. 401–416. DOI: <https://doi.org/10.1007/s11168-004-1975-0>
- von Fintel, Kai. 2001. Would you believe it? The King of France is back! (Presuppositions and truth-value intuitions). In Bezuidenhout, Anne & Reimer, Marga (eds.), *Descriptions and beyond:*

An interdisciplinary collection of essays on definite and indefinite descriptions and other related phenomena, 315–341. Oxford: Oxford University Press.

Webber, Bonnie Lynn. 1988. Discourse deixis: Reference to discourse segments. *Association for Computational Linguistics* 26. 113–122. DOI: <https://doi.org/10.3115/982023.982037>

Wehling, Elisabeth. 2017. Discourse management gestures. *Gesture* 16. 245–275. DOI: <https://doi.org/10.1075/gest.16.2.04weh>

Wiltschko, Martina. 2021. *The grammar of interactional language*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781108693707>

Wiltschko, Martina & Heim, Johannes. 2016. The syntax of confirmational: A neo-performative analysis. In Kaltenböck, Gunther & Keizer, Evelien & Lohmann, Arne (eds.), *Outside the clause: Form and function of extra-clausal constituents*, 305–340. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/slcs.178.11wil>

Yoder, Anne & Widen, Sherri & Russell, James. 2016. The word *disgust* may refer to more than one emotion. *Emotion* 16(3). 301–308. DOI: <https://doi.org/10.1037/emo0000118>

Zimmermann, Malte. 2011. Discourse particles. In Portner, Paul & Maienborn, Claudia & von Stechow, Klaus (eds.), *Semantics: An international handbook of natural language meaning*, Vol. 2 (HSK 33.2), 2012–2038. Berlin: De Gruyter Mouton. DOI: <https://doi.org/10.1515/9783110255072.2012>

