Syntactic Pattern Distribution Analysis of Experiencer–Object Psych Verbs

An Annotation Manual

Linguistic Data Science Lab
Studies in Linguistics and Linguistic Data Science

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Abstract

This manual contains the detailed annotation guidelines used to create a database for the syntactic (and in part semantic) behaviour of 64 German experiencer object verbs. These verbs are annotated for their syntactic pattern, the semantic nature of their stimulus (if present), the presence of a stimulus PP and various other features. Both the manual as well as the resulting database can be used for testing theoretical hypotheses as well as for experimental and computational tasks.¹

KEYWORDS: experiencer-object verb, psych verb, stimulus subject verb, German, annotation, syntactic pattern, database, semantic stimulus type

I. Introduction

The following Annotation Manual and the resulting database are embedded in a larger project targeting the grammatical behaviour of German so-called experiencer-object (henceforth EO, also called “stimulus subject”) verbs, a subclass of psych verbs. The project aims for an empirically valid and data-driven approach towards this verbal class whose general syntactic features and classification inside the verbal domain are still under discussion. This particularly extends to the questions of the lexicogrammatical relation between a group of verbal lexemes (pre-classified as EO verbs in the literature) and certain syntactic constructional patterns that are considered prototypical for this assumed class. Since the unanswered questions appear to be multidimensional, issues regarding both the properties of verbs and their arguments as well as syntactic slots, an annotation study should aim for reflecting the phenomenon from different angles. This particularly holds for issues of polysemy and the assumed ability to occur in distinct syntactic slots.

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Patterns identified for German need to be verified for other languages in future research. The following sections will provide both an overview on the phenomenon and discuss theoretical aspects that are reflected in the annotation. Part II describes the general structure of the annotation guidelines and the dataset as well as the actual annotation process. Part III contains the complete annotation manual with detailed explanations and examples for every annotation.

1.1 Experiencer Object Psych Verbs

Psych verbs, particularly those whose experiencer argument is (normally) syntactically realised as the object are claimed to be grammatically peculiar in the linguistic literature at least since Belletti and Rizzi (1988). In this paper, the authors also introduced a tripartite distinction of the class\(^2\) in Italian with respect to the syntactic realisation of experiencer and stimulus (theme in their terms) argument of the verb that has become very influential: nominative experiencer and accusative stimulus as in (1)\(^3\), accusative experiencer and nominative stimulus as in (2), and dative experiencer and nominative stimulus as in (3). We will call them experiencer subject (psych) verbs (ES), accusative experiencer object (psych) verbs (EO), and dative experiencer object (psych) verbs (EO), respectively.

(1) Gianni teme questo.
   Gianni fears this

(2) Questo preoccupa Gianni.
   This worries Gianni

(3) A Gianni piace questo.
   to Gianni pleases this

Within the Government and Binding framework (but not only there), the existence of these classes posed a challenge for theories of linking between syntax and semantics. This led to investigations of the verbs which resulted in claims that these – and particularly accusative EO verbs – display a deviant behaviour compared to other (“transitive”, especially agent-patient) verbs. This offered loophole: Syntacticians postulated structures for EO verbs that adhered to the general rules the researchers assumed and were supposed to simultaneously explain the verbs’ deviant behaviour (prominent examples include (Belletti & Rizzi, 1988; Pesetsky, 1995)). Landau (2010)

\(^2\) Actually, both propose it as a basic distinction, explicitly ignoring derivational morphology – a fact which is, by our impression, frequently overlooked in the literature.

\(^3\) Italian examples ((1)–(3)) are Belletti and Rizzi’s (1988, p. 291)’s (1–3a.).
presents so-called “psych properties”: ways in which psych verbs differ from other verbs cross-linguistically. It is noteworthy that psych verbs are usually singled out based on their semantics. Landau (2010), for example, regards “any verb that carries psychological entailments with respect to one of its arguments (the experiencer)” as a psych verb (p. 137). To explain why verbs fulfilling this semantic criterion should behave in a grammatically unusual way, he proposes that “[e]xperiencers are mental locations, that is, locatives” (p. 6) from which it follows that “[a]ll object experiencers are oblique (or dative)” (ibid.), so that their status as direct objects in accusative EO verbs is only apparent. This (prima facie) elegant connection between semantics and syntax has of course been challenged: For example, Fábregas (2015) argues that in Spanish not all verbs semantically classified as psych verbs belong to the class that is syntactically special. For German, it has been claimed recently by Hirsch (2018) that psych verbs do not form a uniform class, and also do not necessarily display unexpected or deviant syntactic behaviour.

I.II An Annotation Scheme

Psych verbs in general, and EO psych verbs in particular have often been approached with a specific pattern of realization in mind. In the case of EO psych verbs, this pattern is a subtype of a transitive construction where the role of the stimulus (STM) is assigned to the subject, and the role of the experiencer (EXP) is assigned to the object. But even superficial scrutiny soon reveals that forms of the respective verbs appear in other syntactic patterns. The semantics assigned to the verbs on these patterns is usually transparently linked to the semantics of the ‘prototypical’ pattern, cf. amüsieren (amuse) on the transitive pattern (X-STM_V_Y-EXP) in (4) and the intransitive one (X-STM_V) in (5). In other cases, a link is much harder to detect (e.g., in cases we mark with the comment 4.1.4.8 resultative_object like (6)). In some cases, it appears rather opaque, even to the effect that a description of the verb as EO verb appears ‘wrong’, because the pertinent syntactic and semantic pattern of an EO verb rarely occurs with the verb in question - as in the case of ausreichen, which rarely has a psych interpretation in our data.

(4) Schon das hat ihn amüsiert.
   even that.NOM has him.ACC amused (NZZ_1994_05_06_a199_seg3_s14)
   Even that amused him.
Most of the results amaze, amuse, and convince.

For now, the “fair ones” have provoked criticism from the “just ones”.

While the possibility of a verbs’ occurrence in certain syntactic environments has played a prominent role in the literature from the beginning (especially their ability to passivize, cf. Belletti and Rizzi (1988), Pesetsky (1995), Landau (2010) among others) and alternations between realisation patterns have gained some prominence in the literature recently (cf. e.g. Alexiadou & Iordăchioaia, 2014; Hirsch, 2018; Pijpops & Speelman, 2017a; Rott et al., 2020), we are not aware of a larger corpus study that investigates which patterns German psych verbs actually occur in. Engelberg (2015, 2018a) and Cosma and Engelberg (2014) look at 11 (German) verbs only, Becker and Guzmán Naranjo (2020) annotate 30 sentences for 12 “psych concepts” (in 7 languages), and Verhoeven (2015) performs annotations for 30 EO verbs, but she is interested in word order differences and does not aim to capture the whole syntactic distribution. If one limits the analysis to a small number of verbs and samples, one risks attributing verb-specific peculiarities to the whole (assumed) class and overlooking class-internal variation. Our aim is to close the gap by compiling a corpus of sentences containing German EO verbs from many different potential subclasses proposed in the literature, annotated with relevant syntactic and semantic features. These include – most importantly – the syntactic pattern the verb occurs in, but also the semantic aspect of psych status (not every verb will have a psych entailment in each example), the type of stimulus, and the form of the preposition in a stimulus-indicating PP (if present), as well as other factors which are typically represented by comments.

A dataset like the one resulting from these annotation efforts may be useful in multiple ways: It offers quantitative data that can be used to check and develop theories, but it can also serve as a reservoir of (counter-)examples. Additionally, it may be used as gold standard data to train and evaluate AI systems that are able to identify psych readings. Since we annotate all syntactic patterns we happen to find with our verbs, we can capture their syntactic behaviour, showing that there are more possibilities than one would naively expect (at least if, traditionally, one-lexical-entry-
per-syntactic-pattern is assumed, but – on the verb level – not everything goes. A careful investigation into these distributions may unearth regularities any theory of argument structure and the syntax-semantics interface must be able to explain.

The data is also useful when designing experiments because it can reveal (for example, via a Reliance Analysis, cf. Schmid, 2000) verbal preferences of the target construction for a non-psych reading that could cause interference effects. Also, the annotations enable the search for sentences fulfilling specific criteria, which can – in a modified form – be used in experiments in turn, cf. the methodology of modified stimulus composition as described in (Börner et al., 2019). By annotating stimulus PPs, we provide data that can be used to investigate the semantics of the relevant prepositions. While there is much work on spatial and temporal readings of prepositions, a systematic investigation of the use of prepositions in the psych/emotional domain has yet not been performed, to the best of our knowledge. It is further hampered by the fact that the relevant readings of the prepositions are often not the predominant ones: In Masloch’s (2021) data for über (over, about), the aggregated causal and object-of-emotion readings made up for only 7.27% of the German sentences annotated in a corpus of Parliament debates. Note that this number is almost certainly way too optimistic because infrequent readings are (on purpose) strongly overrepresented in his corpus.

I.III A Note on Syntactic Pattern Annotation

We distinguish 15 basic syntactic patterns. These may or may not combine with stimulus-indicating PPs (cf. 3.2), other stimulus adjuncts (cf. 3.4), control (cf. 3.3), and certain phenomena that we annotate using comments (cf. 4.1), which multiplies the possibilities. For example: The syntactic position usually occupied by the experiencer argument may not be filled with an NP referring to the experiencer itself but with an NP referring to a (non-physical) part or feature of them. We use the comment 4.1.4.5 EXP-related_object to annotate this, and observed the phenomenon within different syntactic patterns as exemplified in (7) and (8). While (7) is just an instance of the standard transitive pattern, (8) contains a so-called modal infinitive: An infinitive embedded under sein.

Of course, non-existence in a corpus does not proof ungrammaticality, but can indicate it, see the discussion in Kiss (2019).
(7) Den Blick erfreut das viele Schöne.

the glimpse.ACC pleases the.NOM much.NOM beautiful.NOM

(NZZ_1995_06_24_a215_seg3_s5)

All those beautiful things please the eye

(8) Die Wall Street-Euphorie scheint durch nichts einzuschüchtern zu sein.

the Wall Street-euphoria seems by nothing to.intimidate to be (NZZ_1996_02_16_a107_seg6_s1)

It seems that nothing can lower the euphoria at Wall Street / people’s euphoria for Wall Street.

Some of the phenomena we treated using comments might also be viewed as independent patterns, especially 4.1.2.3 utterance_reading, where the subject referent utters something and the verb indicates the way of uttering as well as the emotional state, cf. (9), and 4.1.4.8 resultative_object, where the experiencer is not the referent of the direct object NP, cf. (10).

(9) "Ich riskierte etwas zu viel", ärgerte er sich.

I risked a.bit too much annoyed he REFL (NZZ_1994_08_29_a114_seg2_s6)

"I risked a bit too much”, he said, and the way he said it showed that he was annoyed by it.

(10) Vorerst haben die "Fairen " Kritik der "Gerechten " provoziert.

for.now have the.NOM fair.NOM criticism.ACC the.GEN just.GEN provoked (NZZ_1997_03_19_a51_seg4_s12)

For now, the “fair ones” have provoked criticism from the “just ones”.

While the patterns are described in the annotation scheme below and we need not duplicate these descriptions here, some notes are due on specific patterns because of their theoretical significance. In German, verbal and adjectival passive (also called eventive and stative passive) are clearly distinguished by the form of the auxiliary: werden (to become) for the verbal passive, sein (to be) for the adjectival one. We annotate these in different patterns: 2.4 werden_V-PII and 2.3 sein_V_PII. Discussions of passivation possibilities (for accusative EO verbs) have been central in the research on psych verbs since the late eighties. So-called unaccusativity accounts (where the “subject” is not considered a real subject, as proposed by Belletti and Rizzi (1988)) presume that verbal passivation should not be possible. Landau (2010) – who claims that accusative EO verbs may generally have an agentive, (nonagentive) eventive, and stative reading – offers a typology of psych passives in which stative accusative EO
verbs never passivise, agentive ones can passivise universally, and languages differ in a predictable way as to the question whether nonagentive eventive verbs can passivise. Stative accusative EO verbs are also taken to disallow verbal passivation in the recent literature on German psych verbs, as are dative EO verbs (cf. Hirsch, 2018; Temme, 2018). According to Hirsch (2018), the same holds for the adjectival passive.5 With regard to eventive EO verbs, he holds the opinion that all of them can form the stative passive while only the ones having an agentive reading form the verbal passive (even on their nonagentive readings). Möller (2015) also describes the relation between agentivity and passive, but further argues that the apparent lack of passivation does root in semantic aspects of EO verbs while the functional role of a canonical werden-passive is overshadowed by a number of other possible alternations, mainly stative passive, reflexivisation, PPs etc. The results of our annotation study render this unlikely, see (Poppek et al., in prep, section 2.2).

Another aspect traditionally linked with unaccusativity is perfect auxiliary selection: It has been argued that unaccusative predicates select sein (to be) while unergative ones select haben (to have) (cf. the literature cited in Strobel, 2008). Perfect auxiliary selection in German is a topic debated controversially. In any case, we observe that most verbs treated as unaccusatives by these accounts select haben. Accordingly, authors favouring the unaccusativity account dismiss this criterion (i.e. Belletti & Rizzi, 1988; Fanselow, 1992; Hirsch, 2018b). Dative EO verbs selecting sein as their perfect auxiliary we included in our annotation efforts are schwerfallen (to find difficult), nahegehen (to afflict, to upset), aufstoßen (to strike (negatively)), and auffallen (to strike).

On the reflexive pattern 2.6 X_V_refl, the verb is used as a reflexive verb. The subject assumes the role experiencer while the stimulus may be expressed by a PP. Reflexivisation is a means of de-transitivising causative verbs (in German), but some authors recently have argued that only some of the psych verbs alternating this way take part in the general causative alternation (Hirsch, 2018; Rott et al., 2020). Rott et al. (2020) call the alternation “psych alternation” and offer a typological perspective on it. EXP_V_refl_Gen-STM and 2.12 Nom-EXP_V are also patterns belonging to the de-transitivised part of the alternation, the former one differing from pattern 2.6 X_V_refl only in the way the stimulus is expressed (genitive NP vs. PP), the latter one in the way the alternation is marked morphosyntactically (ablaute vs. reflexivisation).

5 He notices that the adjectival passive may be possible (under a job-done interpretation) on a different (activity) reading of the verb (p. 150).
On pattern 2.8 NoAux_V-PII the verb’s participle II is used as an adverb. We are not classifying such uses as verbal, but the forms have been extracted automatically and – just like in the case of the adjectival passive – eventual differences among the verbs regarding their distribution are noteworthy and require a principled explanation.

The existence of 2.11 X_CAUS_V_Y-EXP_PP (as in (11)) in German has been noticed by Haider (1993, p. 117) and Hirsch (2018, p. 83). Here, a subject cause causes the object experiencer to be in the emotional state expressed by the verb towards an object. Analyses of similar constructions in other languages are provided (among others) by Reinhart (2003, pp. 271–274) and Royo (2019).

(11) 1665 hatte Kara Mehmet Pascha die Wiener Oberschichten für das "schwarze Wasser" begeistert.

In 1665, Kara Mehmed Pasha made the Viennese upper classes get excited about the “black water”.

The pattern 2.9 Acc/Dat-EXP_V is used if there is an experiencer object but no phoric subject. While there are verbs that do not need a nominative argument in German (ekeln (to disgust), as in (12), is one of them), usually a non-phoric es is needed (as in (13)). This, however, may be dropped in spoken language resulting in examples like (14). We use a comment to indicate whether a non-phoric es is present or not, but we believe that a further subclassification should be a part of analysis, not annotation.


Alfred Kantorowicz’s “night books” are above all his paper “Wailing Wall”, whose “subjectivism” and “inconsiderately formulated affects” sometimes disgust him.

(13) Es gefällt ihm hier […] .

He likes it here.
If the verb in question is embedded under a raising predicate, we do not annotate this. This is because the raised argument is preserved so that a regular annotation is possible. In contrast, control sometimes leads to a certain lack of clarity because, given the nature of the discussed verbs, the stimulus will usually be the PRO subject – think about adjunct control, control shift, implicit control, non-local control, variable control and so on. Hence, we annotate control (cf. 3.3 Control). Another phenomenon where a semantic argument of the verb is missing is 2.14 sein_zu-Inf, modal infinitives with sein (to be) as in (15).

(15) Die Kriminellen seien mit solch einer "Farce" nicht zu erschrecken.

It is impossible to frighten criminals with such a “farce”. / The criminals are not to be frightened with such a “farce”.

I.IV Non-psych Readings

If we classify as a psych verb any verb that can lead to psychological entailments, many verbs will fall into this class that also have different readings, which in some cases will be far more prominent. A notable example is the German verb bewegen (to move) which can be used in a psych reading, but from a quantitative perspective, this is largely overshadowed by the spatial non-psych reading. When we annotate examples extracted from a corpus because they contain a specific verb (form), we may find that the (putative) psych verb does not have a psych reading at all or that it is ambiguous between a psych reading and a non-psych one. We capture this by using a variable to annotate non-psych occurrences (cf. 1.2) and a comment to distinguish ambiguous ones (cf. 4.1.2.2). (16)–(18) illustrate the distinction: The verb schwerfallen (to be difficult to) does not give rise to psych entailments in (16). In (18), however, it does, and in (17) both readings are possible.

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6 Verbal particle
7 Actually, we use both in cases where the non-psych reading is far more salient although the psych reading might not be absolutely inconceivable.
(16) Doch da die strukturellen Unterschiede […] fortbestehen dürften […],
But because the structural differences persist might,
dürfte es dem Dollar schwerfallen,
schwerfallen, sich gegen eine langfristige
might it the.DAT dollar.DAT be.difficult.to REFL against a long-term
Tieferbewertung erfolgreich zu Wehr zu setzen.
lower.valuation successfully to defence to set
But because the structural differences are likely to persist, it will be difficult for
the dollar to successfully resist a long-term depreciation.

(17) Einzelnen Videasten dürfte es schwierig sein, sich umzustellen.
Individual.DAT videographers.DAT might it be.difficult.to REFL adjust
It will be difficult / emotionally challenging for some videographers to adjust
themselves

(18) Da fiel die Entscheidung nicht schwer.
There be.difficult.to the decision not PRT.
So, it was not hard to decide.

The reasons for the existence of the non-psych reading may differ. While incorrect
lemmatisation of the original data particularly in cases of homonymy of specific verb
forms is possible (as in (19): the past participles of fallen (to fall) and gefallen (to please)
are homonymous), three less trivial sources are relevant: homonymy, polysemy, and
vagueness.

(19) Dann sind wir kopfüber in die Freiheit gefallen."
Then are we headfirst into the liberty fallen
We fell headfirst into liberty then.

While setzen (to add) in (20) is clearly homonymous to setzen (to worry) in (21), the
distinction between polysemy and vagueness might not be that easy to draw without
applying semantic tests. Is the psych reading of bewegen (to move emotionally) (22)
really different from the non-psych one (23)? What about stören (to disturb, to bother) or
gut tun (to benefit, to do good)?
(20) [...] Zu einheimischem Traubenmost [...] darf reine Saccharose [...] zugesetzt werden.
   To domestic grape must may pure saccharose added.
   It is allowed to add pure saccharose to domestic grape must.
   (NZZ_1993_05_22_a70_seg16_s1)

(21) Diese Verantwortungslast setzte offensichtlich der SHB immer mehr zu.
   This responsibility burden worried obviously the SHB more and more.
   (NZZ_1994_01_18_a50_seg9_s1)

(22) Gerade Reagan hat es [...] fertiggebracht [...] die Menschen zu bewegen.
   Of all people Reagan has it managed to move people.
   (NZZ_1993_08_09_a20_seg2_s14)

(23) In der ersten März-Woche hatte er sich noch um 16 800 Yen bewegt.
   In the first March week had he still moved by 16,800 Yen.
   (NZZ_1993_04_08_a164_seg4_s3)

(24) Da es bisher keine geregelte Frequenzverteilung gibt, stören viele der kleinen Transmitter [...] den Empfang des staatlichen Programms.
   Because it yet no regulated distribution of frequencies exists many of the small transmitters interfere with the reception of the state programme.
   (NZZ_1993_04_23_a129_seg3_s9)

   The fact that he is often ridiculed as an "overambitious Pappeli" does not bother Zollinger much.
   (NZZ_1993_12_01_a96_seg6_s1)
Slightly longer pauses between the pieces would have benefited the listeners as well as the works.

If a verb appears to be ambiguous between a psych and a non-psych reading in a large portion of the available examples, one may take this as a hint that the verb does not in fact possess two distinct readings but just one, which is vague with regard to the psych/non-psych distinction.

I.V Stimulus Types, Agentivity and Animacy

With regard to psych verbs, agentivity is one of the most important, yet also one of the most controversial aspects. Its importance manifests itself in claims like Landau’s (2010), who holds that only (some) accusative EO verbs can have an agentive reading, and that they do not display a special behaviour when used this way (p. 6). Its controversial status relates to the question which verbs can have an agentive reading, which is well captured in the following quote from Hirsch (2018) regarding German psych verbs: “Rather different claims are made about the classification of the same verbs, e.g. with respect to agentivity [...]. Not only is there no consensus about the assignment of the verbs to different classes, [...] but, moreover, different claims are made with respect to the behaviour of the same verb in the same test” (p. 75f.). Möller (2015) holds the category as generally open towards contextually coerced agentivity readings, though this is mostly realised through semantic affinities towards certain readings, not real grammatical restrictions. With few exceptions (e.g. wundern, (to wonder)), EO verbs are interpreted to license a reading specifying an action that results in a psychological state. This also indicates difficulties regarding a direct annotation of “agentivity”. Additionally, the verb can be taken to have an agentive (in a naive sense) reading in most of the examples involving an animate stimulus, although an agentive interpretation might not always be the most prominent one. Example (27) clearly has an agentive as well as a non-agentive reading while in (28) an agentive reading is present but most likely not the intended interpretation.
(27) In dieser Rolle ärgert er viele, vor allem aber die SVP des Kantons Bern.
He annoys many people in this role, but especially the SVP of the Canton of Bern.

(28) In den vergangenen Spielzeiten verärgerte der Holländer die PSV-Anhänger mit schwachen Leistungen.
In previous seasons, the Dutchman annoyed the PSV fans with poor performances.

As in other corpus studies on psych verbs (Engelberg, 2018; Levin & Grafmiller, 2013; Pijpops & Speelman, 2017), we do not annotate agency directly but animacy (or rather: very broad ontological stimulus types) instead. If a stimulus is animate but clearly not agentive, however, we use a respective comment to indicate this (cf. 4.1.3.6 clearly_non-agentive). Given the usual conceptions of agency, an agent will be either animate or what we call anim_proxy. An inanimate or propositional stimulus cannot be considered an agent. A verb that is used with an animate stimulus (comparatively) often can be suspected to have an agentive reading, which may be lacking in a verb that is hardly ever used with animate stimuli at all.

The stimulus types we distinguish are anim (animate being), anim_proxy (entities like institutions or organisations that basically act as if they were animate), inanim (inanimate beings including many abstract entities), and propositional (propositions in a broader sense that may include events, situations and the like, very often, these are syntactically clausal), cf. Section 3.1 for the details.

Animacy is of course also interesting in its own right, e.g. because it is often argued to influence word order in German (cf. Ellsiepen & Bader, 2018).

I.VI Stimulus PPs
In some cases, something that (naively) could be described as a (part of the) stimulus is expressed in a PP. This PP may be used instead of an NP/CP stimulus (e.g. in the (stative) passive (29)–(30), or in the reflexive construction (31)–(33)), or it may be present alongside it as in (34)–(36). In the latter case, this is occasionally referred to as a “split stimulus” in the literature (cf. Engelberg, 2015).
(29) Der Verheiratete verliebt sich in eine junge Frau und wird von Gewissensbissen gequält. The married one falls in love with a young woman and is tormented by scruples. (NZZ_1995_03_28_a125_seg5_s3)

(30) Die Athener Regierung ist über die Entwicklungen in Bosnien-Herzegowina beunruhigt. The Athens government is concerned about the developments in Bosnia and Herzegovina. (NZZ_1993_08_09_a5_seg5_s1)

(31) Ich ärgere mich masslos über solches Verhalten. I am extremely annoyed by this kind of behaviour. (NZZ_1998_11_09_a114_seg12_s3)

(32) Tagelang habe sie sich um ihren Mann geängstigt. She worried about her husband for days. (NZZ_1999_06_16_a71_seg5_s7)

(33) Tagelang habe sie sich vor ihrem Mann geängstigt. She was afraid of her husband for days.

(34) Am Englischen fasziniert uns die vergleichsweise grosse Zahl einsilbiger Wörter. What fascinates us about the English language is the comparatively large number of monosyllabic words. (NZZ_1993_02_26_a67_seg2_s11)

(35) Angie fasziniert ihn durch ihre Ausstrahlung und ihren phantasievollen, unregulierten Lebensstil. Angie fascinates him with her charisma and her imaginative, unregulated way of living. (NZZ_1994_02_11_a189_seg1_s48)
With no doubt, the examples above illustrate very different phenomena. However, their common feature (besides the presence of a stimulus PP) is that they are not well understood. Are there differences among the verbs and syntactic patterns with respect to the prepositions used? Is the PP on the reflexive pattern an argument (as e.g. Rott et al., 2020 assume) or an adjunct? If the former is the case: Is the preposition governed (as Bejan, 2002 assumes)? Can the “stimulus” reading of the preposition be reduced to another, better-understood reading (as e.g. one of those listed in (Kiss et al., 2020), cf. Masloch 2021 on über)? Is it really sensible to think of one stimulus that is split into two constituents? Annotating the presence of stimulus PPs will lead to data that can be inspected to answer these questions.

A phenomenon that seems to be closely related to stimulus PPs is what we – for lack of a better term – call other stimulus adjuncts: Stimulus clauses that appear on patterns where more frequently, a PP is used to indicate the stimulus.

(37) Man wundert sich, wo sie ein Auskommen finden.
    One wonders where they make a livelihood.
    (NZZ_1995_09_26_a151_seg3_s7)

It may well be that in fact a stimulus PP is used in examples like (37). It has been argued in the literature that sentences like this one contain an empty pronominal adverb (cf. Gunkel & Hartmann, 2020 and the literature cited therein). Still, since there is no overt preposition, we cannot annotate its form and use a different category to capture the phenomenon.

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8 One may note the contrast in meaning between (32) and (33), which could be interpreted as a counterargument against this hypothesis since it illustrates that prepositions may alternate paradigmatically.
II. Data Generation and Annotation Guidelines

The basis of our annotation study are randomly extracted sentences from a NZZ (Neue Zürcher Zeitung) corpus (NZZ-Korpus 1993–1999) by Keßelmeier et al. (2009), a newspaper corpus based on the published version of the NZZ corpus (years: 1993–1999) under the license of the NZZ Mediengruppe. The NZZ is a newspaper from Zurich written in (the Swiss variety of) Standard German. We chose 64 German EO-verbs based on previous experimental and corpus studies (among others: Engelberg, 2018; Hirsch, 2018; Rääts, 2011; Temme & Verhoeven, 2017). For a list of these verbs, see Section 6. To be included, the verb should be grammatically possible within a transitive EO-construction. We operationalised this by including verbs that are cited frequently as EO-verbs in relevant publications or that are clearly possible in such a construction by the intuition of all three (German native speaker) annotators. Semantically, the verb should display psych-predicate properties by clearly denoting an emotional or mental state or event. Both aspects are commonly referred to as distinctive features of psych EO-verbs in the literature (cf. Landau, 2010, inter alia). Further constraints on the dataset were imposed by balancing on overall frequency, case preference (accusative or dative), and perfect tense auxiliary selection preference (haben or sein), as well as morphological variety (by inclusion of prefix, suffix, and particle verbs. We also tried to include different verbs based on the same root – e.g. wundern (to wonder) and verwundern (to astonish) – since they have been argued to differ systematically (Hirsch, 2018)). For each of the candidate verbs, up to 200 samples were randomly extracted from the NZZ corpus. Roughly one third of these 64 verbs did not yield complete samples of 200 sentences due to their low corpus frequencies (cf. Section 6). The samples were divided among three native speakers of German with a background in linguistics and annotated by them.

The annotation scheme was developed in several steps, alluding to the MATTER-method established by Pustejovsky & Stubbs (2013) for annotation projects based on natural language data. After an initial version was sketched based on what we expected to find on the basis of the literature, a first annotation stage was performed, which consisted of several steps. Annotators started annotating their samples, and when they encountered problems or unexpected phenomena, these were discussed and either the relevant definition in the guidelines was clarified or a new category or comment was added. Prior annotations were modified accordingly. Phenomena we did not expect beforehand include 2.13 EXP_V_refl_Gen-STM, 3.4 Other stimulus adjunct, and 4.1.4.5 EXP-related_object. Because many of the surprising phenomena are
verb-dependent and annotation was performed one verb after the other, modifications were necessary until the very end.

After the first annotation stage was completed, each of the samples was revised by at least one further annotator in a subsequent adjudication state to decide on problematic cases and to search for residual annotations reflecting an earlier version of the annotation scheme. We did not consider a classic inter-annotator agreement calculation fruitful here, but verified every annotation by at least a simple majority decision among the annotators. This resulted in a dataset with a total of 10,290 annotated examples.

In praxis, annotations were performed in spreadsheets: one spreadsheet per verb, examples in rows, categories in columns. For ease of usage, the syntactic pattern was represented in a wide format (each column represents a pattern, and only one of them is marked with an x for each example) while we used a narrower format for the other categories, where the observed value had to be filled in (e.g. mit for Stimulus_PP), or which had only two possible values from the beginning (like Control, other stimulus adjunct). In the latter case, we also used x or left the cell blank. The column names were: NZZ_ID, Token_ID, Sentence, Sentence_CoNLL, not_of_interest, non-psych, X-STM_V_Y-EXP, X-STM_V, sein_V-PII, werden_V-PII, X_lassen_refl_V, X_V_refl, refl_V-PII_zeigen, NoAux_V-PII, Acc/Dat-EXP_V, wirken/scheinen_V-PII, X-CAUS_V_Y-EXP_PP, Nom-EXP_V, EXP_V_refl_Gen-STM, sein_zu-Inf, tough, Stimulus_Type, Stimulus_PP, Control, Other_stimulus_adjunct, Comment, Misc. The first four of these were already present prior to manual annotation. Additional information on the information style for each category can be found in its description below. Sentence_CoNLL contains grammatical information on the sentence presented in CoNLL-U format, i.e. one word per line, properties separated by whitespace. The properties: word ID, word, lemma, universal part-of-speech tag, STTS tag, morphological features, ID of syntactic head, dependency relation between the word and its head (Universal Dependencies, cf. (de Marneffe et al., 2021)). Sentence_CoNLL was automatically generated with Stanza 1.2.3 (Qi et al., 2020) using the default models for German, which were trained on the gsd corpus (McDonald et al., 2013).

The remaining part of this document contains the actual annotation guidelines. The way the categories are listed mirrors their order of appearance in the annotation spreadsheets. The comments are grouped by the element of the sentence they relate to. This grouping’s only purpose is to facilitate look-up, it does not have any further significance. A list of the verbs annotated, the case of their experiencer NP, and their sample size can be found in Section 6.
I. INTRODUCTION

I.1 EXPERIENCER OBJECT PSYCH VERBS

I.2 AN ANNOTATION SCHEME

I.3 A NOTE ON SYNTACTIC PATTERN ANNOTATION

I.4 NON-PSYCH READINGS

I.5 STIMULUS TYPES, AGENTIVITY AND ANIMACY

I.6 STIMULUS PPs

II. DATA GENERATION AND ANNOTATION GUIDELINES

1 GENERAL

1.1 NOT_OF_INTEREST

1.2 NON-PSYCH

2 SYNTACTIC PATTERNS

2.1 X-STM_V_Y-EXP

2.2 X-STM_V

2.3 SEIN_V-PII

2.4 WERDEN_V-PII

2.5 X_LASSEN_REFL_V

2.6 X_V_REFL

2.7 REFL_V-PII_ZEIGEN

2.8 NOAux_V-PII

2.9 ACC/DAT-EXP_V

2.10 WIRKEN/SCHEINEN_V-PII

2.11 X-CAUS_V_Y-EXP_PP

2.12 NOM-EXP_V

2.13 EXP_V_REFL_GEN-STM

2.14 SEIN_ZU-INF

2.15 TOUGH

3 ADDITIONAL CATEGORIES

3.1 STIMULUS_TYPE

3.1.1 anim

3.1.2 anim_proxy

3.1.3 inanim

3.1.4 propositional

3.1.5 ambiguous

3.1.6 clash_of_coordinations

3.2 STIMULUS_PP

3.3 CONTROL

3.4 OTHER_STIMULUS_ADJUNCT

4 COMMENTS & MISC

4.1 COMMENTS

4.1.1 General (sentence-based)

4.1.1.1 false_hit

4.1.1.2 duplicate

4.1.1.3 ungrammatical

4.1.1.4 ambiguous

4.1.1.5 fragment

4.1.1.6 headline

4.1.1.7 ellipsis

4.1.1.8 title

4.1.1.9 variation

4.1.1.10 idiomatic
4.1.1.11 collocation 34

4.1.2 Verb-based 34
  4.1.2.1 polysemous 34
  4.1.2.2 psych_ambiguous 35
  4.1.2.3 utterance_reading 35

4.1.3 STM-based 36
  4.1.3.1 metonymic_STM 36
  4.1.3.2 metaphoric_STM 36
  4.1.3.3 STM_coordination 37
  4.1.3.4 STM_psych_noun 38
  4.1.3.5 propositional content noun 38
  4.1.3.6 clearly_non-agentive 40

4.1.4 EXP-based 40
  4.1.4.1 metonymic_EXP 40
  4.1.4.2 metaphoric_EXP 41
  4.1.4.3 EXP_coordination 41
  4.1.4.4 EXP_anim_proxy 41
  4.1.4.5 EXP-related_object 43
  4.1.4.6 EXP-indicating_adjunct 44
  4.1.4.7 reciprocal 45
  4.1.4.8 resultative_object 45

4.1.5 other 45
  4.1.5.1 non-phoric_es 45
  4.1.5.2 pronominal_adverb 45
  4.1.5.3 result_PP 46

4.2 Misc 46

5 BIBLIOGRAPHY 46

6 LIST OF VERBS 50
1 General

1.1 not_of_interest

In some cases, it is not sensible or even possible to annotate an example. This is the case with (incorrectly tagged) non-verbal occurrences, fragmentary or duplicate sentences, bare infinitives, or ungrammatical clauses, among others. Usually, an explanatory comment is required, cf. 4.1. If no comment applies, use 4.2 Misc to specify why the example should be excluded from further consideration. Fragmentary or ungrammatical examples that can be annotated should be annotated. If you are able to determine the pattern and (if required) the stimulus type, you should annotate the example in the usual way and refrain from using not_of_interest. Be aware of the pattern 2.8 NoAux_V-PII, which is annotated although one might consider these occurrences non-verbal, as disputed in the literature.

not_of_interest + comment fragment

(38) ) Monica, zwei weitere, durchaus sympathische Männer zu faszinieren.
Monica two additional quite likeable men to fascinate
(NZZ_1995_03_31_a143_seg3_s7)

fragment but not not_of_interest

(39) wird sich der heutige Leser halb amüsiert, halb wehmütig denken und
will refl. the contemporary reader half amused half wistful think and
erstaunt auf das kurze Wort "soll" starren [...].
anstonished at the short word shall stare
(NZZ_1996_05_25_a247_seg9_s7)
today’s reader will think to themselves half amused and half wistful, and stare
at the short word “shall” in astonishment.

1.2 non-psych

Landau (2010, p. 137) defines: “A psych verb is any verb that carries psychological entailments with respect to one of its arguments (the experiencer)”. Some verbs like e.g. bewegen (to move), zusetzen (to nag but also to add) or guttun (to benefit, to do sb. good), however, carry psychological entailments only in some of the examples. While one
might want to speak of homonymy in the case of zusetzen, one will be willing to assume polysemy or even postulate only one reading that is vague with regard to the psych/non-psych distinction in other cases – note that it is possible to coordinate both readings of guttun in (40) without a zeugma effect. Examples in which the verb does not have a psych entailment are marked as non-psych. Note the existence of comment 4.1.2.2 *psych_ambiguous*, which is used if the sentence entails both a possible psych and non-psych reading. Non-psych examples are combined with an annotation of the syntactic patterns like psych examples and a “psych ambiguous” comment may also be used.

(40) Über 4500 Arbeiter haben […] 35 Millionen Kubikmeter Erde bewegt.
    over 4500 workers have 35 million cubic metres earth moved
    (NZZ_1993_03_31_a38_seg10_s3)
    Over 4500 workers moved 35 million cubic metres of earth.

(41) […] Zu einheimischem Traubenmost […] darf reine Saccharose […] zugesetzt
    To domestic grape must may pure saccharose added
    werden.
    become. (NZZ_1993_05_22_a70_seg16_s1)
    It is allowed to add pure saccharose to domestic grape must.

perhaps more controversial: sich gefallen lassen (to put up with)

(42) Die Beamten liessen sich das sogar eine kurze Zeit gefallen […]
    the officials let this even a short time please
    The officials even put up with it for a while.

regular annotation + comment *psych_ambiguous*

The comment is not obligatory due to the coordinative construction but because there is a non-psych reading even with the animate object.

(43) Etwas längere Pausen zwischen den Stücken hätten zudem den
    slightly longer breaks between the pieces have moreover the
    Hörerinnen und Hörern sowie den Werken gutgetan […]
    listeners.F and listeners as well as the works benefitted
    (NZZ_1995_05_16_a153_seg2_s12)
    Slightly longer pauses between the pieces would have benefitted the listeners as well as the works.
2 Syntactic Patterns

For ease of annotation, each pattern gets its own column so that it can be marked by an x. We do not distinguish between finite and infinite forms, except for patterns with PIIP. Consequently, EO verbs embedded under raising predicates are not distinguished from corresponding inflected forms, since the original argument structure of the EO verb is not affected by the embedding. However, (adjunct) control is commented separately (cf. 3.3).

2.1 X-STM_V_Y-EXP

The transitive pattern: Stimulus subject, experiencer object.

(44) Die Aura der Stararchitekten **bezaubert** neuerdings die Welt.
the aura the.gen star.architects.gen charms recently the world
(NZZ_1995_11_28_a97_seg3_s1)
The aura of star architects recently charms the whole world.

The same pattern is annotated if the order of complements is reversed (i.e. Y-EXP realized before X-STM).

(45) Ihr **behagen** schwierige Strecken wie in Altenmarkt.
her.dat please difficult.nom routes.nom like in Altenmarkt
(NZZ_1994_01_10_a105_seg6_s17)
She is comfortable with difficult routes like the one in Altenmarkt.

PP (also annotate PP, cf. 3.2):

(46) Sein Nachfolger Clement hingegen **verschreckt** Politiker wie Bürger durch **seine Forschheit**.
his successor clement however scares politicians.acc as.well.as citizens.acc through his brashness (NZZ_1999_03_06_a8_seg6_s4)
His successor Clement, however, scares off politicians and citizens alike with his brashness.

\* participle II. “Partizip II” is the German name for this kind of participle. We use a translation of it because it is more accurate than terms like past participle or perfect participle since it does not make reference to a specific function of the form (it is e.g. questionable whether a participle II in an adjunct participle clause has to be considered passive).
2.2 X-STM_V

The intransitive pattern: There is a stimulus subject without an experiencer object. Although the experiencer is not realised syntactically, they can be considered present semantically.

(47) Die musikalischen Leistungen **imponierten** fast durchweg.
The.NOM musical.NOM performances.NOM impressed almost throughout (NZZ_1994_08_24_a85_seg3_s10)
The musical performances impressed almost without exception/the entire time.

**PP (also annotate PP, cf. 3.2):**

(48) Es sind Steine, Blumen, Muscheln, Figuren,
It are stones.NOM flowers.NOM mussels.NOM figures.NOM
Erinnerungsbilder von Reisen, die ihre Sprache sprechen und **mit**
souvenir.pictures.NOM from journeys that their language speak and with
ihren Formen **bezaubern.**
their shapes enchant (NZZ_1993_08_14_a126_seg2_s139)
Stones, flowers, mussels, figurines, and souvenir pictures from journeys speak their language and enchant with their shapes. / These are stones, flowers, mussels, figurines, and souvenir pictures from journeys, which speak their own language and enchant with their shapes.

2.3 sein_V-II

The stative/adjectival passive (Zustandspassiv) formed with **sein** (to be) and the PII, with or without additional PP (in latter cases, also annotate PP, cf. 3.2). Its exact analysis for EO-verbs is disputed in the literature (cf. Möller, 2015). This pattern is reserved for the stative passive and should not be used with the perfect past of verbs like nahegehen (to affect emotionally) that use **sein** as their perfect auxiliary.

(49) Auch Staehelin ist deprimiert.
also Staehelin is depressed (NZZ_1996_11_04_a18_seg8_s5)
Staehelin is also depressed.
Die Epigonen Duchamps sind noch immer fleissig, the epigones.NOM Duchamp.GEN are still ever industrious Museen und Handel begeistert. museums.NOM and trade.NOM excited (NZZ_1993_01_06_a41_seg2_s7) Duchamp’s epigones are still busy, museums and trade are excited.

PP (also annotate PP, cf.3.2)

Als eher konservativer Bürger, dessen Familie nachweislich seit dem frühen as rather conservative citizen whose family demonstrably since the early Mittelalter im schweizerischen Raum heimatberechtigt ist, bin ich middle.ages in.the Swiss area having.communal.civil.rights is am I von dieser neuen Welle schockt. by this new wave shocked (NZZ_1993_04_23_a50_seg2_s3) As a rather conservative citizen whose family has demonstrably been domiciled in the Swiss area since the early Middle Ages, I am shocked by this new wave.

People in Washington suspect that President Asad is deeply upset about the autonomy agreement with Israel that the PLO leaders arranged.

not sein_V-PII but past perfect (Plusquamperfekt):

Die edle Traurigkeit, die von Ruinenstädten ausgeht, und der Untergang the noble sadness that from ruined.cities emanates and the decline der Antike überhaupt waren den grossen Geistern jener the.GEN antiquity generally were the.DAT great.DAT minds.DAT that.GEN Zeit nahegegangen. time.GEN affect.deeply (NZZ_1998_05_30_a252_seg9_s5) The noble sadness that emanates from ruined cities and the decline of antiquity in general affected the great minds of that period deeply.

2.4 werden_V-PII

This is the canonical German verbal passive (Vorgangspassiv), including the impersonal passive. Some apparent instances of this construction have to be analysed as copula + adjective (cf. also Möller, 2015). If the PII is definitively an adjective in an example, it
is marked as 1.1 not_of_interest. In ambiguous cases, the comment 4.1.4 ambiguous is used.

(54) Russland [...] dürfe unter keinen Umständen verärgert werden.  
Russia may. SBJV under no circumstances angered become  
(NZZ_1995_05_30_a9_seg4_s5)  
Russia must not be angered under any circumstances.

impersonal passive:

(55) 28 Erstaunlich, wie da pustend verwirrt wurde.  
28 astonishing how there blowing confused became  
(NZZ_1997_12_06_a248_seg4_s21)  
Astonishing, how (someone) managed to confuse (someone) by/while blowing.

copula + adjective:

(56) Sie geht ins Altersheim, wird geistig verwirrt, die Kinder holen sie zurück, sie kommt ins Spital und stirbt.  
She goes into the retirement home becomes mentally confused her children bring her back she is admitted to the hospital and dies  
(NZZ_1993_09_20_a225_seg3_s2)  
She moves to a retirement home, becomes mentally confused, her children bring her back, she is admitted to the hospital and dies.

PP (also annotate PP, cf. 3.2):

(57) Der [...] Reisende wird von einem süßlichen Geruch in der Luft verwirrt.  
the traveller becomes by a sweetish smell in the air confused  
(NZZ_1997_10_01_a20_seg10_s1)  
The traveller is confused by a sweetish smell in the air.

2.5 X_lassen_refl_V

In this pattern, the verb cooccurs with a reflexive embedded under lassen (let). For a discussion of the construction, cf. (Kunze, 1997; Pitteroff, 2014). We do not distinguish e.g. between the personal and the impersonal form (although a comment in 4.2 Misc is advisory in the case of the impersonal variant) or between lexicalised and more productive forms of usage (but cf. 4.1.1.11 collocation and 4.1.1.10 idiomatic).

(58) Gogo lässt sich nicht entmutigen.  
Gogo lets REFLECT not discourage (NZZ_1994_01_08_a194seg3_s24)  
Gogo does not get discouraged.
impersonal variant:

(59) 52 Mit ihnen lässt sich trefflich imponieren.
    52 with them lets REFL splendidly impress
    (NZZ_1994_10_01_a212_seg17_s32)
    52 One can splendidly use them to impress.

PP (also annotate PP, cf. 3.2):

(60) […] "Eigentlich ungewöhnlich, wie sich der Mensch von diesen Blechtrotteln […] actually unusual how REFL the human by this tin.moron faszinieren lässt."
    fascinate lets (NZZ_1994_05_27_a204_seg4_s3)
    Actually, it’s quite unusual how people allow themselves to get fascinated by these tin morons.

2.6 X_V_refl

This is the reflexive construction. It can be distinguished from instances of the transitive pattern, 2.1 X-STM_V_Y-EXP, containing an anaphoric reflexive pronoun with the usual tests. In concrete terms, we use the following ones as presented in (Kunze, 1997):

1. Is it possible to replace the reflexive pronoun with an interrogative one or to coordinate it with a referential NP?
2. Can the reflexive pronoun appear in the vorfeld\textsuperscript{10}? (related to 1)
3. Is it possible to modify the reflexive using selbst/selber? (related to 1)
4. Is it possible to negate the reflexive? (related to 1)
5. Is it possible to replace the reflexive with a referential NP without a change in verb meaning?
6. Is it possible to replace the reflexive with a referential NP without consequences for the overall argument structure of the verb?

In the case of an anaphoric reflexive pronoun, all of the above questions will be answered affirmatively, though coordination with a referential NP may not be possible in the case of reciprocal pronouns.

If both readings are possible, one should annotate the more prominent one (which will usually be X_V_refl) and comment 4.1.1.4 ambiguous.

\textsuperscript{10} German is a V2 language, i.e. in a canonical sentence the finite verb is located in the second position, following an arbitrary constituent. In traditional terminology the area in front of the verb is called Vorfeld (prefield).
unproblematic standard case: unambiguously X_V_refl

(61) Wenn zwei sich streiten, freut sich die Nachwelt.
when two REFL quarrel rejoices REFL the posterity
(NZZ_1994_06_08_a113_seg4_s1)
When two people quarrel, posterity rejoices.

not X_V_refl but X-STM_V_Y-EXP (+ comment 4.1.4.7 reciprocal):

(62) Es sind Pelzrobben, die andere Pelzrobben auf dem schmalen Strand
it are fur.seals.NOM who other fur.seals.ACC on the narrow beach
herumjagen, sich gegenseitig imponieren, spielen.
chase.around REFL mutually impress play
(NZZ_1995_01_28_a218_seg3_s27)
They are fur seals, who chase other fur seals around on the narrow beach, who
impress each other, who play.

ambiguous example, comment ambiguous (X_V_refl reading more prominent)

(63) Man […] weiss, dass sie sich langweilen und quälen […].
one knows that they REFL bore and torture
(NZZ_1999_09_14_a128_seg3_s14)
One knows that they are bored and struggling. / One knows that they are bored
and that they torture. / One knows that they bore and torment each other.

Some verbs will have an utterance reading when used reflexively if a (direct or
indirect) quotation is present. Use the comment 4.1.2.3 utterance_reading in this case.

(64) "Ich riskierte etwas zu viel ", ärgerte er sich.
I risk a.little too much annoyed he REFL
(NZZ_1994_08_29_a114_seg2_s6)
"I risked a little too much", he said annoyed.

Often, the stimulus is expressed by means of a PP or an Other_stimulus_adjunct (cf.
3.4) with this pattern.

PP (also annotate PP, cf. 3.2):

(65) Man amüsiert sich über Tinguelys Sinn für Satire und Ironie.
one amuses REFL about Tingeuley.GEN sense for satire and irony
(NZZ_1995_08_15_a122_seg6_s3)
One is amused by Tinguely’s sense of satire and irony.
Other_stimulus_adjunct (cf. 3.4):

(66) 23.00 Ich freue mich, dass du geboren bist.
     23.00 I am glad that you were born.
     (NZZ_1994_12_16_a188_seg29_s25)

2.7 refl_V-PII_zeigen
Verb and reflexive embedded under zeigen (to show). Also includes comparable cases with fühlen (to feel), erklären (to declare), sehen (to see) etc. which are not listed separately. One might consider this pattern related to 2.3 sein_V-PII in a copula analysis (cf. Möller, 2015).

(67) Nach zwei Monaten habe ich Zweifel und fühle mich deprimiert.
     After two months have I doubts and feel depressed.
     (NZZ_1993_04_30_a72_seg4_s6)

PP (also annotate PP, cf. 3.2):

(68) Sie selbst zeigten sich "schockiert" über die politischen Sitten
     they themselves showed shocked about the political customs
     im Lande.
     in the country (NZZ_1994_03_31_a32_seg5_s6)

They themselves appeared "shocked" by the political mores in the country.

2.8 NoAux_V-PII
Sometimes a PII is used as a depictive/adverbial. It may form a (sometimes considerably long) participle clause. These occurrences are not verbal per se but e.g. differences among verbs regarding their distribution or the stimulus prepositions they come along with may nevertheless be interesting for an analysis of the verbs.11 Although some analyses assume a silent element in cases like these and Fischer and Høyem (2017) take it to be PRO, we do not annotate 3.3 Control.

11 The same holds for 2.3 sein_V-PII.
(69) Der exzentrische Mr. Enderby ist sichtlich verängstigt vor ihren Augen tot zusammengebrochen. Visibly frightened, the eccentric Mr Enderby collapsed dead under their very eyes.

PP (also annotate PP, cf. 3.2):

(70) Nach dem Abzug der Sowjets nahm er seine religiösen Studien wieder auf, brach sie jedoch ab, als er, angeekelt von den Machtkämpfen zwischen den afghanischen Milizen, 1994 wieder zu den Waffen griff [...]. After the Soviets left, he resumed his religious studies, but abandoned them when, disgusted by the infighting between Afghan militias, he took up arms again in 1994.

2.9 Acc/Dat-EXP_V

There is a dative/accusative experiencer but no (phoric) subject. A non-phoric es (3rd person singular neuter pronoun) is ignored (but comment 4.1.5 non-phoric_es). We also take the es in examples like (71) to be non-phoric.

non-phoric_es:

(71) Dort gefiel es ihr nicht [...] there liked it her.DAT not

(NZZ_1993_04_29_a117_seg1_s7) She did not like it there.
PP (also annotate PP, cf. 3.2):

formulierten Affekten» ihn manchmal ekelt [...]. 
Alfred Kantorowicz’s “night books” are above all his paper “Wailing Wall”, 
whose “subjectivism” and “inconsiderately formulated affects” disgust him 
sometimes.

2.10 wirken/scheinen_V-PII
PII embedded under a verb like wirken (to appear) scheinen (seem) or klingen (to sound). 
The category is not restricted to the verbs listed here, similar to refl_V-PII_zeigen. There 
might be a close relation to (copula-analysed) 2.3 sein_V-PII but we will keep them 
separate during the annotation.

(73) Der [...] Sänger Roger Daltrey dagegen wirkt etwas gelangweilt [...]. 
The singer Roger Daltrey, in contrast, seems a bit bored 
(73) Der [...] Sänger Roger Daltrey dagegen wirkt etwas gelangweilt [...].

2.11 X-CAUS_V_Y-EXP_PP
The subject causes the object experiencer to be in a certain emotional state (depending 
on the verb) regarding some object of emotion which is given as a PP.

(74) 1665 hatte Kara Mehmet Pascha die Wiener Oberschichten für das 
"schwarze Wasser " begeistert.
In 1665, Kara Mehmed Pasha made the Viennese upper classes get excited about the “black water”.

2.12 Nom-EXP_V
The experiencer is the subject of the intransitive verb, which follows the strong 
conjugation paradigm. According to Hirsch (2018 chapter 4.2), these verbs take part in 
the causative alternation, and this is the anticausative form.
Ich erschrak etwas, machte mich dann aber bald an die Arbeit.
I startled a.bit made REFL then but soon to the work
(NZZ_1996_12_07_a218_seg3_s7)
I was a little startled, but soon got down to work.

2.13 EXP_V_refl_Gen-STM
Reflexive verb with a nominative experiencer and an additional genitive stimulus.

(76) Nicht umsonst erfreut sich Graf v. Krockow in Polen grossen Ansehens.
not for.nothing enjoys REFL Count v. Krockow in Poland great renown.GEN
It is not for nothing that Count von Krockow enjoys great renown in Poland.

2.14 sein_zu-Inf
Modal infinitive with sein (to be). Modal infinitives with haben (have) are treated just like any other instance of raising, but this is not possible with the sein-variant.

(77) Die Kriminellen seien mit solch einer "Farce" nicht zu erschrecken.
the criminals are.SBJV with such a.DAT farce.DAT not to frighten
(NZZ_1998_03_07_a9seg6_s3)
It is impossible to frighten criminals with such a “farce”. / The criminals are not to be frightened with such a “farce”.

2.15 tough
This is the tough-construction as exemplified in (78). Haider (2010, chapter 7.4) argues that the German tough-construction is an instance of 2.14 sein_zu-Inf (and thus works differently from tough-movement in English), but we will treat them separately during the annotation.

(78) Die russische Gesellschaft dürfte nicht leicht wieder einzuschüchtern sein.
the Russian society might not easy again to.intimidate be
(NZZ_1994_01_29_a113_seg23_s13)
It won’t be easy to intimidate Russian society again.
3 Additional Categories

3.1 Stimulus_Type

We distinguish three broad classes of stimuli (two of which are semantic, the third one is half semantic, half syntactic): animate, inanimate, and propositional/clausal. However, the overall distribution of observed stimuli called for a more fine-grained classification, resulting in six possible values for this feature. Since we consider “agentivity” not a feature of certain stimuli, but of constructions or certain contexts, we refrained from a stimulus-based annotation in terms of “agentivity” or “volitionality” and preferred a semantically more profound classification based on animacy. We annotate the stimulus type only for patterns with an NP/CP stimulus, i.e. 2.1 X-STM_V_Y-EXP, 2.2 X-STM_V, and 2.11 X-CAUS_V_Y-EXP_PP. In all other cases, the cell is left empty. If the stimulus is realised syntactically as a pronoun, its antecedent is treated as the stimulus. Of course, it may be the case that the antecedent is not realised in the given sentence and the stimulus type cannot be determined. In this case, we annotate cf. 3.1.5 ambiguous. Quantifiers may come with restrictions that make it possible to choose a specific stimulus type. Annotate 3.1.5 ambiguous if not.

3.1.1 anim

The stimulus is animate. Generally speaking, everything that is alive from a biological point of view is considered animate for our purposes. Additionally, things like ghosts, dead people, gods count as animate if it is clear from the context that they are taken to share some features that are typical of animate beings in the strict sense (such as volitionality, the ability to make plans etc.). For complex (social) entities that may behave like atomic animate beings, cf. 3.1.2 anim_proxy. Note the existence of comment 4.1.3.6 clearly_non-agentive, which is used with stimuli that are animate but definitely not agentive, which might apply to plants, single-cell organisms etc. If the stimulus

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This criterion has the advantage of being (comparatively) clear-cut. It also seems like a reasonable default choice: it might well be that different concepts of animacy are relevant in different areas of grammar/semantics. At least since Jespersen (1924, p. 237), the distinction between wer (who) and was (what) is cited as a grammatical reflex of animacy. But it is perfectly possible that the kind of animacy relevant there is different from the one that interests us when we look at the kinds of stimuli a verb can take. There is e.g. – as Križka (2009) points out – an observation dating back to Paul (1917) that inanimate masculine nouns belonging to the weak declension class show a nominative-accusative case syncretism while animate ones do not. Križka (2009, p. 148) attributes to Gustav Wurzel the observation that fish behave as if they were inanimate. One may note that (at least on my judgement) one can use wer in their case: Wer schwimmt denn da im Teich? Ein Karpfen. (Who’s swimming in the pond? A carp.) This means that it cannot be the same concept of animacy that is relevant in both cases. Though note that one may also doubt the generalisation based on counterexamples like Automat (vending machine, automaton).
argument is realised as a pronoun, use *anim* only if it is clear from the context that its referent must be animate.

(79) Liberale Abgeordnete befürchten, dass Bishop Wähler liberal representatives fear that Bishop.NOM voters.ACC einschüchtert [...]. intimidates (NZZ_1994_03_31_a7_seg8_s6)

Liberal MPs fear that Bishop intimidates / will intimidate voters.

demons are animate:

(80) [...] in der Kirche findet sie keinen Trost, weil die Dämonen sie in the church finds she no comfort because the demons.NOM her.ACC peinigen. torment (NZZ_1996_12_28_a155_seg10_s5)

She does not find comfort in church because the demons torment her.

antecedent of pronoun animate:

(81) Und ihre Politiker, die widern mich an! and their/her politicians they disgust me.ACC PRT (NZZ_1998_03_10_a23_seg6_s6)

As for their/her politicians, they disgust me!

*anim* but 4.1.3.6 clearly_non-agentive:

(82) Die zu den Schraubenbakterien zählenden Borrelien verwirren die the to the Spirochaetes belonging Borrelia confuse the Mediziner seit Jahrhunderten mit einem Spektrum von sehr physicians.ACC for centuries with a spectrum.DAT of very unterschiedlichen Krankheitsformen. different forms.of.disease (NZZ_1998_10_07_a196_seg4_s1)

Borrelia, which belong to the spirochete phylum, have been confusing physicians for centuries with a spectrum of very different forms of disease.

3.1.2 *anim_proxy*

The stimulus is not strictly speaking animate, but it is a (complex social) entity that is rooted in animate or sentient beings and in certain (relevant) respects acts like an animated agent. Typical examples include institutions, organisations, nations etc. If it is not clear whether the stimulus is *anim* or *anim_proxy*, annotate *anim*.
Deutsche Fernsehanstalten hätten durch falsche Berichterstattung die Touristen eingeschüchtert.

German television networks have intimidated the tourists through false reporting.

most probably a sports team

Während […] St. Gallen die Fans entzückte […]
While St. Gallen the fans delighted […]

The world champion wins and bores.

Der Weltmeister siegt und langweilt.
The world champion wins and bores.

Although the performance did everything to keep the memory of the original soundtrack alive, it was impressive in its own way.

He did not like Paris before he became its mayor in 1977. / He did not feel comfortable in Paris before he became its mayor in 1977.
3.1.3 inanim

The stimulus is inanimate. NPs that may be taken to have a propositional reading also fall into this category. If the stimulus is realised as an NP headed by a propositional content noun (cf. 4.1.3.5 *propositional content noun*), *inanim* is used and a comment is obligatory irrespective of the presence of an embedded clause within the NP (cf. Section 4.1.3.5).

(88) Daniel Vischer […] bekümmert das Schicksal der Swissair.
    Daniel Vischer.ACC troubles the.NOM fate.NOM the.GEN Swissair.GEN
    (NZZ_1997_04_22_a138_seg11_s11)
    Swissair’s fate troubles Daniel Vischer.

(89) Der dauernde Sprachwechsel amüsiert sie […].
    the constant change.of.language amuses her/them.ACC
    (NZZ_1994_11_24_a165_seg10_s8)
    The constant shift in language amuses her/them.

More controversial example, refers to an abstract kind of person that B. exemplifies

(90) An Berlusconi imponiert ihnen der Macher-typ […].
    At Berlusconi.DAT impresses them the doer-type
    (NZZ_1995_01_30_a14_seg10_s4)
    What impresses them about Berlusconi is that he is the kind of person that gets things done.

also controversial: Dead people are not animate (in this example, the shock does not refer to corpses per se but the fact that someone died)

(91) Erste Todesopfer schockieren.
    first victims.of.death shock
    (NZZ_1996_01_11_a127_seg3_s5)
    First fatalities shock.

+comment PCN+C (cf. 4.1.3.5):

(92) Ganz besonders schien Rutskoi die Tatsache zu missfallen, especially particularly seemed Rutskoy.DAT the.NOM fact.NOM to displease dass er zusammen mit Schumeiko […] suspendiert wurde: (…)
    that he together with Shumeyko suspended was
    (NZZ_1993_09_02_a25_seg6_s8)
    Rutskoy seemed particularly displeased by the fact that he was suspended along with Shumeyko:
3.1.4 propositional

A stimulus is treated as propositional if it is 1. syntactically clausal and semantically propositional (this includes non-finite clauses) or 2. realised as a pronoun that refers to a proposition. The second conjunct of 1. excludes free relative clauses as in (104).\textsuperscript{13} The presence or absence of an es-correlate does not make a difference. Semantically propositional in the sense relevant here are not only propositions proper but also the denotation of e.g. some non-finite clauses that may be analysed to refer to events or situations.

dass-clause without an es-correlate:

(93) Dass die Vernunft dieser Männer und deren langfristige Arbeitskonzeption nun schon als "Modell Ajax im Schwarzwald" gefeiert wird, schmeichelt zwar ein bisschen, überheblich wird deswegen keiner.
because.of.this nobody (NZZ_1996_03_19_a161_seg3_s20)
Although it is a little flattering that the prudence of these men and their long-term working conception is now being celebrated as the “Ajax in the Black Forrest model”, no one gets conceited about it.

dass-clause with an es-correlate:

(94) Es leuchtet ein, dass eine solche Erhebung für die Umwelt vorteilhaft ist.
beneficial is (NZZ_1997_09_02_a165_seg2_s15)
It is evident that such a survey/rising/charging is beneficial to the environment.

\textsuperscript{13} Free relative clauses must be distinguished from sentences having the same form that are traditionally called “indirekte Fragenätze” (indirect interrogative clauses). Zifonun et al. (1997, p. 2263ff.) draw the distinction in a slightly different way, distinguishing “gegenstandsfundierte W-Sätze” (object-based w-clause, where a w-clause is a clause introduced by a phrase containing a w-element like wie (how), wer (who), was (what), welcher (which), worüber (about what), etc., cf. ibd.) and “propositionsfundierte W-Sätze” (proposition-based w-clauses). They offer a range of tests that allow to distinguish them. While we classify the latter as propositional, the former are usually ambiguous (but they could also be inanim or theoretically even anim/anim\_proxy). If a clause is ambiguous between an object-based and a proposition-based reading, it will usually also be considered ambiguous (exception: it is clear from the context that the object on the object-based reading has to be a proposition).
pronoun referring to a proposition

(95) Niemand steuert diesen Prozess; dies ängstigt die Kontrollsüchtigen.
    nobody controls this process this.NOM frightens the control.addicts.ACC
    (NZZ_1999_12_30_a24_seg10_s11)
    Nobody controls this process; this frightens the control addicts.

In examples like below, we take es to be a phoric pronoun that refers to the content of the wenn-clause:

(96) Womöglich hätte es ihn sogar amüsiert, wenn ich ihm diese Frage
    Possibly have.SBJV it him.ACC even amused if I him this question
    posed have.SBJV (NZZ_1996_02_20_a107_seg6_s16)
    It might even have amused him if I had asked him this question.

non-finite clause + es-correlate

(97) [...] Welcher Künstlerrunde hätte es nicht geschmeichelt, sich ein
    Which round.of.artists.DAT have.SBJV it not flattered REFL a
    veritables Bettlerbankett zu nennen?
    veritable beggars’.banquet to call (NZZ_1994_05_14_a231_seg3_s3)
    Which round of artists would not have been flattered to call itself a veritable beggars’ banquet?

proposition-based w-clause (cf. footnote on page 19)

(98) Wie sicher und souverän er diese Führung hielt, imponierte.
    how safe and sovereign he this lead held impressed
    (NZZ_1993_01_28_a120_seg2_s17)
    It was impressive how securely and sovereignly he held this lead.

3.1.5 ambiguous

From the sentence only, it is not clear which of the other categories the stimulus belongs to. This will mostly apply if the antecedent of the pronoun realising the stimulus is not part of the tagged sentence; but it is also used when there are two possible antecedents for a pronoun that belong to different categories, or when possible readings of a stimulus NP belong to different categories and cannot be sufficiently disambiguated in context. Many free relative clauses with was (what) and clauses that may or may not be free relative clauses (cf. footnote on page 19) also fall into this category.
Was mag Herrn Makishima bekümmern?

What might it be that troubles Mr Makishima?

Sie soll mich faszinieren?

She is supposed to fascinate me?

A person named Schubert or the famous composer’s oeuvre?

Dass Schubert sie verwirren würde [...] hätten sie gleich gewusst, als sie sich kennenlernten.

When they met for the first time, they immediately knew that Schubert would confuse them.

Several possible referents for es: the proposition expressed by the initial clause, the procedure (inanim), the meat (inanim).

Das Fleisch wird butterzart, und man muss auch nicht unbedingt etwas gegen dieses Vorgehen haben - aber es verändert die Struktur des Fleisches ein bisschen, und mir gefällt es einfach nicht.

The meat becomes tender as butter – and one does not necessarily have to have anything against this procedure – but it changes the structure of the meat a bit, and I just don't like it.

quantifier

Nichts schockiert Madame de Sevigne.

Nothing shocks Madame de Sévigné.
free relative clause with *was* *(what)*

(104) [...] **was er im fernen Südamerika zu sehen bekam**, schien ihn zu **entzücken**.

What he got to see in faraway South America seemed to delight him.

3.1.6 clash_of_coordinations

This category is used if the stimulus is an NP consisting of two coordinated NPs that differ in animacy, or a pronoun referring to (the sum/set of) entities of differing status.

**anim and inanim**

(105) **Die vielen Personen und kleinen Sequenzen [...] verwirren** allerdings die **Betrachter**.

The many people and small sequences, however, confuse the beholders.

**anim and anim_proxy**

(106) **Am stärksten imponierten mir damals George Clinton, Bootsie Collins und ihre Bands Parliament/Funkadelic.**

The ones who impressed me most were George Clinton, Bootsie Collins, and their bands Parliament/Funkadelic.
3.2 Stimulus_PP

Some prepositions can be used to indicate stimuli. By using this category, we do not want to commit to any theoretical analysis of such constructions, but we consider it necessary to document their occurrence. Therefore, all sentences containing a PP that can be considered to express (part of) a stimulus should be annotated accordingly. We have a very broad concept of a stimulus here that includes e.g. von-PPs in passive sentences or PPs headed by als (as) in examples like (111).

Other interpretations of the (usually polysemous) prepositions are considered irrelevant for this annotation. If there are two stimulus PPs, the prepositions should be separated by a comma. Use the standard citation form of the preposition also for portmanteau morphemes like an (an + dem, at the). Pronominal adverbs like dafür or darüber are also not annotated differently from the prepositions they derive from (but a comment is obligatory, cf. 4.1.5.2 pronominal_adverb).

An (incomplete) list of prepositions with relevant readings: als, an, angesichts, auf, bei, dank, durch, für, in, mit, ob, um, über, von, vor, wegen

(108) Um so mehr fällt an Ruth Liepmans Lebensbericht auf, wie vollkommen unetitel sie erzählt.
What is all the more striking about Ruth Liepman’s life story is how completely unpretentiously she narrates.
(109) Sie freue sich jetzt auf ihre Familie, gab Lucid lachend bekannt.
Lucid laughingly announced that she is excited now to be with/meet her family.

(110) Sie fielen durch eine unsichere Fahrweise auf.
They attracted attention due to their insecure way of driving.

controversial:

(111) Die Verteidiger Meier (Chur) und Seger (Uzwil) imponierten als "Abräumer" an der Bande [...].
The defenders Meier (Chur) and Seger (Uzwil) were impressive as "enforcers" on the boards.

annotate an, not am:

(112) Einleitend [...] erklärt Jean Nouvel, was ihn am gegenwärtigen Design interessiert [...].
In the beginning, Jean Nouvel explains what interests him about contemporary design.

+ comment 4.1.1.4 ambiguous because of PP attachment ambiguity

(113) Eher hatte er ein Gesicht [...] das ihn als einen Mann auswies, den das Jahrhundert mit seinem Lärm bekümmert.
Rather, he had a face that showed that he was a man distressed by the century’s noise / the century and its noise.
pronominal_adverb (annotate über):

(114) Angesichts der deutlich verbesserten Umsatzrentabilität zeigte sich die Geschäftsführung […] darüber nicht bekümmert.

Given the considerably improved profit on sales, the management […] was not distressed by this.

not a stimulus PP (mit-PP clearly instrumental)

(115) Es war dann der Routinier, der […] das Tempo bestimmte […] und damit den Äthiopier zu zermürben versuchte.

It was the veteran then who set the pace and tried to demoralise the Ethiopian this way.

(116) Der Vater schüchterte die Mutter noch lange mit Drohungen ein.

The father intimidated the mother with threats for a long time.

(117) Die Regierung wollte mit dieser Politik die Bevölkerung einschüchtern.

With this policy, the government wants to intimidate the people.

controversial example: not a stimulus PP (locative)

(118) Im romantischen Rosensteinpark begeistern die Blumenwiesen und mächtigen Kastanienbäume.

In romantic Rosenstein Park, the flower meadows and the mighty chestnut trees are a delight.

3.3 Control

This category is only relevant if the EO verb is non-finite and has a silent subject controlled from outside the non-finite clause (PRO). For non-relevant sentences, the cell
in the spreadsheet is left blank. Instances of 2.8 NoAux_V-PII are not taken to fall into this category. It is desirable to annotate cases of control since they can go along with an uncertainty regarding the nature of the stimulus type (because with our verbs the stimulus will usually be the PRO subject).\(^{15}\) This is most pressing in the case of implicit control where the controller is not syntactically realised and which is frequent in German (Stiebels, 2010, p. 395). We annotate 3.1.5 ambiguous as Stimulus_Type only if the nature of the controller is not clear from the (semantic) context, cf. (121). Most controllers can be assumed to be animate, but this is not always the case, especially not if the control verb is vermögen (to be able to) or wissen (to know) (cf. Colomo, 2011 on their status as control verbs).

To tell cases of control apart from cases of raising, the following tests are used (cf. (Kiss, 1995), we generalise from verbs to predicates here):

1. Raising predicates allow for expletive subjects and they embed predicates that select expletive subjects; control predicates don’t.
2. Many (but not all) raising predicates can embed subjectless predicates; control predicates never do.
3. Passivising the complement does not change the meaning of the whole sentence with raising predicates; with control predicates, however, there is a change in meaning.

Note that almost all modal verbs are raising verbs in German; exceptions include e.g. evidential wollen and abilitive verbs like vermögen or wissen (cf. Colomo, 2011).

**Unproblematic standard case: controller (ihm) is (dative) object of control verb (erlauben)**

(119) Zudem erlaubt ihm die Vermittlung, […] die politischen Konkurrenten zu verwirren.

Additionally allows him.DAT the mediation the political rivals.ACC to confuse (NZZ_1994_03_07_a5_seg6_s8)

Additionally, mediation allows him to confuse his political rivals.

\(^{15}\) This is not the case with raising predicates, where the “missing” argument of the embedded predicate will invariably occur as (depending on the embedding predicate) subject or object. Control appears as a more complex issue due to phenomena like adjunct control, control shift, implicit control, non-local control, or variable control.
Implicit control with a passivised control verb. We annotate 3.1.1 anim as Stimulus_Type because in order to try something, one has to be a conscious being, and conscious beings count as animate for our purposes.

(120) So wird mit allen Mitteln versucht, die Heimkehrwilligen einzuschüchtern […].
So, one tries to intimidate those who want to return home by all means.

Implicit control with a noun as the control predicate: We annotate 3.1.1 anim as Stimulus_Type.

(121) Dies sei ein Versuch gewesen, die Verteidigung einzuschüchtern.
This had been an attempt to intimidate the defence.

adjectival control predicate, animate (arbitrary) controller:

(122) Es ist unsinnig, diese Leute mit der demütigenden Stempelpflicht zu quälen.
It doesn’t make sense to torment these people with the humiliating stamping requirement.

ambiguous (most probably propositional) controller with vermögen:

(123) Letzteres vermochte die Organisatoren […] jedoch nicht zu entmutigen.
The latter, however, could not discourage the organisers.

adjunct control:

(124) Sie schossen vor ihrem Gesicht das MP-Magazin leer, um sie einzuschüchtern.
They shot the SMG’s magazine empty in front of her face in order to intimidate her.
not control but raising:

(125) Bis diese [...] den Zuschauer zu quälen beginnt. 
untill this. he/she starts to torment the spectator.
(NZZ_1999_08_07_a226_seg5_s49)
Until this/she starts to torment the spectator.

(126) Doch den flämischen Rennfahrern scheint's zu behagen. 
but the Flemish racers seems it to please
(NZZ_1994_04_05_a147_seg4_s4)
But the Flemish racers seem to like it.

(127) Eben der Anspruch ist es aber, durch den Cristina Campo ihrem Kreis imponiert haben muss. 
precisely the ambition is it but through which Cristina Campo her circle impressed must
(NZZ_1996_08_17_a135_seg5_s4)
But it is precisely this ambition by which Cristina Campo must have impressed her circle.

3.4 Other_stimulus_adjunct

In some cases, an additional stimulus is not realised as a PP but in another syntactic construction, e.g. as a non-finite clause or a dass-clause. Use x or leave blank. Examples like these have been argued to contain an empty pronominal adverb (cf. Gunkel & Hartmann, 2020).

(128) [...] er habe sich gekekelt, mit Familienmitgliedern einen Apfel zu teilen [...]. 
he had been disgusted with family members
share (NZZ_1996_05_30_a178_seg6_s7)
He had been disgusted to share an apple with family members.

(129) Gate Gourmet wäre [...] interessiert, diese vollständig zu übernehmen. 
Gate Gourmet is interested these completely to take over
(GNNZ_1995_06_12_a65_seg4_s15)
Gate Gourmet would be interested in taking them over completely.

(130) Dieser ärgerte sich am Ziel, dass er [...] die ihm von der Teamleitung gebotene Chance nicht besser genützt hatte. 
this.m annoyed at.the finish that he the him by the team management offered chance not better used had
(NZZ_1995_03_20_a146_seg8_s5)
After the race, he was annoyed that he had not taken better use of the chance offered to him by the team management.
not Other_stimulus_adjunct (relevant phrase not part of the same sentence)

(131) Und man wunderte sich: Warum lässt man derlei an Zürich vorbeiziehen?
and one wonders why lets one such at Zurich pass (NZZ_1999_10_26_a180_seg3_s9)
One wonders: Why does one let such things go past Zurich?

4 Comments & Misc

The following section lists the additional comments that are used for notable phenomena not reflected in the above guidelines. These will mostly regard sentence- and annotation-based characteristics as well as certain (semantic) features of stimuli and experiencers.

4.1 Comments

Multiple comments are possible and should be separated by comma. We group the comments into five categories here, but this is only to increase readability and for ease of use.

4.1.1 General (sentence-based)

4.1.1.1 false_hit

To be used with 1.1 not_of_interest if the example is incorrectly tagged (non-verbal occurrence) or clearly applies to a non-relevant verbal form, mostly due to homonymy. For occurrences of verbal polysemy, cf. 4.1.2.1 polysemous.

homonymous verb (fallen (to fall) instead of gefallen (to like)):

(132) Dann sind wir kopfüber in die Freiheit gefallen. "
Then are we headfirst into the liberty fallen (NZZ_1993_02_06_a160_seg4_s70)
Then, we fell headfirst into liberty.

different language (French):

(133) Une fille sur la plage. (NZZ_1996_02_24_a166_seg5_s2)
different POS (PII as attributive adjective in NP):

(134) Balladurs etwas aus der Mode gekommene Eleganz, seine ausgesuchte Höflichkeit, seine vornehmen, aber abgeschliffenen Formulierungen erweckten politenheit but musty wordings awaken mit ihrer Unzeitgemässheit die erstaunte kommentierte anästhetische Wirkung, auf welche die von Affären, politischen Manövern und Niedrigkeiten, staatlicher Ohnmacht angesichts der Krise und Arbeitslosigkeit verwirrte öffentliche Meinung in der Endzeit der affairs political manoeuvres and ignobleness state impotence in. the face of the crisis and Mitterrandism. gen gladly responded (NZZ_1995_01_21_a18_seg9_s2)

With their unseasonableness, Balladur’s slightly out-of-fashion elegance, his refined politeness, his genteel but musty phrasing aroused an anaesthetic effect which lead to astonished comments, and public opinion in the last days of Mitterandism – confused by affairs, political manoeuvres and ignoblenesses, state impotence in the face of crisis, and unemployment – gladly responded to it.

4.1.1.2 duplicate

Duplicate or highly similar example, the latter (or, in case of headlines, the incomplete) occurrence should be annotated 1.1 not_of_interest.

(135) Seine Frau, die reizende Reggie Lambert (Audrey Hepburn), langweilt sich derweil in den französischen Alpen. Meanwhile, his wife, the charming Reggie Lambert, is bored in the French Alps. (NZZ_1998_10_07_a146_seg7_s3)

Meanwhile, his wife, the charming Reggie Lambert (Audrey Hepburn), is bored in the French Alps.

(136) Seine Frau, die reizende Peggie Lambert, langweilt sich derweil in den französischen Alpen beim Wintersport. Meanwhile, his wife, the charming Reggie Lambert, is bored with/while doing winter sports in the French Alps.
4.1.1.3 ungrammatical

If the clause of interest is ungrammatical, annotate 1.1 not_of_interest and comment ungrammatical. Be sure not to confuse this category with 4.1.1.9 variation.

(137) *Tatsache ist, dass die jüngste wirtschaftliche Abflachung

fact is that the most recent economic flattening

die Werbung mit dem Fussball besonders hart zugesetzt hat.

the advertisement with the football particularly hard tormented has

(NZZ_1994_06_13_a226_seg10_s5)

(137) is ungrammatical because the NP die Werbung mit dem Fußball should bear dative (instead of nominative) case.

4.1.1.4 ambiguous

This comment is used with all sentence-level ambiguities. For ambiguities caused by the lexical semantics of the verb, cf. 4.1.2.1 polysemous and 4.1.2.2 psych_ambiguous. Use the most prominent reading as the basis for the annotation.

PP attachment:

(138) An einem Spieltag gelang es ihnen gar, die Spitzenclubs der ersten Division mit dem bundesweit höchsten Publikumszuspruch zu beschämen.

one matchday succeeded it them even the top clubs the first division with the nationwide highest popularity among the audience to shame

(NZZ_1996_12_10_a166_seg3_s5)

One matchday, they even managed to put the top clubs from the first league to shame by having the highest number of visitors nationwide. / One matchday, they even managed to put the top clubs from the first league having the highest number of visitors nationwide to shame.
2.2 $X$-$STM_V$ (preferred) or 2.1 $X$-$STM_V$-$Y$-$EXP$ with die Phantasie (the imagination) left out elliptically?

(139) Der Umgang der katholischen Kirche mit Geld interessiert, the dealing the.Catholic.CHurch.GEN with money interests irritiert, provoziert und nährt die Phantasie […].
irritates provokes and feeds the imagination.ACC
(NZZ_1999_06_05_a119_seg5_s1)
The Catholic Church’s money management is interesting, irritating and provoking, and it feeds the imagination. / The Catholic Church’s money management interests anyone’s imagination, irritates anyone’s imagination, provokes anyone’s imagination, and feeds anyone’s imagination. (among others)

2.12 Nom-$EXP_V$ but 2.2 $X$-$STM_V$ theoretically also possible:

(140) " Bei so heftigen Tönen […] konnte man […] fast ein wenig erschrecken. with such intense sounds could one almost a little frighten
(141) Man […] weiss, dass sie sich langweilen und quälen […].
one knows that they refl bore and torture
(NZZ_1999_09_14_a128_seg3_s14)
One knows that they are bored and struggling. / One knows that they are bored and that they torture. / One knows that they bore and torment each other.

Phoric ($\rightarrow$ 2.1 $X$-$STM_V$-$Y$-$EXP$) or non-phoric (2.9 Acc/Dat-$EXP_V$)? The latter reading is more likely because one would prefer a different pronoun (e.g. das (that)) on the former.

(142) Es ekelte sie,
it disgusted her/them
(NZZ_1999_05_08_a249_seg6_s100)
She was / they were disgusted. / It disgusted her/them.
Unclear if this example reflects an incorrect sentence segmentation (animate stimulus: Mother Teresa) or (incorrect) replication by the author (inanimate stimulus: Mother Teresa’s testament)?

(143) *Das Testament der Mutter Teresa* Mutter Teresa begeisterte und the testament of GEN Mother Teresa GEN Mother Teresa inspired and befremdete.
alienated (NZZ_1997_09_13_a134_seg3_s1)
Mother Teresa’s testament Mother Teresa inspired and alienated people.

4.1.1.5 fragment

Incomplete example, possibly based on incorrect segmentation. Annotate as usual if possible, otherwise annotation should be 1.1 *not_of_interest*.

Annotation possible:

(144) Der Eiermann […] musste geärgert und nachgeahmt werden, wie er "Eeeeer!
the egg.man had.to angered and imitated become how he eggs
(NZZ_1996_12_27_a125_seg4_s13)
The egg salesman had to be teased and imitated, how he “eeeeeeeegs!

*not_of_interest* (annotation of 3.1 *Stimulus_Type* not possible):

(145) - mag Intertextualitätsfahnder faszinieren, sprachlich
may people.searching.for.intertextual.references fascinate, linguistically
führt es zu einem befremdlichen Kauderwelsch.
leads it to a strange gibberish
(NZZ_1994_09_29_a205_seg8_s8)
may fascinate people searching for intertextual references, linguistically it leads
to a strange gibberish

4.1.1.6 headline

The “sentence” is possibly a headline. *headline* often combines with 4.1.1.7 *ellipsis*. If a regular annotation is still possible, it should be performed. Use 1.1 *not_of_interest* if not. In any case, the comment is required. Punctuation is often missing in headlines, distinguishing it from 4.1.1.7 *ellipsis* and 4.1.1.5 *fragment*. 

31
headline (as indicated by missing punctuation) but not ellipsis:

(146) Die Gentech-Gegner erschrecken die Anleger
the opponents.of genetic.engineering.NOM scare the investors.ACC
(NZZ_1999_09_14_a100_seg2_s1)
The opponents of genetic engineering scare the investors

+ ellipsis:

(147) Roy Hodgson tief beeindruckt
Roy Hodgson deeply impressed (NZZ_1993_02_26_a151_seg1_s1)

4.1.1.7 ellipsis

Some part of the pattern is elided elliptically. This may cooccur with 4.1.1.6 headline but it does not have to.

auxiliary ellipsis

(148) Die Epigonen Duchamps sind noch immer fleissig, Museen und
the epigones Duchamp.GEN are still ever industrious museums.NOM and
Handel begeistert.
trade.NOM excited (NZZ_1993_01_06_a41_seg2_s7)
Duchamp’s epigones are still busy, museums and trade are excited.

sein_V-PII + headline:

(149) Römer Deputierte über Scalfaro verärgert
Roman deputies.NOM about Scalfaro.ACC angry
(NZZ_1993_10_07_a16_seg1_s1)
Roman deputies angry at/about Scalfaro

Headlinese (as indicated by missing determiners): + headline

(150) Ehrung für Kohl ärgert britische Europagegner
award.NOM for Kohl.ACC annoys British.ACC opponents.of.Europe.ACC
(NZZ_1998_02_20_a20_seg1_s1)
Award for Kohl annoys British opponents of Europe

4.1.1.8 title

The verb, the experiencer, the stimulus, or the whole sentence is (part of) a title or contains it. Should be regularly annotated if possible; use 1.1 not_of_interest if not. In any case, the comment is required.
Ein Element der Geschichte [...] hat Shalev in sein Kinderbuch "Papa nervt" übernommen. “dad annoys” adopted (NZZ_1994_07_14_a107_seg7_s10)

Shalev adopted one element of the story in his children’s book “My Father Always Embarrasses Me”.

20.15 Gepeinigt!
tormented (NZZ_1998_04_09_a162_seg27_s16)

20.15 The Belt

Oliver Stone’s “JFK” disturbed and confounded the international audience.

Mitosevic [probably recte Mitošević] will have been even more annoyed about the performance of his team later.
4.1.1.10 idiomatic

Constructions or phrases that can be considered idiomatic, be aware of potential overlap to 4.1.10 collocation.

(155) Sein Rücken kann bei Tisch entzücken.

his back.NOM can at table.DAT delight

(NZZ_1996_10_26_a223_seg4_s36)

Its back can be a delight at the (dinner) table.

 Cf. the German proverb Ein schöner Rücken kann auch entzücken (A beautiful back can also be charming).

4.1.1.11 collocation

Noticeable collocational modifications that are not already considered idiomatic, e.g. the frequent cooccurrences of sauer (sour) and aufstoßen (to anger, to strike (as), literally to belch)).

(156) Sein Auftreten […] stösst manchem der altgedienten Genossen

his comportment belches some.DAT the.GEN long-serving.GEN comrades.GEN

sauer auf.

sour PRT (NZZ_1998_03_03_a23_seg8_s9)

His comportment offends some of the veteran comrades. / Some veteran comrades dislike the way he comports himself.

4.1.2 Verb-based

4.1.2.1 polysemous

Cases of (assumed) verbal polysemy that are not reflected in the above categories (1.1 non-psych), i.e. the reading of the verb is psych-related but it is different from the predominant one.
(157) Dem aussenstehenden Beobachter stösst unweigerlich die Vermutung auf, dass es wohl nie zu einer "Dorsaz-Affäre" gekommen wäre, wenn bei der damaligen Walliser Kantonalbank [...] nicht eine heillose Schluderei [...] bestanden hätte. a hopeless sloppiness existed has.SBJV

The external observer inevitably suspects that there would never have been a “Dorsaz affair” if it had not been for the hopeless sloppiness at the Banque cantonale du Valais at the time.

4.1.2.2 psych_ambiguous

The sentence has a psych as well as a non-psych reading. To be used even if one of the readings is far more salient.

(158) Einzelnen Videasten dürfte es schwerfallen, sich umzustellen. 

Individual videographers might it be.difficult.to REFL adjust

It will be difficult / emotionally challenging for some videographers to adjust themselves.

4.1.2.3 utterance_reading

The verb has an utterance reading and the utterance is presented as an (indirect) quotation. This includes examples like (159) and (160), where the experiencer of a certain emotion utters something, as well as examples like (161), where the person uttering something is not the person experiencing the emotional state.

indirect quotation:

(159) Am Montag empörte sich […] Ilhan Selçuk in der Zeitung "Cumhuriyet", on.the Monday incensed REFL İlhan Selçuk in the newspaper Cumhuriyet die türkische Presse befinde sich in tiefem Schlaf.

On Monday, İlhan Selçuk wrote a resentful article in the newspaper “Cumhuriyet” stating that the Turkish press is in a deep sleep.
direct quotation:

(160) "Ich riskierte etwas zu viel", ärgerte er sich.
I risked a bit too much annoyed he
(NZZ_1994_08_29_a114_seg2_s6)
“I risked a bit too much”, he said, and the way he said it showed that he was
annoyed by it.

(161) "Ich bin du ", irritiert ihn der Alte [...].
I am you perplexed him.ACC
(NZZ_1994_04_20_a137_seg3_s8)
“I am you”, the old man said to him, and this perplexed him.

4.1.3 STM-based

4.1.3.1 metonymic_STM

The STM argument is metonymic. We have a broad notion of metonymy that includes
synecdoche. Note that there also is 4.1.4.4 EXP_anim_proxy. This comment is not used
with stimulus PPs in the sense of 3.2.

(162) Es lässt sich nun trefflich darüber spekulieren, ob und wie
it lets REFL now splendidly about this speculate whether and how
stark Peking mit seinem Säbelrasseln die Taiwaner eingeschüchtert
strongly Beijing with its sabre-rattling the Taiwanese.ACC intimidated
[...] hat [...].
has (NZZ_1995_12_04_a18_seg2_s7)
It is open to speculation whether and to what extent Beijing has intimidated the
Taiwanese with its sabre-rattling.

4.1.3.2 metaphoric_STM

The STM argument is metaphoric. Note that there also is 4.1.4.4 EXP_anim_proxy. This
comment is not used with stimulus PPs within the meaning of 3.2.
Comment *metaphoric_STM*:

(163) Der Optimismus sollte [...] nicht unbegründet sein, denn die kräftigen Zuger "Mühlsteine" setzten den Freiburgern arg zu. (NZZ_1994_03_04_a192_seg3_s8)

The optimism proved to be well-founded because the powerful “millstones” from Zug put a lot of pressure on the Fribourgeois / harassed the Fribourgeois severely.

4.1.3.3 STM_coordination

The STM is syntactically realised using a coordination and the conjuncts have congruent animacy status (otherwise, cf. 3.1.6 and annotate *Stimulus_Type* accordingly). If the phrase expressing the stimulus is a pronoun, *coordination* should not be annotated even if the pronoun’s antecedent is an XP coordination. This comment is not used with coordinations inside stimulus PPs in the sense of 3.2.

**STM_coordination (inanim) (annotate only STM_coordination):**

(164) Eine Ohreninfektion und Beinkrämpfe plagten [...] Woosnam. (NZZ_1993_09_27_a82_seg7_s9)

An ear infection and leg cramps plagued Woosnam.

**propositional**

(165) Ihn beunruhigt, dass der Markt wenig transparent ist, dass vor allem in Marktsegmenten für exotische Instrumente ein hoher Konzentrationsgrad bestehe und dass für wichtige Marktteilnehmer keine Aufsichtsbehörden existieren. (NZZ_1994_06_08_a35seg8_s9)

He is concerned that the market is not very transparent, that there is a high degree of concentration especially in market segments for exotic instruments, and that important market participants lack supervisory authorities.
In reality, he was concerned about only one thing: keeping his work in vivid efficacy and seeing the new opera performed.

4.1.3.4 STM_psych_noun

The stimulus argument is an NP headed by a psych noun and the experiencer of the psychological state denoted by it is identical to the experiencer of the psychological state denoted by the verb. This comment is not used with psych nouns in stimulus PPs in the sense of 3.2.

(167) aber die Sorge um verschollene Verwandte quäle
but the worry about lost relatives torments
sie spürbar.
she/her them noticeably (NZZ_1999_06_05_a54_seg8_s7)
but the worry about relatives who have disappeared torments her/them noticeably.

not STM_psych_noun due to non-identical experiencers

(168) [...] die Ehrfurcht in der Stimme des Russen befremdet sie ein
the awe in the voice the GEN Russian alienates her
bisschen.
little (NZZ_1998_02_27_a143_seg3_s3)
The awe in the Russian’s voice alienates her a little.

4.1.3.5 propositional content noun

The stimulus is a proposition semantically and syntactically an NP whose head is assumed to lack individual semantic content beyond the fact that it refers to a proposition.¹⁶ Common examples include Tatsache (fact), Problem (problem), Fakt (fact) etc. The propositional content can (but does not have to) be expressed elsewhere within the same sentence or even within the same NP, not only through a clause but

¹⁶These nouns are described in the literature using many different names (cf. Kolhatkar et al., 2018), perhaps most prominently as shell nouns (Schmid, 2000).
also through an NP, PP … Comment PCN+C if the propositional content is expressed within the same sentence, PCN-C if not. Of course, it is a pressing question how much semantic content is “not much”: If one is in doubt and the noun in question regularly takes a clausal complement, one can annotate PCN+/-C. These comments are not used with NPs in stimulus PPs in the sense of 3.2 or experiencer-indicating adjuncts in the sense of 4.1.4.6.

**PCN+C:**

(169) Ihn beunruhigten die damals schon absehbaren Möglichkeiten, him.ACC troubled the at.that.time already foreseeable possibilities das Erbgut zu manipulieren.

the genome to manipulate (NZZ_1995_08_19_a43_seg17_s6)
The possibilities to manipulate genetic material, which were already foreseeable at that time, troubled him.

(170) **Der Vorwurf, die Bergkantone hätten kein Verständnis für die**

the accusation the mountain.cantons have.SBJV no understanding for the Wirtschaft, economy empörte den Tessiner Freisinnigen Marty.

outraged the.ACC Ticinian.ACC liberal.ACC Marty.ACC

(NZZ_1996_03_13_a49_seg9_s1)
The accusation that the mountain cantons have no economic understanding outraged Marty, a liberal from Ticino.

(171) Ihn faszinierte die Idee eines rein allegorischen Denkmals, ohne

him.ACC fascinated the idea a.GEN solely allegorical.GEN memorial without Bildnis des Verstorbenen.

portrait the.GEN deceased.GEN (NZZ_1995_02_22_a106_seg6_s3)

He was fascinated by the idea of a purely allegorical memorial, without any portrait of the deceased.

(172) Weiter gibt es ein Minderheitenproblem in Bulgarien, wo die türkische

also exists it a minority.problem in Bulgaria where the Turkish Minorität derzeit bei jeder Regierungsbildung das Zünglein minority at.present at every formation.of.government the needle.index an der Waage bildet - eine Tatsache, welche die bulgarische

at the scale forms a fact which the.ACC Bulgarian.ACC Mehrheit […] immer stärker irritiert.

majority.ACC ever stronger irritates (NZZ_1993_03_12_a16_seg8_s5)

There is also a minority problem in Bulgaria, where the Turkish minority currently tips the scales every time a government is formed – a fact which increasingly irritates the Bulgarian majority.
PCN-C:

(173) Nur auf den ersten Blick befremdet **diese These**.
    only at the first glance alienates **this thesis**
    (NZZ_1994_01_14_a138_seg3_s7)
    This thesis seems strange only at first glance.

not PCN:

(174) **Dieses Vorgehen** sei dem Bundesrat sauer aufgestossen [...].
    this approach is.SBJV the.DAT Federal.Council.DAT sour belched
    (NZZ_1995_11_30_a30_seg6_s5)
    The (member of) the Federal Council was annoyed by this approach.

(175) Es sind **Floskeln dieser Art**, die dem aufmerksameren Teil
    it are.set.phrases this.GEN kind.GEN that the.DAT more.attentive.DAT part.DAT
    der amerikanischen Bevölkerung sauer aufstossen.
    the.GEN American.GEN population.GEN sour belch
    (NZZ_1996_01_13_a25_seg8_s5)
    Set phrases of this kind annoy the more attentive part of the American population.

4.1.3.6 clearly_non-agentive

The stimulus is animate but clearly non-agentive, mostly used for plants and the like.

(176) **Die zu den Schraubenbakterien zählenden Borrelien verwirren** die
    the to the Spirochaetes belonging Borrelia confuse the
    Mediziner seit Jahrhunderten mit einem Spektrum von sehr unterschiedlichen
    physicians for centuries with a spectrum of very different
    Krankheitsformen.
    forms.of.disease (NZZ_1998_10_07_a196_seg4_s1)
    Borrelia, which belong to the spirochete phylum, have been confusing
    physicians for centuries with a spectrum of very different forms of disease.

4.1.4 EXP-based

4.1.4.1 metonymic_EXP

The EXP argument is metonymic. We have a broad notion of metonymy that includes
synecdoche. This comment is not used with experiencer-indicating adjuncts in the
sense of 4.1.4.6.
In Berlin, Böcklin’s Isle of the Dead illustrates what fascinated Romanticism about an image of the Etruscans which is overly dominated by funerary culture.

4.1.4.2 metaphoric_EXP

The EXP argument is metaphorical. This comment is not used with experiencer-indicating adjuncts in the sense of 4.1.4.6.

Since then, the European culture gets troubled by the „barbaric“.

4.1.4.3 EXP_coordination

The EXP argument is syntactically realised within a coordination. This comment is not used with experiencer-indicating adjuncts in the sense of 4.1.4.6, but it can be combined with 4.1.4.4 EXP_anim_proxy.

However, this need not worry Kohl and his squad.

4.1.4.4 EXP_anim_proxy

The experiencer is a (complex social) entity one can attribute a psychological state to, although it is not bona fide animate. In the case of social entities, the psychological state should not be totally dependent on the psychological states of their members: Annotate EXP_anim_proxy if the experiencer is eine Zeitung (a newspaper) but not if it is das Publikum (the audience). Typical anim_proxy experiencers are institutions, organisations, nations etc. If it is not clear whether the stimulus is EXP_anim_proxy or plainly animate, do not use this comment. Note that this comment may be used with every experiencer, not only with the ones in object position (but experiencer indicating adjuncts (cf. 4.1.4.6.) do not count as experiencers here).
Nach dem Bericht der «Milchzeitung» zeigten sich auch die Bauernverbände interessiert. Die Bauernverbände interessiert (NZZ_1994_07_13_a92_seg22_s11) According to/Following the report in the Milchzeitung, the farmers’ associations also showed interest.

It is clear from the sentence that der Meister (the champion) – although it could generally also refer to a single person – has to refer to a team or club.

Damit war der Meister, der während 40 Minuten elf Stürmer einsetzte, wieder in der Situation, die ihm behagt. (NZZ_1995_03_15_a179_seg3_s7) This put the champion, who used eleven forwards during 40 minutes, back in the situation they are comfortable with.

Some examples might be problematic with respect to the distinction between 4.1.4.4 EXP_anim_proxy, 4.1.4.1 metonymic_EXP, and a plain experiencer:

-kreise (circles) neither anim_proxy nor metonymic but simply anim:

Während die Bauten von Baldeweg, […] und Mateo vor allem die Fachkreise begeistern, wurde Rafael Moneo zum gefeierten Star. (NZZ_1993_07_12_a42_seg2_s3) While Baldeweg’s and Mateo’s buildings mainly enthuse experts, Rafael Moneo became a celebrity.

-welt (world) typically EXP_anim_proxy:

Die Musik […] schockierte die Jazzwelt. (NZZ_1993_01_08_a77_seg2_s16) The music shocked the jazz world.
**Zensur (censorship)** taken to be an institution. Might also have a metonymic reading (use Misc to indicate that)

(184) Der Metternich-schen Zensur behagten derlei Frivolitäten nicht.

(Metternich’s body of censors were not pleased with such frivolities.

plain experiencer:

(185) […] breite Schichten liessen sich weiterhin […] einschüchtern.

(186) Anlässlich der Preisverleihung […] zeigte sich das Publikum von Text und Lesung beeindruckt.

(Publication was discernibly impressed by the text and the reading.

Publikum (audience) not EXP_anim_proxy

(187) Ebenso müsste die zwangsweise Verlagerung des Gütertransitverkehrs auf die Schiene Deutschland, Italien aber auch die "Transporteurenation" Holland verärgern.

(190) stünde die Zensur nicht mehr für die Freiheit der Presse.

(Likewise, the forced shift of transit freight traffic to rail would have to anger Germany and Italy, but also the “nation of hauliers”, the Netherlands.

4.1.4.5 EXP-related_object

The direct object is not the experiencer but a (sometimes non-physical) part or a property of them. We do not pursue a further classification of the direct objects at the moment.17

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17 Mathieu (1995) distinguishes several classes of nouns heading such NPs in French.
(188) Den Blick erfreut das viele Schöne.
   the. ACC glance. ACC pleases the. NOM much. NOM beautiful. NOM
   (NZZ_1995_06_24_a215_seg3_s5)
   All those beautiful things please the eye.

(189) Und es gibt fürderhin keine Stunde mehr, wo dieser Name nicht
   and it exists henceforth no hour anymore where this name not
   seinen Schlaf verängstigt und sein Wachsein.
   his sleep frightens and his being. awake
   (NZZ_1995_10_07_a177_seg8_s14)
   And henceforth there is not an hour in which this name does not make his sleep
   and wakefulness fearful.

In some cases, it is not easy to decide whether to annotate a psych reading and use
this comment or to opt for non-psych (the psych-reading of the whole sentence would
arise from a metaphoric reading not only of the verb but the whole VP or sentence
then). If a psych reading is possible, annotate it.¹⁸

psych-related experiencer combined with a dative maleficiary:

(190) Der Nord […] verwirre den Menschen die Sinne […].
   the north confuses. SBJV the. DAT humans. DAT the. ACC senses. ACC
   (NZZ_1998_05_09_a221_seg3_s8)
   The north wind confuses people’s senses.

4.1.4.6 EXP-indicating_adjunct

Sometimes the experiencer is indicated using an adverbial (usually a PP) in a
construction where the experiencer NP is dropped.

(191) Diese Neuerungen behagen naturgemäss nicht überall.
   these innovations please naturally not everywhere
   (NZZ_1994_11_29_a72_seg8_s3)
   Naturally, not everyone is happy with these innovations / some people have
   doubts about these innovations.

¹⁸ One may hypothesise that EXP-related_object is used with verbs having a related non-psych reading more
frequently. This can be further investigated on the basis of the annotations.
Even in Bremen’s rather calm football scene, people are annoyed after a streak of seven games without a win.

4.1.4.7 reciprocal

The experiencer NP is a reciprocal pronoun.

4.1.4.8 resultative_object

The direct object is not the direct experiencer but the result of the experiencer’s reaction towards the stimulus. Typically, the experiencer is somehow indicated at in the object NP, but this is not obligatory.

For now, the “fair ones” have provoked criticism from the “just ones”.

4.1.5 other

4.1.5.1 non-phoric_es

There is a non-phoric es in the EO-verb’s clause.

4.1.5.2 pronominal_adverb

Instead of a stimulus PP a corresponding pronominal adverb is used.
Celine would presumably not even annoy this. (NZZ_1994_03_09_a104_seg5_s16)

There is a PP that indicates a result state. Not to be used with instances of 2.11 X-CAUS_V_Y-EXP_PP, where the result state clearly emerges from the pattern.

We were bored out of our minds. (NZZ_1998_04_22_a160_seg3_s16)

Additional observations and (personal) comments by the annotator that are not reflected in the current guidelines. With ambiguous examples, one can use Misc to indicate the reading not annotated.

5 Bibliography


Keßelmeier, K., Kiss, T., Müller, A., Roch, C., Stadtfeld, T., & Strunk, J. (2009). Mining for Preposition-Noun Constructions in German. In M. Sahlgren & O. Knutsson (Eds.),


### List of Verbs

<table>
<thead>
<tr>
<th>Verb</th>
<th>case</th>
<th>sample_size</th>
</tr>
</thead>
<tbody>
<tr>
<td>amüsieren,'to amuse'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>anekeln,'to sicken'</td>
<td>acc</td>
<td>20</td>
</tr>
<tr>
<td>ängstigen,'to frighten'</td>
<td>acc</td>
<td>109</td>
</tr>
<tr>
<td>anwidern,'to disgust'</td>
<td>acc</td>
<td>32</td>
</tr>
<tr>
<td>ärgern,'to anger'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>auffallen,'to strike'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>aufstoßen,'to strike (neg.)'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>aufwühlen,'to stir up'</td>
<td>acc</td>
<td>117</td>
</tr>
<tr>
<td>ausreichen,'to suffice'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>bedrücken,'to distress, depress'</td>
<td>acc</td>
<td>87</td>
</tr>
<tr>
<td>beeindrucken,'to impress'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>befremden , 'to alienate'</td>
<td>acc</td>
<td>177</td>
</tr>
<tr>
<td>begeistern,'to thrill, enthuse'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>behagen,'to please'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>bekümmern,'to concern, chagrin'</td>
<td>acc</td>
<td>60</td>
</tr>
<tr>
<td>beruhigen , 'to calm'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>beschämen,'to shame'</td>
<td>acc</td>
<td>65</td>
</tr>
<tr>
<td>beunruhigen,'to worry'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>bewegen,'to move'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>bezaubern,'to charm'</td>
<td>acc</td>
<td>138</td>
</tr>
<tr>
<td>deprimieren,'to depress'</td>
<td>acc</td>
<td>60</td>
</tr>
<tr>
<td>einleuchten,'to be evident'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>einschüchtern,'to intimidate'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>ekeln,'to disgust'</td>
<td>acc</td>
<td>23</td>
</tr>
<tr>
<td>empören,'to outrage'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>entmutigen,'to discourage'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>entzücken,'to delight'</td>
<td>acc</td>
<td>190</td>
</tr>
<tr>
<td>erfreuen,'''to enjoy, delight'</td>
<td>acc</td>
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</tr>
<tr>
<td>erheitern , 'to cheer, brighten'</td>
<td>acc</td>
<td>59</td>
</tr>
<tr>
<td>erschrecken , 'to startle'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>faszinieren,'to fascinate'</td>
<td>acc</td>
<td>200</td>
</tr>
<tr>
<td>freuen,'to please, be glad'</td>
<td>acc</td>
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</tr>
<tr>
<td>frustrieren,'to frustrate'</td>
<td>acc</td>
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<tr>
<td>gefallen,'to like'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>genügen,'to suffice'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>guttun,'to benefit, comfort'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>imponieren,'to impress'</td>
<td>dat</td>
<td>200</td>
</tr>
<tr>
<td>interessieren,'to interest'</td>
<td>acc</td>
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</tr>
<tr>
<td>irritieren,'to irritate, confuse'</td>
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<tr>
<td>langweilen,'to bore'</td>
<td>acc</td>
<td>200</td>
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<tr>
<td>leidtun,'to feel sorry'</td>
<td>dat</td>
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<tr>
<td>missfallen,'to displease'</td>
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<tr>
<td>nahegehen,'to afflict, upset'</td>
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<td>nerven,'to bother'</td>
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<td>peinigen , 'to tantalise'</td>
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<td>plagen , 'to plague'</td>
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<td>provozieren,'to provoke'</td>
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<tr>
<td>quälen,'to torment'</td>
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<td>German Phrase</td>
<td>Case</td>
<td>Frequency</td>
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<tr>
<td>schmeicheln,'to flatter'</td>
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<td>schockieren,'to shock'</td>
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<tr>
<td>schwerfallen,'to find difficult'</td>
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<tr>
<td>stören, 'to disturb, bother'</td>
<td>acc</td>
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<tr>
<td>überfordern,'to be too much, overwhelm'</td>
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<tr>
<td>verängstigen,'to frighten'</td>
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<tr>
<td>verärgern,'to annoy'</td>
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<tr>
<td>verblüffen,'to flabbergast'</td>
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<tr>
<td>verschrecken,'to scare'</td>
<td>acc</td>
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<tr>
<td>verstören,'to distract, distress'</td>
<td>acc</td>
<td>52</td>
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<tr>
<td>verwirren,'to confuse'</td>
<td>acc</td>
<td>200</td>
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<tr>
<td>verwundern,'to astonish'</td>
<td>acc</td>
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<tr>
<td>widerstreben,'to oppose, have an aversion'</td>
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<tr>
<td>wundern,'to wonder'</td>
<td>acc</td>
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<tr>
<td>zermürben,'to demoralize, grind'</td>
<td>acc</td>
<td>152</td>
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<tr>
<td>zusetzen,'to badger, harass'</td>
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</tbody>
</table>
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