

# IMPLICIT REGISTER MARKING IN GERMAN VIA METAPHOR AND METONYMY

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## 1. INTRODUCTION

Metaphors and metonymies as in (1) and (2) are non-literal expressions: first, metaphoric expressions denote entities that are similar to the referents of the literal interpretations of the expressions. For example, if the metaphor in (1) represents a department in the sense of a hotbed, the similarity is that both entities are environments that enable the emergence and creation of new things:

- (1) The new dean converted the department into a hotbed of new theories.

Second, metonymies denote entities that are related to the literal referents of the expressions in terms of a salient functional relation. This is illustrated in (2), which makes reference to a person, who is related to a specific instrument by playing it:

- (2) The bassoon has called in sick this morning.

In either case, additional effort of the hearer is required to reconstruct the intended referents. Since no such effort would have been necessary in the case of reference in terms of a literal expression, metaphor and metonymy seem to violate the Maxim of Manner (Grice, 1975). We claim that one of the justifications for such an additional effort lies in the fact that metaphors and metonymies can contribute to implicit register marking, building on work like Goatly (1994, 2011) and Deignan *et al.* (2013). ‘Register’ refers to linguistic variation motivated and determined by the situational and functional context (Halliday and Hasan, 1985; Biber and Conrad, 2009).

To investigate this claim, we annotated a German corpus for metaphor and metonymy. Our corpus includes different text types (parliament speeches, newspaper commentaries, sermons, fiction, debates of a debating society, and TEDx talks), which vary along important register dimensions like literality/orality, persuasivity, or social relations between interlocutors (hierarchy and distance).

Our results show a clear interdependence of metaphor and metonymy with register properties, for instance, with respect to a persuasive purpose and a hierarchical relation between the interlocutors. In contrast, we found that orality and literality emerge as less important for metaphor and metonymy than previously thought, instead, we identified the limitation of length as a new register property that has a strong impact on metonymy.

The paper is structured as follows. After introducing the theoretical foundations of our analysis and relevant previous work in Section 2, we will present the German register corpus, on which our analyses are based, in Section 3. Section 4 will summarise and discuss our results before we conclude with an outlook on further work in Section 5.

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## 2. THEORETICAL BACKGROUND AND PREVIOUS WORK

### 2.1. *Metaphor and metonymy*

Metaphors use an expression to refer to an entity that is similar to the referent of the literal interpretation of the expression with respect to specific properties. The effect is that these properties are transferred from the literal referent (often called ‘vehicle’) to the intended referent (often called ‘tenor’) of the metaphor. For instance, the vehicles in (3) are boundaries and the tenor are conventions that the speaker used to comply with so far. The similarity between the two lies in the fact that both tenor and vehicle outline and delimit a range of possibilities and in this way function as constraints<sup>2</sup>:

- (3) die bisher mein Leben markierenden, sicher erscheinenden Grenzen.  
*the seemingly safe borders that hitherto demarcated my life.*

Metaphor theories reconstruct this similarity in different ways (for an overview see chapters 2-4 in Ritchie, 2013). For the purpose of this paper, it is not necessary to opt for a specific metaphor theory because the issues discussed are independent of the concrete way of implementing metaphors.

Metonymies refer to an entity by denoting an entity saliently linked to the intended referent in the context of the utterance (no similarity is required). Well-known metonymies from professional registers refer to persons in terms of contextually salient accessories, as in Nunberg’s (1979) famous *ham sandwich*, which refers metonymically to a customer who ordered a ham sandwich. In our subcorpus of sermons, for example, many metonymies stem from the domain of communication and are based on the relation ‘locution stands for illocution’, e.g., *Wort* ‘word’ is used in the sense of ‘statement’ in examples like (4):

- (4) Wort der Versöhnung aller Welt  
*word of the reconciliation of the whole world*

Sometimes the referent of the literal interpretation and the intended referent of a metonymy are also called ‘vehicle’ and ‘tenor’, respectively.

### 2.2. *Register*

For the description of register, we follow Systemic-Functional Linguistics (SFL) in decomposing register into field, tenor, and mode (Halliday and Hasan, 1985). ‘Field’ refers to what is happening, to the nature of an interaction that involves language, including subject matter and purpose of the interaction, e.g., when classifying a linguistic interaction as buying a train ticket or reading a bedtime story. ‘Tenor’ targets the participants, in particular, their statuses and social relationships. Two central parameters for tenor are distance and hierarchy (does the communication situation assign equal roles to the participants or are the roles ordered along a dimension like power or seniority)<sup>3</sup>. Finally, ‘mode’ is about the role of text or discourse in the interaction (e.g., how central is it to the activity, and is it accompanied by other, non-linguistic activities) and its organization

<sup>2</sup> The following examples in the paper are taken from our corpus (see Section 3).

<sup>3</sup> This use of the term must be distinguished from its use in metaphor and metonymy research, where it is used to refer to the non-literal, intended meaning.

and properties (such as its oral or written presentation or its monologic or dialogic nature). Relevant to the spoken/written dimension is the model of ‘conceptual literality/orality’ (Koch and Oesterreicher, 1994). In this model, the crucial factor is the way in which a text or discourse is produced, but not its concrete mode of presentation. Hence, in Section 3, we will classify speeches and sermons as literal despite their oral presentation, because they are prepared and fixed in advance.

Another approach to register, introduced in the work of Douglas Biber (see, e.g., Biber and Conrad, 2009), is based on frequencies of grammatical features on all levels (e.g., the use of pronouns or tenses, sentence length, etc.) across text corpora, which are subjected to multidimensional and multivariate analyses in order to identify dimensions. In a second step, these dimensions are interpreted in terms of register features, e.g., persuasivity (to which extent does a discourse aim at convincing its audience to adopt a certain proposition or to act in a specific way), or ‘situation dependent vs. elaborated reference’ (i.e., how dependent is reference on the situational context, in other words, how much contextual knowledge is required to understand definite noun phrases, proper names, and other referring expressions in the discourse). For instance, newspaper articles or counselling sessions refer to specific entities (persons and events) in the context to a high degree, but poetry tends to require much less embedding in a situational context. In the same way, the level of persuasivity is high for instance in sales talks but low in university lectures.

### 2.3. *The interdependence of metaphor and metonymy with register*

Previous work focuses on the general properties of metaphor and metonymy, in particular their function; it started including an account of register in order to obtain a better understanding of metaphors and metonymy in general. We will start by summarising previous work about metaphor and register and will then review work on metonymy and register.

For metaphors, different potential functions are identified for their use, including framing, which exploits the fact that metaphors highlight specific aspects of tenors in order to influence an audience’s stand on these entities (Musolff, 2016), and alienation (Beger, 2011, 2015; Egg, 2016), which can be used for instance in academic lectures to make the audience reconsider everyday concepts from a more distanced scientific perspective. Investigating the function of metaphors motivated widening the perspective to the role of metaphors in their utterance context, in particular, its register.

Goatly (1994, 2011) investigates a selection of metaphor properties (e.g., their degree of conventionalisation or the semantic distance between the entities compared in a metaphor) whether they emerge in registers like conversation, news reports, and popular science writing. Following Goatly’s example, much work of the group of Gerard Steen targets differences of metaphors between specific registers. Steen *et al.* (2010) investigate registers taken from Biber’s work (news, conversation, fiction, and academic discourse). Other work of this group looks at metaphor in specific registers, e.g., newspapers (Krennmayr, 2011), academic discourse (Beger, 2015; Herrmann, 2015), or fiction (Dorst, 2015).

This previous work unanimously concludes that the function of metaphor depends on register. For instance, Steen *et al.* (2010) claim that differences in metaphor use depend on the function of language (e.g., expressive vs. informational, situation-dependent or independent, or abstract vs. concrete). For instance, the informational registers (news, fiction, and academic discourse) use metaphor to express content to a much larger extent than general conversation. More fine-grained distinctions were uncovered as well, e.g.,

Herrmann (2015) points out that the overwhelming number of metaphors in academic discourse are indirect, hence, not openly signalled. Goatly (1994, 2011) correlates the functions of metaphors with SFL register features. For instance, if social relations between interlocutors are close, metaphors are expected to express emotion rather than being used for informative purposes like, e.g., as part of an explanation.

Studies on the interdependence of register and metonymy, starting with Deignan *et al.* (2013), reveal two insights. First, metonymy is dependent on mode in that it is more frequent in ‘speech in action’, i.e., when language has a more ancillary role to play in the whole activity, rather than being the sole activity in a given situation. In such situations, succinct and rapid communication is called for, e.g., in the (high-pressure) context of a production line in a fish factory (Harrison, 2015) or among nursery staff on duty (Deignan *et al.*, 2013). This increased frequency of metonymies has been explained by the observation that metonymy allows compliance with two competing (and potentially conflicting) subgoals of the maxim of manner, viz. brevity and clarity (Egg, 2006): due to the salience of the relevant functional relation between vehicle and tenor, it is understood and need not be verbalised, hence, reference to the tenor in terms of talking about the vehicle is possible without losing clarity.

Second, (SFL) tenor is an important factor for metonymy, which presupposes a sufficient level of expertise, being a mapping within a specific domain. Deignan *et al.* (2013) show this by comparing registers that only differ with respect to a hierarchical vs. an equal relation between speakers and hearers, e.g., in academic discourse between peers vs. popular scientific writing, or in a nursery amongst staff as opposed to interactions between staff and children and parents. They found that if the interlocutors are peers, while all other factors are held constant, there is much more metonymy than if the relations between them were hierarchical.

### 3. THE CORPUS AND ITS ANNOTATION

Our investigations are based on a corpus (Egg and Kordoni, 2022) of six text types, viz., parliament speeches from the *Parlamentsreden-Korpus* (Blaette, 2017), newspaper commentaries (the *Potsdam Commentary Corpus*, Stede and Neumann, 2014), sermons, light fiction, and debates from competitions of the organisation ‘Jugend debattiert’ (Kemmann, 2013), and German TEDx talks taken from the new *Multilingual TEDx Corpus* (Salesky *et al.*, 2021). The corpus comprises 180,000 words, with each of the subcorpora comprising 30,000 words.

The subcorpora vary along register dimensions of Systemic-Functional Linguistics (Hasan and Halliday, 1985). For tenor, we included hierarchy vs. equality and distance vs. closeness between the interlocutors: we find hierarchy in sermons, commentaries, and (mostly, see section 4) TEDx talks, and closeness in sermons and fiction (the specimens in the corpus are written by young adults for their peers). The second SFL parameter is one of mode; we included spoken and written text types. Debates and TEDx talks are conceptually oral, and only the debates are dialogic.

We also represented variation along two important dimensions of Biber and Conrad (2009) in the subcorpora. For ‘situation dependent vs. elaborated reference’ (how dependent is reference on the situational context), we expected commentaries and speeches to relate to concrete extralinguistic situations and individuals, whereas debates, talks, and sermons are more abstract deliberations, and fiction is highly detached from reality. Thus, the anticipated level of situation dependence for reference is low for fiction, medium for debates, talks, and sermons, and high for commentaries and speeches. As regards ‘overt expression of persuasion’, the expected level is high for debates, sermons,

and commentaries, moderate for talks and speeches (whose influence on actual decision-making in German politics is not high), and low for fiction.

For the annotation, we used the INCEPTION tool (Klie *et al.*, 2018). Metaphors and metonymies were annotated independently by two annotators following our guidelines; differences were subsequently adjudicated. The annotation took place on top of a layer of syntactic dependency structure, derived by parsing the texts with the Stanza package (Qi *et al.*, 2020). This information will allow the integration of syntactic information for the identification of metaphors and metonymies in future work.

Our guidelines were developed on the basis of the ‘Metaphor Identification Procedure-VU’ (MIPVU; Herrmann *et al.*, 2019; Steen *et al.*, 2010). It defines a metaphorical reading of an expression as a context-based sense of an expression that differs from another, currently used and more ‘basic’ sense (e.g., more concrete or related to bodily action). The senses are similar but not subsumable under a common hypernym.

Also, the MIPVU introduced a binary distinction between conventionalised and non-conventionalised metaphors: if a metaphorical sense of an expression is described in suitable lexical resources, it counts as conventionalised, otherwise, as non-conventionalised (Steen *et al.*, 2010). We adopted this strategy, using the online versions of the Duden<sup>4</sup> and the *Digitales Wörterbuch der deutschen Sprache*<sup>5</sup> as suitable resources. Only metaphors listed in at least one of the resources are classified as conventionalised. E.g., *Eisberg* ‘iceberg’ has the abstract sense of ‘state of mind’ in (5), which eventually transfers to the tenor (the personality) the properties of being cold, hard to move out of the way, and potentially dangerous. Neither resource lists this sense, thus, it qualifies as non-conventionalised. In contrast, *Facette* ‘facet’ means ‘aspect’ in (6), which is listed in both resources, thus, counts as conventionalised.

(5) der erdrückende Eisberg unserer alten Persönlichkeit.  
*the crushing iceberg of our old personality.*

(6) alle Kriminalitätsfacetten und Probleme  
*all aspects of delinquency and problems*

The strategy of identifying non-conventionalised metaphors singled out very unusual and mostly strongly context-dependent metaphors. I.e., rather than falling back on already established similarities between entities they introduced new ones, echoing Ricœur’s (1978) observation that novel metaphors introduce rather than presuppose similarities, which is a characteristic of religious metaphor in general (Egg, 2020).

At the same time, we noted that many conventionalised metaphors are not relevant for register: to be able to function as a register marker, metaphors must be free choices in the linguistic system, whose optional use can be harnessed to mark register. Consequently, any metaphor whose use is necessitated by the language system cannot be employed for the purpose of register, e.g., spatial metaphors for the description of temporal constellations such as *before Friday* or *in the last year*<sup>6</sup>. While we annotate such conventionalised metaphors as well (following the *VU Amsterdam Metaphor Corpus*; Steen *et al.* 2010), we will take this issue with conventionalised metaphors into account when evaluating the annotated corpus.

<sup>4</sup> [www.duden.de](http://www.duden.de).

<sup>5</sup> [www.dwds.de](http://www.dwds.de).

<sup>6</sup> We have no direct sensory access to time and thus cannot refer directly to it. Instead, we conceptualise time as a one-dimensional directed line in space. The points on this line are ordered exactly like moments in time, which allows us to express temporal relations like precedence or inclusion in terms of their spatial counterparts.

We also took into account open signals of metaphoricity (so-called ‘metaphor flags’), like *wie* ‘like’ in similes or expressions such as *gewissermaßen* ‘as it were’ or *praktisch* ‘in effect’:

- (7) Wir sind wie Blumen praktisch, geerdet.  
*In effect, we are like flowers, earthed.*

Our annotation also recognises extended metaphors. They consist of several metaphors that share the specific similarity between the literal and the metaphorical referent. For example, one of the parliamentary speeches characterises social spending metaphorically as an investment. The underlying comparison of assets and families provides the basis for metaphorical interpretations of both *auszahlen* ‘pay off’ and *investieren* ‘invest’:

- (8) dass sich die Familienpolitik der letzten Jahre auszahlt, und sich das Geld, das wir investieren, lohnt.  
*that the family policy of the last years is paying off, and the money we invest is worthwhile.*

Furthermore, we were the first to describe – and to annotate – the phenomenon of ‘potential metaphor’, the deliberate combination of tokens of an expression, first with literal and then with metaphorical sense in the same text. E.g., one of the sermons uses the term *dunkel* ‘dark’ repeatedly in its basic sense ‘without physical light’ like in (9) before it is used metaphorically in the sense of ‘bad’, as in (10).

- (9) im Dunkel, im Wurzelbereich bei dem Weizen  
*in the dark zone, in the rhizosphere of the wheat*
- (10) die dunkle Erde elterlicher Übermüdung  
*the dark soil of parental fatigue*

We broke new ground in that we additionally identified the ‘backgrounds’ of metaphorical expressions, i.e., those elements in their immediate context that trigger the metaphorical interpretation. Backgrounds and metaphorical expressions are related syntactically, e.g., as head and modifier or as the arguments of copulative verbs like *sein* ‘be’ or *werden* ‘become’. This contributes important information for the automatic detection of metaphors in future work. For instance, in (5), the background is the modifying genitive NP. (See Egg and Kordoni, 2022, for further details on the annotation guidelines.)

#### 4. RESULTS

The results of our annotation (calculated as percentages per word tokens) are summarised in Table 1, they show clear differences in metaphor and metonymy usage between the different text types<sup>7</sup>. The level of conventionalised metaphors is high for speeches, medium for sermons, commentaries, TEDx talks, and debates, and low for fiction. Metaphor flags are extremely rare in general. Potential metaphors occur almost exclusively in sermons; calculating the statistics without sermons revealed that the significance of potential metaphors solely depends on sermons. We, therefore, excluded

<sup>7</sup> The asterisks in this table and the following ones indicate different significance levels: \* = significant at  $p < .05$ ; \*\* = significant at  $p < .01$ ; \*\*\* = significant at  $p < .0001$ .

them from the following calculations of correlations between types of metaphors and more general register properties<sup>8</sup>.

Table 1. *Metaphor and metonymy counts for the text types in the corpus*

subcorpus	metaphor flags*	convent. met.***	non-conv. met.**	extended met.***	potential met.***	metonymy***
speeches	.01%	14.01%	.11%	.03%	0%	1.63%
sermons	.08%	10.88%	.26%	.26%	.22%	.79%
commentaries	.11%	11.60%	.26%	.12%	.01%	1.30%
light fiction	.05%	4.53%	.14%	.02%	0%	.41%
debates	.06%	11.93%	.17%	.20%	0%	1.07%
TEDx talks	.07%	9.78%	.19%	.07%	.003%	.67%

Non-conventionalised and extended metaphors pattern similarly, occurring mostly in sermons and commentaries. We argue that this is due to the fact that these text types are highly persuasive. This correlation is less visible in the debates, which we put down to the time pressure of the debates, which impedes the creation of these kinds of metaphors. Table 2 summarises the counts of highly persuasive against other text types and shows that the correlations are significant for these two classes of metaphors<sup>9</sup>.

Table 2. *Metaphor and metonymy counts for highly persuasive vs. other text types*

subcorpus	metaphor flags	convent. metaphor***	non-conv. metaphor**	extended metaphor***	metonymy
highly persuasive	.08%	11.52%	.23%	.19%	1.07%
medium or not p.	.04%	10.19%	.15%	.05%	.95%

We next investigated potential correlations between metaphor and metonymy on the one hand and the division into literal and oral text types on the other hand. However, we found no clear evidence for a lower degree of metaphoricality for oral as opposed to literal discourse, which differs for instance from the findings in Steen *et al.* (2010).

What is more, while we did find a highly significant difference with respect to metonymy, it turned out that metonymy is used more in literal than oral text types. These scores for metonymy are surprising in that metonymy is a manner of reduced speech, since metonymies tend to be shorter than the corresponding literal expressions (compare, e.g., *the customer who had the French fries* with its metonymic variant *the French fries*), which makes for a shorter way of expressing the same idea. Consequently, one would expect metonymy to be used predominantly in oral (as opposed to literal) text types, in which language production is immediate and requires considerable speed. Instead, we found a strong negative correlation between oral text types and metonymy, i.e., metonymy is significantly more frequent in literal text types in our corpus.

<sup>8</sup> Otherwise, all further results would have shown a significance correlation for whichever register property sermons happen to have (e.g., closeness), even though these correlations are only due to sermons, not to the register property in general.

<sup>9</sup> The correlations are also significant for a three-way distinction in highly persuasive, medium persuasive, and not persuasive text types.

Table 3. *Metaphor and metonymy counts for literal and oral text types*

subcorpus	metaphor flags	convent. met.	non-conv. met.	extended metaphor	metonymy***
literal	.07%	10.96%	.20%	.12%	1.19%
oral	.06%	10.83%	.19%	.13%	.86%

However, a closer look at the text types involved can resolve this puzzle. First of all, a comparison between the debates and the TEDx talks revealed a much stronger use of metonymy in debates than in talks. We assume that this is due to the fact that in the debates, time pressure is an important issue, which is not so in the TEDx talks, where one speaker has the exclusive right to present his views and there is no strict time limit. In other words, time pressure is not a general factor in oral text types.

Instead, there are also literal text types for which such a limiting factor can be identified: if we generalise the phenomenon of a temporal limit to a length restriction (which may take different forms), we can entertain the hypothesis that all text types in which such a restriction is active should employ metonymies more frequently in order to comply with this restriction.

In our corpus, such a length restriction holds not only for debates but also for parliament speeches and commentaries: in the debates, the turns of the individual speakers are very short (two minutes for an opening statement, and one minute during the discussion) and strictly reinforced. For the commentaries, the length restriction is part of the text type in that commentaries have to be short (typically, they are found on the left or right margins on one of the initial pages of a newspaper). In our corpus, they are by far the shortest text type as well, with an average of 169 words. Finally, our parliament speeches are strictly limited in time as well: After each election, the parties represented in the German parliament engage in intense negotiations to distribute the time for speeches according to a complicated calculation.

Indeed, Table 1 shows that the highest metonymy scores emerge exactly in these three text types. The results from a direct comparison of these text types against the other three, in which there is no such length restriction, are summarised in Table 4 and corroborate the hypothesis that metonymy correlates with a length restriction:

Table 4. *Metaphor and metonymy counts for text types with and without length restriction*

subcorpus	metaphor flags	conventional metaphor***	non conventional metaphor***	extended metaphor	metonymy***
length restriction	0.06%	12.43%	0.18%	0.12%	1.32%
no length restriction	0.07%	9.05%	0.21%	0.12%	0.66%

In sum, our research points to a new register parameter, viz., length restriction, which cuts across literal and oral text types and has hitherto not been discussed in research on metonymy as a factor that is independent of orality. Once this parameter is established, the correlation with metonymy is as expected, with metonymy being one of the strategies employed to increase the brevity of a discourse. At the same time, this parameter should not have an impact on metaphor frequency, because we do not expect metaphors to differ



in length systematically from the corresponding literal expressions. This expectation is also borne out by the results in Table 4.

One can venture an explanation for the fact that our results differ from the ones of Steen *et al.* (2010) at this point. It seems that the mode parameter of orality unites many text types with quite divergent properties, which would call for investigating a much wider range of oral text types to be able to identify properties that truly correlate with orality. In particular, conversations are much less focussed with respect to their topics than TEDx talks and debates and have a different main purpose (maintaining social relations) than the text types investigated in our corpus. Such factors might have a much greater impact on metaphor and metonymy use than orality, in other words, a direct comparison of our results with the ones of Steen *et al.* (2010) is not feasible as yet.

Note that compliance with length restrictions is not the only motivation for metonymy, however. In a way similar to metaphor, metonymy can be used for framing individuals or situations with a persuasive intention. For instance, in one of the parliament speeches, the mismatch between the seats in the federal parliament and the exact number of votes (due to the mixed voting system in Germany) is systematically referred to as *Verfälschung des Wahlergebnisses* ‘adulteration of the election result’ by those who plead for a change of the voting system. This metonymy ‘cause for effect’ presents the mismatch as the result of a deliberate attempt to adulterate the results of the vote.

Another factor that has an impact on metonymy is the effect of hierarchy: as noted above, metonymy often occurs in communication between peers and presupposes in-group knowledge (Deignan *et al.*, 2013). In our data, too, metonymy is related to hierarchy in that it occurs significantly ( $p < .0001$ ) more frequently in text types whose interlocutors are on an equal level than in those text types in which there is a hierarchy between speakers and audiences.

As for individual text types, fiction exhibits few conventionalised metaphors but is average with respect to non-conventionalised and extended metaphors, which ties in with the results in Reijnierse *et al.* (2019). The text type with the highest register marking is sermons. They comprise numerous non-conventional metaphors, furthermore, extended and potential metaphors emerge as clear register markers for sermons, with the latter almost exclusively occurring in sermons.

For debates, we found that chains of extended metaphors typically span across the turns of several speakers (Egg and Kordoni, 2023). Three patterns of picking up already introduced metaphors emerge in our data: first, some metaphors are introduced by one speaker and reappear in later turns of the same speaker, but are not picked up by others. The second pattern can be characterised as metaphorical alignment or collaboration, in that one speaker introduces a specific metaphor which is subsequently adopted and reused by the other speakers and thus becomes common metaphoric usage. Finally, sometimes the two debaters that join forces in the debate use a metaphor exclusively, whereas the two opposing debaters do not adopt it<sup>10</sup>.

Finally, TEDx talks are the least uniform with respect to metaphor and metonymy, which we put down to their heterogeneity with respect to register dimensions like hierarchy, closeness, and persuasion: Speakers can define their relationship with the audience on the dimensions of hierarchy and closeness according to their own preferences. A tell-tale sign of this preference is the way in which they present themselves at the beginning of the talk, some just use their first name while others give their full name with titles, including their profession or function. Also, some of the talks focus more on presenting a topic whereas others are more persuasive, trying to convince the audience of specific assumptions or even trying to motivate them to act. Consequently, a more fine-

<sup>10</sup> The debates are set up in a way such that there are always two participants arguing in favour and two participants arguing against a specific statement.

grained analysis of TEDx talks is called for to describe their relation to register in greater detail.

## 5. CONCLUSIONS AND FURTHER WORK

To conclude, the results from our annotated corpus corroborate the claim that metaphor and metonymy contribute to register marking. We have identified two major register properties that are sensitive to this kind of marking, viz., persuasivity and length restriction. At the same time, we showed that, at least so far, no clear conclusions can be drawn with respect to orality. In further work, we will integrate additional dialogic and oral text types in order to balance the corpus on the dimensions of literal vs. oral and monologic vs. dialogic text types. In this way, we intend to learn more about the potential interdependencies between metaphor and metonymy and orality and literacy, and, at the same time, to address in greater detail the relationship between metaphor and metonymy and monologue and dialogue.

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