

# Ideophones as iconic mixed items<sup>1</sup>

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**Abstract.** Ideophones such as the German *plitsch platsch* ‘splish splash’, *holterdipolter* ‘helter-skelter’ and *ratzfatz* ‘very quickly, fast’ have long been considered exceptions to the rule of arbitrariness in natural language. However, they have been argued to be a near universal feature of language (cf. Diffloth, 1972; Kilian-Hatz, 1999) and with the increased interest in the meaning contributions of iconic forms (cf. Ebert et al. (2020); Esipova (2019); Schlenker (2018b, a) among others), this article aims to contribute to the growing literature on iconicity and meaning by presenting an analysis of ideophones as “iconic mixed items”, combining both descriptive and depictive meaning, similar to the expressive mixed items discussed by McCready (2010); Gutzmann (2011).

**Keywords:** ideophones, mixed items, at-issueness, iconicity, German.

## 1. Introduction

In recent years, there has been a growing interest in the meaning contributions of iconic enrichments in spoken languages, much of this focussed on the at-issue status of iconic co-speech gestures (see Ebert et al. (2020); Esipova (2019); Schlenker (2018b, a) among others). The research discussed here expands upon this work on gestures by looking at the meaning contribution of a prominent iconic enrichment in spoken language; ideophones.

Dingemanse (2019: p.16) defines ideophones as “open lexical class of marked words that depict sensory imagery”. In other words, ideophones are conventionalised words which are marked with respect to the morphophonology of the languages in which they occur, rely on “perceptual knowledge that derives from sensory perception of the environment and the body” (Dingemanse, 2013: p.655) and form an open class, with new ideophones being able to be added to this class via ideophonisation or ideophone creation. Most importantly, Dingemanse (2019) argues that ideophones depict rather than describe. This clearly refers back to the different communication types outlined by Clark and Gerrig (1990), with Dingemanse arguing that ideophones constitute a depictive rather than a descriptive act. Instead of interpreting a set of arbitrary signs according to a conventionalised linguistic system, as one must do with descriptive expressions, depictive expressions directly illustrate the events to which they refer. For example, the German ideophone *plitsch platsch* ‘splish splash’ in (1a) iconically depicts the wetness of the frog and how it produced different kinds of splashing sounds as it moved up the stairs. This is in contrast to the descriptive expression *mit einem platschenden Geräusch*, which gives a more arbitrary description of how the frog moved up the stairs.<sup>2</sup>

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<sup>2</sup>The expression *mit einem platschenden Geräusch* is not entirely arbitrary as *platschend* is derived from the ideophonic verb *platschen* and has some sound symbolic, iconic properties. However, it is not depictive in the same manner as a ‘true’ ideophone. See Section 4.1 for further discussion of depiction in ideophones.

- (1) a. Der Frosch geht plitsch platsch die Treppe hoch.  
 the frog goes IDEO the stairs up  
 ‘The frog goes splish splash up the stairs.’
- b. Der Frosch geht mit einem platschenden Geräusch die Treppe hoch.  
 the frog goes with a splashing sound the stairs up  
 ‘The frog goes up the stairs, making splashing sounds.’

Languages such as German and English have often been claimed to be ideophone poor, with languages such as Japanese, Quechua and the Bantu languages having a much larger range of ideophones encompassing a variety sensory categories. Nevertheless, ideophones have been argued to be a (near-)universal feature of human language (cf. Diffloth, 1972; Kilian-Hatz, 1999) and while Western European languages may not contain the same range of ideophones as other languages, ideophones certainly do exist in their lexicons (see Barnes et al. (2022) for a discussion of how ideophones in German fit the definition provided by Dingemanse (2019)).

Previous research into ideophones has predominantly focused on their crosslinguistic typology, sound symbolism and the semantic categories they can express with little to no formal semantic work on ideophones, notable exceptions being Henderson (2016); Kawahara (2020). However, the crosslinguistic literature on ideophones provides some clues as to their at-issue status. For example, Dingemanse (2017) describes properties for ideophones in Siwu, which seem to resemble those of non-at-issue content, particularly Pottsian supplements (cf. Potts, 2005). Dingemanse argues that the majority of ideophones in Siwu are not subject to negation, cannot be used in questions and provide new rather than backgrounded information. Similar properties have also been noted for ideophones in Japanese by Kita (1997, 2001) and Toratani (2018). Kita (1997, 2001) even argues for a multidimensional approach to ideophones in Japanese. He proposes that ideophones occur in the affecto-imagistic dimension, while other parts of speech occur in the analytic dimension. As logical negation only targets linguistic material in the analytic dimension, ideophones cannot be targeted by logical negation. This approach suggests that ideophones contribute information in a different manner to more arbitrary content and the parallels to the multidimensional analysis of at-issueness proposed by Potts (2005) are striking.

Barnes et al. (2022) conducted the first experimental work on the at-issue status of ideophones, with the results indicating that sentence-medial adverbial ideophones in German are less at-issue than equivalent standard adverbial expressions. The initial hypothesis was that the ideophones are less at-issue due to their depictive nature. Descriptive content is the primary means of communication in spoken language, with depictive content adding an additional layer and it is therefore likely that depictive content is generally subordinated compared to descriptive content. However, it appears that although such ideophones in German are default non-at-issue, this is not universally so. The experimental work was replicated on ideophones in Akan, a language where ideophones occur much more frequently and showed that adverbial ideophones in Akan are no less at-issue than standard adverbials (cf. Asiedu et al., 2023). This indicates that the non-at-issue status of German ideophones cannot be purely due to their depictive nature, as Akan ideophones are equally depictive. Dingemanse (2019) has in fact argued that ideophones combine iconic and arbitrary mappings. As the range of possible iconic meanings in a language is vast, ideophones represent socially mediated and conventionalised iconic meanings and are therefore distinct from other non-conventionalised iconic forms. In (2), *splish splash* clearly has the conventionalised meaning that water was involved and that splashing sounds

were made. While this conventionalised meaning appears to be somewhat vague, it still holds across all contexts for the ideophone and allows speakers to say when the ideophone is used appropriately or not.

(2) Bill went splish splash through the puddles!

In this article, I will therefore propose that the differing at-issue status of ideophones in German and Akan is due to the fact that these ideophones are *iconic mixed items*, containing both iconic depictive *and* conventionalised descriptive content, and that this descriptive content can be more or less at-issue, which in turn influences the overall at-issue status of ideophones. Ideophones are therefore similar to expressive mixed items such as *cur*, as discussed by McCready (2010); Gutzmann (2011), in that they contain two types of meaning. In this analysis, the descriptive meaning component of ideophones contributes the same meaning as arbitrary adverbials, namely event modification, while the second meaning component of ideophones is their depictive meaning. Here I follow Henderson (2016) and analyse the depictive meaning component as a demonstration (cf. Davidson, 2015), which stands in a similarity relation to the given referent.

This article is structured as follows: Section 2 will give the necessary background on expressive mixed items, in particular the diagnostics for said items proposed by Gutzmann (2011) and will discuss how these diagnostics apply to ideophones in German, demonstrating that these also appear to be mixed items. Section 3 will discuss the approaches of Davidson (2015) to quotation and Henderson (2016) to ideophones, upon which this approach builds, before outlining the proposed semantic analysis of ideophones in Section 4, discussing the modelling of both the descriptive and depictive components of the ideophone and how these combine. Section 5 will discuss how this approach can account for the at-issue status of adverbial ideophones in German and Akan, with Section 6 will concluding the article.

## 2. Mixed items

This section will first provide the necessary background on expressive mixed items, particularly the diagnostics for such items that were proposed by Gutzmann (2011), before turning to how these diagnostics can be applied to ideophones in German.

### 2.1. Expressive mixed items

Expressives provide information about the speaker's attitude or emotions towards a particular situation or a particular referent. Examples include, but are not limited to, epithets such as *damn*, *fucking* and slurs such as *bastard*. For example, *damn* in (3) could indicate that the speaker has a negative attitude towards the dog, potentially due to its barking, or perhaps that the speaker dislikes dogs in general, or that the speaker is annoyed by the situation in general.

(3) The damn dog barked all night long.

Expressives are generally considered *descriptively ineffable* (cf. Potts, 2007b). For example, speakers would struggle to define an expressive modifier such as *damn*, other than to say that

it is somewhat negative. However, given a sentence as in (3), speakers will be able to say that *damn* refers to the speaker's negative attitude towards the dog or the situation as a whole. Potts (2007b) also argues that expressives such as *damn* are non-at-issue. In (4), the main assertion that the dog barked all night can be directly denied, as in (4b), whereas *damn* cannot be directly denied, as in (4c), but instead must be targeted by a discourse interrupting interjection, as in (4d).

- (4) a. A: The damn dog barked all night long.  
 b. B: No, it didn't it! It only barked for 10 minutes!  
 c. #B': No, you like the dog!  
 d. B'': Hey, wait a minute! You like that dog!

However, there do appear to be cases where expressives must be at least partially at-issue. For example, in (5), *bastard* must be somewhat at-issue in order for the sentence to be well-formed and interpretable.

- (5) The bastard parked his car over my driveway.

In his seminal work on at-issueness and conventional implicatures, Potts (2005) argued that an atomic linguistic expression cannot contribute both at-issue and conventional implicature, or non-at-issue, content. Hence in Potts' framework, expressions must be either fully at-issue or non-at-issue. This would then suggest that in (5), *bastard* must be fully at-issue. However, McCready (2010) and Gutzmann (2011) have both argued for the existence of expressions that contain both at-issue descriptive and non-at-issue expressive content, or so called 'mixed items'. In this approach, *bastard* in (5) would contain descriptive at-issue content referencing a unique, salient individual in the context and the expressive content denoting the speaker's negative emotions. Some examples of expressive mixed items in German are given below:

- (6) a. *Köter* 'cur, mutt'  
 AT-ISSUE: given individual is a dog.  
 EXPRESSIVE: the speaker has a negative attitude towards dogs, a particular dog, etc.  
 b. *Bulle* 'cop'  
 AT-ISSUE: given individual is a police officer.  
 EXPRESSIVE: negative attitude towards police, etc.  
 c. *Tussi* 'bimbo'  
 AT-ISSUE: given individual is a girl.  
 EXPRESSIVE: negative attitude towards said individual.  
 (Gutzmann, 2011: p.131)

Gutzmann (2011) argues that there are two distinct meaning components within these mixed items, an at-issue descriptive component and a non-at-issue expressive one, and that such mixed expressives cannot be analysed by assuming that the expressive content is contained within the descriptive meaning. Firstly, he argues that the sentences as in (7a) and (7b) have the same descriptive content and, from a descriptive standpoint, would be true in the same situations, namely those in which a unique, salient dog barked all night long. However, (7a) contributes additional, expressive meaning that is missing from (7b), namely the speaker's negative attitude. If *cur* were therefore to be substituted by *dog* then this expressive content would be lost.

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Hence Gutzmann (2011) argues that this expressive meaning cannot be part of *cur*'s descriptive content.

- (7) a. The cur barked all night long!  
b. The dog barked all night long!

Gutzmann (2011) furthermore illustrates the two dimensions of meaning in mixed expressives using the outdated racist slur *Boche* 'German'. While it is possible to directly deny the assertion that Lessing was German, as in (8a), it is not possible to directly target the expressive content of a negative attitude towards Germans, cf. (8c), but instead this must be targeted using a discourse interrupting interjection, as in (8d).

- (8) a. A: Lessing was a Boche.  
b. B: No, he was not a German.  
c. B': # No, I like Germans!  
d. B'': Hey, wait a minute! I like Germans!  
(Gutzmann, 2011: p.133)

This indicates that the descriptive content of *Boche* is at-issue, while the negative attitude is non-at-issue. Hence Gutzmann (2011) argues again that the negative attitude cannot be part of *Boche*'s descriptive meaning. The two meaning components must be in different dimensions; the at-issue descriptive dimension and the non-at-issue expressive dimension. As it is not possible for a single meaning component to have two different levels of at-issueness, there must be two components here.

Finally, Gutzmann (2011) shows that the expressive component of such mixed items cannot be displaced. In (9), the speaker cannot call Daniel a *Boche* and then immediately follow this by stating that they like Germans today. This is because the expressive content of *Boche* is bound to the utterance time, meaning that the speaker commits themselves to not liking Germans at the utterance time through their use of *Boche*. The descriptive content on the other hand, is not utterance bound; it is possible that the property of being German can hold of a past time only.

- (9) Daniel was a Boche. # But today, I like Germans.

Given these properties of expressive mixed items, I now turn to ideophones in German and discuss how these diagnostics apply to them, arguing that ideophones can also be viewed as mixed items, but instead of combining expressive and descriptive meaning, they combine *depictive* and descriptive meaning.

### 2.2. Ideophones as mixed items

As previously discussed, this analysis argues for two meaning components in ideophones; one descriptive and one depictive. I therefore argue that ideophones are mixed items due to the fact that they contribute two different meaning components. This is somewhat distinct to how both Gutzmann (2011); McCready (2010) used mixed item to refer to the fact that such expressives contribute meaning in two different at-issue dimensions, although as we will see, the descriptive and depictive meaning components of ideophones can have differing degrees of at-issueness.

Turning now to the two meaning components themselves, we can see that when comparing a sentence with a German adverbial ideophone to one with an adverbial equivalent, it is clear that the ideophone contributes additional meaning alongside its descriptive meaning. While for the mixed expressives, this meaning was expressive, for ideophones it is depictive. If we disregard at-issueness<sup>3</sup>, then when an arbitrary equivalent substitutes an adverbial ideophone, it results in near identical descriptive content, as can be seen in (10).

- (10) a. Peter rennt holterdipolter die Treppe runter!  
 Peter runs IDEO the stairs down  
 ‘Peter runs helterskelter down the stairs!’
- b. Peter rennt laut und chaotisch die Treppe runter!  
 Peter runs loudly and chaotically the stairs down  
 ‘Peter runs loudly and chaotically down the stairs!’

Here (10a) and (10b) could be used to describe the same situation of an individual running loudly and chaotically down the stairs and would contribute very similar descriptive meaning with regards to the manner in which the individual did so. However, the ideophone *holterdipolter* in (10a) contributes additional depictive meaning about the event of running down the stairs. Hence, were *holterdipolter* to be substituted with *laut und chaotisch* then this depictive component would be lost.

This example also illustrates that German ideophones too appear to be somewhat descriptively ineffable. Although *laut und chaotisch* has roughly the same meaning as *holterdipolter*, it is difficult to exactly paraphrase the ideophone using standard adverbials. It seems that the descriptive content of ideophones is somewhat vague, although this is not necessarily a crosslinguistic property, but may be more specific to German ideophones. Although not directly discussed by Gutzmann (2011), descriptive ineffability seems to apply somewhat differently to mixed expressives. The descriptive content of *cur* in (11) is not in any way ambiguous, it refers to a unique, salient dog. The expressive content is, however, more vague. It is clear that the speaker probably dislikes this dog and maybe dogs in general, but it is also possible that the expressive meaning refers to the situation overall, i.e. the speaker is annoyed that they couldn’t sleep because the dog was barking. As such, it is hard to say exactly what the expressive meaning of *cur* is and, similarly to the depictive content of ideophones, it appears to vary from utterance context to context.

- (11) The cur barked all night long!

Complex ideophone predicates, such as *macht plitsch platsch* ‘makes splish splash’ also contribute additional depictive content when compared to non-ideophonic equivalents. (12a) and (12b) again make similar descriptive contributions, but *plitsch platsch* adds an additional depictive component that is not present in the more arbitrary *laut platschende Geräusche*.<sup>4</sup> Substitution here would again result in the loss of the depictive component.

<sup>3</sup>Here we are discussing overall meaning contributions and not distinguishing between at-issue and non-at-issue content.

<sup>4</sup>It is worth noting, however that this expression is not entirely arbitrary. The adjective *platschend* is derived from the verb *platschen*, which is an ideophonic verb and is almost definitely the origin for *plitsch platsch*. Nevertheless, the expression is clearly much less depictive than *plitsch platsch*.

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- (12) a. Ein Frosch macht plitsch platsch im Garten.  
 a frog makes IDEO in the garden  
 ‘A frog goes splish splash in the garden.’
- b. Ein Frosch macht laut platschende Geräusche im Garten.  
 a frog makes loud splashing noises in the garden  
 ‘A frog makes loud splashing noises in the garden.’

Such complex ideophone predicates are even more similar to expressive mixed items as their descriptive and depictive components have different levels of at-issueness. For example, in (13), the descriptive meaning of *macht plitsch platsch*, namely that the frog made splashing sounds, can be directly denied, as in (13b), indicating that this component is at-issue. However, the depictive meaning cannot be directly targeted, cf. (13c), but instead must be addressed via a discourse interrupting interjection, as in (13d), indicating that this is non-at-issue. As with the mixed expressive *Boche*, the differing at-issue status shows that the meaning components must be distinct from one another.

- (13) a. Ein Frosch macht plitsch platsch im Garten.  
 a frog makes IDEO in the garden  
 ‘A frog goes splish splash in the garden.’
- b. Nein, das stimmt nicht. Man hört kein Platschen im Garten.  
 no that is right not one hears no splashing in the garden  
 ‘No, that’s not true. I can’t hear any splashing in the garden!’
- c. #Nein, das stimmt nicht. Es hört sich ganz anders an!  
 no that is right not it sounds REFL completely different PREP  
 ‘No, that’s not true. It sounds completely different!’
- d. Hey warte mal! Es hört sich ganz anders an!  
 hey wait once it sounds REFL completely different PREP  
 ‘Hey wait a minute! It sounds completely different!’

Due to the default non-at-issue status of adverbial ideophones in German, the direct denial test is not as easy to apply. Nevertheless, it does appear possible to target the descriptive and depictive components of adverbial ideophones separately using a discourse interrupting interjection. In (14), *holterdipolter* is non-at-issue and hence its descriptive contribution cannot be targeted directly, cf. (14b), but can be denied if the speaker uses a discourse interrupting interjection, cf. (14c).

- (14) a. Peter geht die Treppe holterdipolter runter.  
 Peter goes the stairs IDEO down  
 ‘Peter is going helterskelter down the stairs.’
- b. #Nein, das stimmt nicht. Er geht doch völlig geordnet runter.  
 No that is right not he goes but completely orderly down  
 ‘No, that’s not true. He’s going down in a completely calm way.’
- c. Hey, warte mal. Peter geht doch völlig geordnet runter.  
 hey wait once Peter goes but completely orderly down  
 ‘Hey wait a minute. Peter’s going down in a completely calm way.’

The depictive content of *holterdipolter* is also non-at-issue here and as such, cannot be directly targeted, cf. (15b). It does appear that the depictive component may be targeted with a discourse interrupting interjection, as in (15c), however, this denial does not appear as acceptable as the

denial in (13d). There are a few potential reasons for this, which are not mutually exclusive. Firstly, we have seen that the depictive content of ideophones is somewhat hard to define and is almost entirely based on context, as such it is somewhat difficult to pick out what part of the depictive content could be denied. Secondly, the construction in (13a) highlights the depiction of sound via *plitsch platsch* and therefore it is easier for a speaker to deny the sound emission component of the ideophone. Finally, it also seems likely that *plitsch platsch* is more clearly depictive of sound than *holterdipolter*, which would also make the denial easier.

- (15) a. Peter geht die Treppe holterdipolter runter.  
 Peter goes the stairs IDEO down  
 ‘Peter is going helterskelter down the stairs.’
- b. #Nein, das stimmt nicht. Es hört sich ganz anders an!  
 no that is right not it sounds REFL completely different PREP  
 ‘No, thats not true. It sounds completely different!’
- c. (?) Hey warte mal! Es hört sich ganz anders an!  
 hey wait once it sounds REFL completely different PREP  
 ‘Hey wait a minute! It sounds completely different!’

The third example by Gutzmann (2011) concerned the utterance bound nature of expressive content. However, it is not immediately clear if this property also applies to depictive content in ideophones. Perspective does appear to play role in ideophones, potentially due to their depictive nature and this could have an impact on how and when speakers can use ideophones. For example, it seems strange for the speaker to use *helterskelter* while also asserting that they did not witness the event. As this issue is rather complex and not immediately comparable to the non-displaceability of expressives, it will not be discussed further here.

- (16) Peter ging die Treppe holterdipolter runter. ?? Ich habe ihn gar nicht  
 Peter went the stairs IDEO down I have him absolutely not  
 gesehen, aber er ging sicher holterdipolter runter.  
 seen but he went surely IDEO down  
 ‘Peter went helterskelter down the stairs. I didn’t see him, but he definitely went down them helterskelter.’

The examples discussed above indicate that adverbial ideophones occurring alone and in complex predicate structures have a depictive component, which adds additional meaning on top of their descriptive meaning component, and can be targeted separately to this descriptive meaning in discourse. Having established that ideophones can be considered iconic mixed items, I now turn to how to semantically model these two meaning components, starting by outlining previous approaches to ideophones which I adapt within my analysis.

### 3. Previous approaches: Quotations and ideophones as demonstrations

In order to model the depictive content of ideophones, I draw upon the demonstration based account provided by Henderson (2016) for ideophones in Tselal. Davidson (2015) originally proposed *demonstrations* as a means of modelling spoken language quotation, but as we will see, they can be used to model a range of iconic phenomena. I will therefore first give a brief outline of Davidson’s approach to quotation in order to provide the necessary background both



to understand Henderson’s (2016) analysis of ideophones, as well as my proposal. I will then outline the analysis given by Henderson (2016) for ideophones in Tseltal.

### 3.1. Davidson (2015)

Davidson (2015) follows Clark and Gerrig (1990) and models quotations as demonstrations, whereby speakers do not simply give verbatim repetitions of speech, but instead perform utterances using a range of multimedial linguistic resources, such as inflection, prosody, facial expressions and gestures in order to imitate the full speech report and not just what was said. For example, in (17), it is clear that the speech reported in (17a) is intended as a performance of how Bob was scared when he saw the spider, while in (17b) and (17c), we are clearly not supposed to understand the quoted speech as verbatim speech reports, but rather as an overall demonstration of how Bob and the cat acted in their respective situations.

- (17) a. Bob saw the spider and was like “ahhh!”<sub>SCARED</sub>  
 b. Bob saw the spider and was like “I can’t kill it!”  
 c. My cat was like “feed me!”  
 (Davidson, 2015: 485)

In order to model these performances, Davidson (2015) introduces a new type into the ontology, demonstrations *d*. Davidson argues that demonstrations can be considered a superset of the linguistic objects of type *u* introduced by Potts (2007a). Davidson (2015), however, argues that *d* is somewhat more flexible than Potts’ linguistic objects, allowing “for more natural language data beyond the words used” (p.486).<sup>5</sup> Furthermore, Davidson (2015) introduces the predicate *demonstration-of*, which takes demonstrations and events as its arguments. She provides the following definition of the *demonstration-of* predicate:

- (18) A demonstration *d* is a *demonstration of e* (i.e. *demonstration(d, e)* holds) if *d* reproduces properties of *e* and those properties are relevant in the context of speech.  
 (Davidson, 2015: p.487)

Properties that the demonstration can reproduce include, but are not limited to words, intonation, facial expressions and gestures. *demonstration-of* is purposefully underspecified in order to allow for the varieties of ways that a speaker may choose to reproduce the original speech event.

In English, the *demonstration-of* predicate is lexicalised via the expression *be like*:

- (19)  $[[\text{like}]] = \lambda d \lambda e [\text{demonstration}(d, e)]$

As such, the quoted clause “I’m happy” in an utterance such as (20) can be analysed as in (21).

- (20) John was like “I’m happy”  
 (21)  $[[\text{“I’m happy”}]] = d_1$   
 $[[\text{like}]] = \lambda d. \lambda e. \text{demonstration}(d, e)$   
 $[[\text{like “I’m happy”}]] = [\lambda d. \lambda e. \text{demonstration}(d, e)](d_1)$

<sup>5</sup>It should be noted that Potts (2007a) does briefly discuss how his system could be extended to non-linguistic quotations, such as the sound of a machine gun. However, he does not go into any further detail on this.

$$= \lambda e. \text{demonstration}(d_1, e)$$

$$\llbracket \text{John was like "I'm happy"} \rrbracket = \exists e. [\text{agent}(e, \text{John}) \wedge \text{demonstration}(d_1, e)]$$

The demonstrated event is therefore the act of John saying “I’m happy”, which is reported by the demonstration  $d_1$ , with the *be like* construction licensing this demonstration.

Having now given the necessary background on Davidson (2015), we can turn to Henderson (2016), who adapts Davidson’s approach in order to analyse ideophones in Tseltal.

### 3.2. Henderson (2016)

The basic ideophone construction in Tseltal is the ideophone stem combined with the reported speech particle *chi*. Henderson (2016), however, argues that using an ideophone is not simply a case of quoting the ideophone stem, but rather that ideophones are a distinct lexical class in Tseltal, with this construction being a unique type of ideophone demonstration that can be analysed using compositional semantics just as other expressions in the language can also be.

Henderson (2016) formalises the analysis proposed by Davidson (2015), defining type  $d$  as a subtype of  $\epsilon$ , the type of events, and assumes that just as the domain of events is connected to the domains of individuals and times via  $\theta$ -roles, demonstrations are also connected to their participants via  $\theta$ -roles.

Henderson (2016) then analyses ideophone stems as predicates of events, i.e.  $\lambda e. \text{IDEO}(e)$  and introduces the IDEO-DEMO operator, which forms the core of the analysis. This operator selects for ideophone stems in the syntax and semantically returns an expression that can be embedded under the verb *chi* ‘to say’. The operator takes “takes a linguistic expression (here always an ideophone stem denoting a predicate of events) and derives a relation between demonstrations and events” (Henderson, 2016: p.673).

$$(22) \quad \text{IDEO-DEMO: } \lambda u \lambda d \lambda e [\text{TH}_\delta(d) = u \wedge \text{STRUC-SIM}_{\perp u \perp}(d, e)]$$

More specifically, this operator takes the utterance of the ideophone, as a linguistic object, to be the theme of the demonstration event, with the demonstration then standing in a similarity relation to the demonstrated event. Unlike Davidson (2015), Henderson chooses not to underspecify the similarity relation between the demonstration event and demonstrated event, instead proposing the  $\text{STRUC-SIM}_{\perp u \perp}$  relation to connect the ideophone demonstration to the event, with the corner brackets, as in  $\perp u \perp$ , denoting the semantic content of the linguistic object  $u$ . The basis of this relation is that the demonstration event is structurally similar to the demonstrated event.  $\text{STRUC-SIM}_{\perp u \perp}$  essentially requires that the demonstrated event must be partitionable into a set of subevents  $P$ , so that all subevents satisfy the lexical definition of the ideophone, the cardinality of the atomic parts of the demonstration event must be equal to or less than the cardinality of  $P$ , and there must be a temporal similarity between the partition and the atomic parts of the demonstration event.

Henderson (2016) therefore proposes the analysis in (24) for the sentence in (23).

$$(23) \quad \begin{array}{l} \text{Tsok' x-chi-}\emptyset \text{ ta mantekat} \\ \text{IDEO say} \quad \text{in lard} \\ \text{'It goes "tsok' " in the lard.} \end{array}$$

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$$(24) \quad \exists e[\text{AG}(e) = x_1 \wedge \text{TH}_\delta(d_{13}) = \text{tsok}' \wedge \text{STRUC-SIM}_{\perp\text{tsok}'\perp}(d_{13}, e) \\ \wedge \text{LOC}(e) = \sigma x[\text{LARD}(x)]]$$

The truth conditions for (23) can then be given as follows:

- there is an event  $e$  that takes place in the lard and the agent is  $x_1$  (an individual given by the context or variable assignment).
- the demonstration event has the linguistic object  $\text{tsok}'$  as its theme.
- the demonstration event is structurally similar to  $e$ :
  - As  $d_{13}$  is an atomic event,  $e$  must also be partitionable into an atomic event (trivial partition).
  - $e$  must satisfy the predicate. In this case, the predicate is derived from the linguistic object  $\text{tsok}'$ , as in  $\perp\text{tsok}'\perp = \lambda e[\text{TSOK}'(e)]$ .  $e$  must therefore be an event of frying sound emission.

Having now provided the necessary background, I will move on to my proposal for modelling the meaning of ideophones. Although this draws from both Davidson (2015) and Henderson (2016), there are several important differences, which I argue provide a better model of ideophonic meaning.

### 4. Modelling meaning in ideophones

In this section, I will first discuss the depictive meaning component of ideophones, before moving on to the descriptive meaning component of ideophones and how this combines with the depictive component in order to give an analysis for the overall meaning contribution of ideophones.

#### 4.1. Depictive content

In this analysis, the depictive content of the ideophone is modelled as a demonstration, per Davidson (2015). Dingemanse et al. (2016) argue that ideophones are not depictive purely because they are sound-symbolic, but rather a range of utterance level factors such as prosody, intonation, reduplication and so on contribute to how the ideophone depicts. I propose therefore that ideophones are iconic at the utterance level and that the main property which makes them depictive is that the context and manner in which they are uttered will impact upon the way that their iconicity is interpreted. As such, their iconicity can vary from context to context, depending on when and how exactly they are uttered. For example, if a speaker utters *splish splash* in a monotone with a slow reduplication in (25), the depicted event is taken to be one where Bill walks slowly through the puddles, perhaps in a depressed manner. Whereas if the speaker reduplicates *splish splash* quickly, with a high excited voice, the depicted event appears to be one where Bill splashes happily through the puddles. The ideophone *splish splash* therefore contrasts with the verb *splash* in (26), which cannot be manipulated in the same manner to produce the same iconic effect. It would clearly be possible to create an iconic depiction using the utterance in (26), but this would not be solely reliant on the utterance of the verb and would likely need to involve gestures to create the same inferences as for (25).

(25) Bill went splish splash through the puddles!

(26) Bill splashed through the puddles!

Modeling the utterance as a demonstration therefore allows us to capture the depictive nature of ideophones. Unlike the linguistic entities proposed by Potts (2007a), the demonstration does not contain any information about the syntactic or semantic representation of an utterance, it is purely concerned with the form of the utterance. It could be argued that a demonstration simply represents the phonological form of the utterance, however, there are aspects beyond phonology that we may wish to include in this demonstration, such as facial expressions. Therefore, I propose that a demonstration,  $d$ , models the surface form of the utterance, i.e. the exact manner in which the speaker uttered the ideophone, including prosody, phonation type, reduplication and anything else that may have contributed to the iconicity of the utterance. The use of an ideophone, due to its depictive qualities, automatically introduces the demonstration variable. Hence, the utterance of an ideophone automatically triggers two dimensions of meaning, one being the semantic interpretation of the ideophone, i.e. its descriptive meaning and the second being the demonstration of the event via the utterance of the ideophone, i.e. its depictive meaning. I adopt the notation proposed by Potts (2007a) and use upper corner brackets to indicate the exact utterance which is being used as a demonstration. For example, an utterance of the ideophone *plitsch platsch* would be given as  $d_{\ulcorner \text{plitsch platsch} \urcorner}$ .

The demonstration introduces the utterance of the ideophone as a variable in the semantics, however, this alone does not model the iconic relation between the ideophone and the event depicted. Therefore, the introduction of the demonstration variable also triggers a similarity relation between the demonstration and the event contributed by the main predicate. Diverging from both Davidson (2015) and Henderson (2016), I chose to model this iconic relation using the SIM predicate (cf. Umbach and Gust, 2014; Ebert et al., 2020).  $\text{SIM}(x,y)$  holds iff  $x$  and  $y$  are similar in the relevant dimension as given by the context.<sup>6</sup> When an ideophone is uttered therefore, a demonstration  $d$  is introduced, which models the form of the utterance and then stands in a similarity relation to the event being discussed. For ideophones, the SIM predicate can therefore be defined as follows:

(27) If  $d$  is the utterance of an ideophone, and  $e$  an event that the ideophone depicts, then  $\text{SIM}(d,e)$  holds iff  $d$  and  $e$  are similar in the relevant dimension as given by the context.

As we have seen, what this means exactly for ideophones can vary from context to context, as the depictive meaning of ideophones is dependent on the context in which it occurs and the exact manner in which it is uttered. As such, the SIM predicate is left purposefully underspecified to allow for the multidimensional and contextually dependent nature of an ideophone's iconicity.

This modelling of the iconic relation is very different from the  $\text{STRUC-SIM}_{\ulcorner u \urcorner}$  relation proposed by Henderson (2016). Henderson (2016) argues that  $\text{STRUC-SIM}_{\ulcorner u \urcorner}$  can be reduced to similar cardinality between the ideophone utterance and the demonstrated event referent and through his definition of the relation attempts to give an exact analysis of how the iconicity

<sup>6</sup>Umbach and Gust (2014) actually propose a three place SIM predicate, where  $\text{SIM}(x,y,z)$  holds if  $x$  and  $y$  are similar in terms of  $z$ . I.e.  $z$  specifies the dimension of similarity. However, as discussed later in this section, the SIM predicate is purposefully underspecified for ideophones and this dimension variable is therefore not part of the similarity relation between ideophones and events.

of the ideophone arises. This difference in approaches brings us to a larger point overall in the semantics of iconicity. While some argue for an explicit semantics of iconicity beyond demonstrations (cf. Schlenker, 2023), I argue that this is not necessary in a formal semantics of language. Within compositional semantics, the goal is to model how the individual parts of an utterance contribute to the overall meaning of an utterance. We do not attempt to compositionally model how the individual morphemes of a word contribute to the overall meaning, but rather take the word itself as the smallest possible component and model how this contributes to the utterance meaning. Similarly, in this iconic semantics, I take the utterance of the ideophone as the smallest possible component and I do not attempt to model how each component of this utterance, such as the prosody, the amount of reduplication or even the sound symbolism of the ideophone itself contributes individually to the iconicity. Instead the model simply captures that, thanks to its iconic nature, the utterance of the ideophone stands in a similarity relation to the depicted event.<sup>7</sup> Furthermore, attempts to specify the exact source of an ideophone's iconicity often appear to be too restrictive and cannot account for the huge variety of ways in which an ideophone can be iconic.  $\text{STRUC-SIM}_{\lfloor u \rfloor}$  in particular does not seem to allow for the contribution of iconic elements outside of the words spoken, for example prosody, intonation, gesture and facial expressions, among others.

As to why I do not use the *demonstration-of* predicate proposed by Davidson (2015), this is more of a preference in terminology. The term *demonstration of* seems to indicate an intentionality, i.e. that someone is intentionally recreating an event. Hence the *demonstration-of* predicate indicates that quotations are intended to be direct demonstrations of a previously occurring speech (or action) event, i.e. when the speaker utters the quotation they are imitating or recreating an event. While this seems appropriate for cases of quotation, I do not want to argue that ideophones are always intended as recreations of the events they depict. Instead, the ideophones, thanks to their depictive nature, naturally trigger the similarity relation when they are uttered.

Aside from  $\text{STRUC-SIM}_{\lfloor u \rfloor}$  giving a highly specified definition of the ideophone's iconicity, the relation also directly combines the depictive meaning component of ideophones with its descriptive content. However, ideophones appear to contain both descriptive and depictive content meaning components, which can be targeted separately. If these meaning components are combined as in the  $\text{STRUC-SIM}_{\lfloor u \rfloor}$  relation, then this should not be possible. The approach outlined here, however, models the two meaning components as two distinct contributions made by the ideophone. The following section will therefore discuss the descriptive meaning components of ideophones and how these combine with the depictive components in order to give an analysis for the overall meaning contribution of ideophones.

#### 4.2. Descriptive content

This approach proposes that the descriptive component of adverbial ideophones is the same as ordinary adverbial items with the same syntactic distribution, but with obvious differences in

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<sup>7</sup>One potential exception to this would be iconic gestures co-occurring with the ideophone, which may add iconic elements to the demonstration that should be semantically interpreted independently from other components of the utterance form. However, such gestures would arguably not be comparable to prosody, reduplication and sound symbolism as they can easily be separated from the main utterance of the ideophone.

at-issueness. Adverbial ideophones in German appear to pattern with manner modifiers. While they do appear odd when used in answer to questions as in (28), this appears to be mainly due to their default non-at-issue status. When shifted towards at-issueness using the demonstrative *so*, as in (28c), *holterdipolter* is a perfectly acceptable answer to the question of how Peter went down the stairs.

- (28) a. Wie geht Peter die Treppe runter?  
 how goes Peter the stairs down  
 ‘How does Peter go down the stairs?’
- b. #Holterdipolter  
 helterskelter  
 ‘Helterskelter.’
- c. So holterdipolter.  
 DEM IDEO  
 ‘Like helterskelter.’

This analysis assumes a Neo-Davidsonian approach to event semantics in which the predicate contributes an event argument and the ideophone’s descriptive meaning serves as an event modifier of said event. Adverbial ideophones as manner modifiers are therefore functions from events to events. If events are of type  $v$  and assuming a predicate of type  $(v,t)$ , then the event modification provided by the ideophone is of the same type as a standard manner adverbial, namely  $(v, (v,t))$ . Hence in (29), the main predicate contributes an event of running down the stairs of which Peter is the agent. The ideophone *holterdipolter* then takes this event as its argument and returns the modified event, namely some sort of *holterdipolter*-ing event.

- (29) Peter geht die Treppe holterdipolter runter.  
 Peter goes the stairs IDEO down  
 ‘Peter is going helter-skelter down the stairs.’

Due to the descriptive ineffability of ideophones in German, what exactly qualifies as a *holterdipolter*-ing event is up for debate. Most speakers would agree that there must be some amount of loud noise and chaotic movement in order for an event to qualify as such, but, as with most ideophones in German, *holterdipolter* has a somewhat vague descriptive meaning. There are exceptions to this rule, for example both *ratzfat* and *ruckzuck* clearly seem to behave very similarly to the arbitrary adverbial *schnell* ‘fast, quickly’ and in other languages, such as Akan, ideophones appear to have much more conventionalised descriptive meanings. The (im)precise nature of ideophones descriptive meaning will be discussed in greater detail in Section 5. For now, due to this vagueness, I choose not to provide an arbitrary paraphrase of the ideophone when modelling its descriptive meaning, but rather choose to leave the ideophone as the modifier of the event. For example, an event,  $e$ , of Peter going down the stairs would be modified so that *holterdipolter*( $e$ ).

Overall then, the use of an ideophone as a manner adverbial in reporting an event compositionally leads to the modification of the event so that it has the property of said ideophone, as well as introducing a demonstration  $d$ , representing the form of the utterance, which then stands in a similarity relation to the reported event. (29) can therefore be analysed as in (30).

$$(30) \quad [e] \wedge \text{goes-down-the-stairs}(e) \wedge \text{agent}(e, \text{Peter}) \wedge \text{holterdipolter}(e) \wedge [d] \wedge d = d_{\neg \text{holterdipolter}} \wedge \text{SIM}(e, d_{\neg \text{holterdipolter}})$$

Here the descriptive content of the whole sentence is that there is an event of going down the stairs, of which Peter is the agent and that this event has the property of being *holterdipolter*. The depictive content is that there is a demonstration, namely the utterance of *holterdipolter* and this utterance is similar in the relevant dimensions to the event of Peter going down the stairs.

One key component of this analysis is still missing, namely the at-issue status of the two meaning components. The final section will therefore discuss the at-issue status of the two meaning components of ideophones within a gradient approach to at-issueness.

## 5. Ideophones and at-issueness

This analysis of ideophones' at-issueness is based upon the gradient approach proposed by Barnes and Ebert (2023). Barnes and Ebert (2023) argue that propositions can be more or less at-issue with respect to other propositions and that this at-issue status is based on their relevance to a given QUD. A relevance metric  $r$  specifies for every proposition  $p$  and QUD  $Q$  the degree to which  $p$  is relevant to (the resolution of)  $Q$ , or  $r(p, Q)$ . This relevance metric then allows for partial ordering of propositions, with  $r(p, Q)$  being ranked relatively low if there are many other propositions which better resolve  $Q$  and relatively high if there are few propositions which better resolve  $Q$ . Furthermore, Barnes and Ebert (2023) argue that “the less at issue a proposition is the less it contributes to the overall(graded) semantic value of the underlying joint proposition evaluated in the actual world [...]”(p.51) and propose that the joint (graded) truth value  $T(u)$  of an utterance  $u$  can be calculated by multiplying the normalised relevance and truth value of each component proposition and then summing this value for all component propositions. This calculation is spelled out in (31)

$$(31) \quad T(u) = \sum_i \tilde{r}([t_i], Q^*) \cdot [t_i](w^*)$$

In terms of the at-issueness of ideophones, it is assumed that the depictive content of the ideophone, in the absence of other factors, has a very low degree of relevance and is therefore minimally at-issue. If the descriptive content of the ideophone is more at-issue however, this can boost the overall at-issue status of the ideophone utterance by boosting the joint truth value for the ideophone. In German, the default at-issue status of an ideophone's descriptive content is relatively low meaning that the overall at-issue status of the ideophone is relatively low. However, if the ideophone's descriptive meaning contribution is otherwise equivalent to that of a manner adverbial, then why would its at-issue status be relatively low, while manner adverbials appear to be more at-issue?

One possible explanation could be the vague nature of German ideophones' descriptive content. Kennedy (2013) has, for example, argued that there are two types of subjectivity; while *fun* is a gradable evaluative predicate, which is subjective, Kennedy argues that vague, dimensional predicates such as *rich* or *tall* can also be somewhat subjective. Vague predicates, however,

are only subjective due to uncertainty around the standard of comparison used. The descriptive component of ideophones in German appear to demonstrate this second type of subjectivity. In (32b), B disagrees with the use of *holterdipolter* because they do not think that the event of Peter going down the stairs is chaotic enough to satisfy the descriptive component of *holterdipolter*. Here speaker A appears to define an event as *holterdipolter* if it is predominantly loud, whereas B requires the event to be predominantly chaotic.

- (32) **Context:** Peter runs very loudly down the stairs past speakers A and B.
- a. A: Peter ging holterdipolter die Treppe runter!  
     Peter went IDEO                      the stairs    down  
     ‘Peter went helterskelter down the stairs.’
  - b. B: Naja, er war schon    laut, aber so chaotisch ging er nicht.  
     well he was definitely loud but    so chaotic    went he not  
     ‘Well, he was definitely loud, but he wasn’t that chaotic.’

If we assume then that there is a degree of uncertainty around the standard of comparison for the descriptive meaning component of an ideophone such as *holterdipolter*, then this can help to explain why this meaning component is less at-issue than a standard adverbial.

In the gradient approach to at-issueness proposed by Barnes and Ebert (2023), the degree of relevance for a given proposition is determined with respect to alternative propositions that also (partially) resolve  $Q$  in the given context;  $r(p, Q)$  is relatively low on the scale if there are many other alternative propositions a speaker could have made to resolve the question which are ordered above  $r(p, Q)$ . We can furthermore assume that a proposition is more relevant to  $Q$  if it is more informative with respect to resolving  $Q$ . Therefore, when there is uncertainty around the standard of comparison for an ideophone then speakers will find the proposition contributed by the ideophone less informative than that contributed by a standard adverbial with a more precise meaning, where the standard of comparison can easily be determined. The vague meaning components of ideophones in German, such *plitsch platsch* and *holterdiepolter* then results in  $r(p, Q)$  being rated low on the at-issueness scale as other propositions with standard adverbials are more informative with respect to resolving the QUD.

What then is the situation for languages such as Akan, where the ideophone appears to be equally as at-issue as other adverbials? Thanks to the more frequent use of ideophones in Akan, their meanings are more conventionalised and therefore more specified. Hence, when speakers use an ideophone in Akan, there is no confusion around the standard of comparison and the relevance of the ideophone to the QUD can more easily be assessed. This means that the ideophone proposition is just as informative as a proposition modified by an arbitrary adverbial. Unlike in German, there are not a large number of alternative propositions which would better resolve the QUD. The result is therefore a  $r(p, Q)$  for the the ideophone which is equivalent to that of other arbitrary expressions.

Another important point to make about languages, such as Akan, where ideophones occur frequently, is that often the ideophone is the only choice of adverbial (cf. Markus Steinbach, p.c.). This fits well into this account of at-issueness, however. Given that the relevance of a proposition to a QUD is based on how well alternative propositions resolve the QUD, then if there is no alternative, equally informative proposition which also resolves the QUD, then the ideophone will clearly be highly relevant to the QUD and therefore highly at-issue.



The mixed item approach is therefore advantageous in explaining the difference between the at-issue status of ideophones in German and Akan without having to assume that depictive content contributes information differently between the two languages. In this approach, the depictive content of ideophones in both languages is equally non-at-issue, but the descriptive content differs and as such the overall at-issueness of the ideophones differs between the languages.

### 6. Conclusion

This article has outlined an analysis of German ideophones as iconic mixed items similar to expressive mixed items, such as *cur* (cf. Gutzmann, 2011; McCready, 2010). I proposed that ideophones contain both a descriptive and a depictive meaning component and showed that, similarly to expressive mixed items, it is possible to target the descriptive and depictive meaning components of German ideophones separately and that these meaning components can have different degrees of at-issueness, indicating that they are indeed two distinct meaning components. The descriptive content of the ideophone is the same as the meaning contribution of an arbitrary item with the same distribution, so the descriptive content of an adverbial ideophone will be event modification. I modelled the depictive meaning component of the ideophone as a demonstration, *d*, following Davidson (2015); Henderson (2016) and a similarity relation, modelled using the SIM predicate (cf. Umbach and Gust, 2014; Ebert et al., 2020). I argued that the utterance of an ideophone, as a depictive utterance, automatically introduces both the descriptive meaning of the ideophone and a demonstration variable, triggering the inference that the demonstration stands in a similarity relation to the event contributed by the main utterance. This mixed iconic item approach, combined with the gradient approach to at-issueness proposed by Barnes and Ebert (2023) can also account for the difference in at-issue status between adverbial ideophones in German and Akan, with both having equally at-issue depictive content. Ideophones in Akan appear to have more at-issue descriptive content, likely due to a more specified meaning component due to their more frequent use, meaning that ideophones in Akan are more at-issue relative to standard adverbials in the language. While this analysis can account for the differing at-issue status of ideophones in German and Akan, it also raises more questions about the nature of ideophonic meaning such as why the depictive content of ideophones appears to be minimally at-issue and whether the distinction between the at-issue status of ideophones in German and Akan holds for other languages.

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