The semantics of variable case marking (Accusative/Dative) after two-way prepositions in German locative constructions. Towards a constructionist approach*

Abstract

Researchers have long debated the meanings of morphological cases, as markers of core arguments as well as adjunct phrases. However, the proposed semantic paraphrases have traditionally mainly relied on introspection and usually prove problematic from an observational standpoint. This article explores the semantics of variable case marking by focusing on the distribution of the Accusative and Dative in phrases with two-way prepositions in present-day German. The empirical aim of the article is to gain a better understanding of the conditions under which the variation between Accusative and Dative occurs in German locative constructions with prepositional verbs. To this end, a classification of four subclasses of prepositional verbs is presented and discussed. The theoretical aim of the article is to confront current cognitive claims about case meanings in German with observations that Hermann Paul made about a century ago in his *Deutsche Grammatik* (1916–1920). It is concluded, firstly, that cognitive-semantic explanations tend to overspecify the semantic content encoded in the case morphemes while at the same time underestimating the importance of inference and psychological associations of all kind. Secondly, an alternative approach is presented which emphasises the role of syntactic constructions in the case alternation. It is shown that Paul's account is valuable because of the way it combines a balanced view of the relative semantic homogeneity of prepositional cases with instructive corpus findings on variable case marking. Furthermore, Paul's account contains several aspects that characterise it as a "constructionist" analysis *avant la lettre*. It is argued that this kind of analysis is superior to the currently dominant projectionist approach for a number of reasons.

1. *Introduction*

Most prepositions in present-day German consistently govern a single case, either Accusative (ACC, e.g. *für* 'for', *bis* 'until, by'), Dative (DAT, e.g. *bei* 'near, at, etc.', *nach* 'to, after'), or Genitive

(GEN, e.g. *während* 'during, while', *kraft* 'by virtue of, by use of').[1] There are, however, nine so-called "Wechselpräpositionen" (Duden 2006: 615) that either take the ACC or the DAT. These two-way prepositions are: *an* ('to, on, etc.'), *auf* ('on'), *hinter* ('after, behind'), *in* ('in, into'), *neben* ('next to'), *über* ('over, about'), *unter* ('under, below'), *vor* ('before'), and *zwischen* ('between').[2] In present-day German, they are used both in locative and more abstract constructions, including metaphorical expressions. In this article, the relation between the locative uses of the two-way prepositions and their variable case marking will be examined. By way of example, the case alternation at issue is illustrated below by sentences with the prepositions *in*, *hinter*, and *vor*:[3]

(1) a. Die Bohrinseln *ziehen* dann weiter raus *ins* (ACC) Meer. (DeReKo)
   'The rigs then move further out into the sea.'
  b. Ein Schatz *liegt* tief unten *im* (DAT) Meer. (DeReKo)
   'A treasure lies deep under (literally: in) the sea.'

(2) a. Er *stellte sich hinter den* (ACC) Mitarbeiter. (DeReKo)
   'He got behind the employee.'
  b. … ein weiterer Weihnachtsbaum *steht hinter dem* (DAT) Altar. (DeReKo)
   ' … another Christmas tree is behind the altar.'

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[1] The paraphrases of the German prepositions between brackets are only meant as semantic approximations in the English language; the paraphrases do not cover the entire semantic range of the German prepositions.

[2] The occasional variation between DAT and GEN after prepositions such as *dank* ('thanks to'), *statt* ('instead of'), *trotz* ('despite'), *während* ('during') and *wegen* ('due to'), or between DAT, GEN and ACC with *entlang* ('along') is of a different order and does not concern us here (s. Elter 2005).

[3] The German examples in this article are, as a rule, taken from the Mannheim corpus (DeReKo, "Deutsches Referenzkorpus", 2010-II version, also known as the Cosmas corpus). Some examples are obtained from additional printed sources or retrieved from German websites through the search engine Web-Corp. The DeReKo of the Institut für deutsche Sprache (IDS) in Mannheim is the largest data base of machine-readable German written texts, in particular newspapers, that is currently available for corpus research to the linguistic community (over 4 billion words, as of Fall 2010).

(3)   a. Sie *stellte sich vor den* (ACC) Fernseher. (DeReKo)
           'She stepped in front of the TV.'
       b. … dann werden sie wieder *vor dem* (DAT) Fernseher *sitzen*.
           (DeReKo)
           '… then they will again be sitting in front of the TV.'

There is a long tradition of accounting for the semantic differences between ACC and DAT after these prepositions going back to at least the early 19th century (see Hjelmslev 1935 and Helbig 1973 for an overview of relevant studies). It is traditionally held that the ACC is chosen when the prepositional phrase designates a "direction", "motion", or "dynamic process" in general. DAT, on the other hand, is said to mark "no direction" ("location"), "no motion", or a "static event" in general, as well as motion "confined to the locative configuration specified by the preposition" (Smith 1995: 294), as e.g. in:

(4)   [Der Vogel] *fliegt über dem* Blätterdach des Urwalds. (DeReKo)
       'The bird flies/is flying above the canopy of the jungle.'

The dichotomy between *motus* and *status* proves to be pervasive in grammars up to the present day in order to explain ACC and DAT following two-way prepositions (cf. Duden 2006: 616, Vandermeeren 2004: 180–182, Rehbein and van Genabith 2006: 57–58, De Knop 2008: 55–60, among others). This dichotomy – compare the well-known distinction between *Wohin?* and *Wo?* – may well account for the majority of instances. However, it has long been observed that it does not adequately explain all instances and therefore should either be complemented with additional specifications or else be replaced by a more generally applicable explanation under which the dichotomy can be subsumed as a special case (see Leys 1989; 1993; 1995, Smith 1995, Van de Velde 1995, Willems 1997, Sylla 1999, Baten 2009).[4]

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[4] A different approach altogether was adopted by generative linguists such as Bierwisch (1988), among others. They maintain that in German, the DAT is the structurally assigned default case of all prepositions, including the two-way prepositions, whereas the ACC is secondarily assigned to the prepositional complement according to semantic or lexical conditions. Although the assumption of a default dative case with prepositions is still shared by some generative linguists today, it is demonstrably at odds with the basic assumptions of descriptive adequacy and I will therefore not pay attention to it any further.

In the last two decades, several scholars, in particular linguists inspired by the cognitive framework, have offered further accounts along the lines of the traditional dichotomy. They argue that well-established cognitive notions such as "trajectory" and "landmark" (and the asymmetrical relation between them), "source-path-goal" and "search domain" can be employed to explain morphological case marking, including the variation between ACC and DAT after two-way prepositions, on a conceptual ("holistic") basis, i.e. by means of "image schemas" (see in particular Langacker 1991b: 398–403; 1999 and Smith 1985; 1987; 1993; 1995, on which most subsequent cognitive accounts are based). The cognitive approach, which rejects the assumption of a prepositional default case, is avowedly usage-based (see Langacker 1988a and b) and hence possibly more in line with what speakers intuitively consider to be meaningful about the differences between prepositional cases in their language competence. This is a very interesting perspective which, however, raises a number of issues.

Firstly, cognitive linguists have reaffirmed the belief that cases not only are functional in argument frames (in the sense of Fillmore's case grammar approach, see Fillmore 1968 and many subsequent publications) but are meaningful categories in their own right, thus accounting for case variation in prepositional phrases as well. The cognitive account of case meanings is therefore comparable to older case theories of the 19th and 20th century. An important question that arises from such an approach is how one has to proceed methodologically in order to show that a truly semantic view of morphological cases is both viable and coherent. Obviously, it is particularly important to verify whether corpus data confirm or reject the proposed cognitive account. Secondly, although the assumption that cases are to be considered meaningful grammatical categories in their own right seems plausible, it has to be asked whether still fairly "intuitive" universal notions such as "trajector", "landmark", etc. are useful and adequate for the analysis of case meanings.[5]

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[5] I will not be concerned, in this article, with variable case marking that is due to regional (dialect) or social (education, gender, etc.) variables. This is a virtually untouched area of research and there is certainly a lot of work to be done with regard to this aspect of case variation, which I however leave to future investigations.

The cognitive account of case meanings is based on a number of preconceptions which may amount to an oversimplification of the problems of semantics (lexical and grammatical meaning) and linguistic intuition (viz., introspection) involved in such an analysis. Moreover, the arguments presented often seem to overestimate the importance and reliability of introspective judgments while at the same time underestimating the value of corpus findings. I refer to Willems (forthcoming) for a fuller discussion of this issue. In the present article, I will focus on the very nature of the semantic variation that ensues from the use of ACC and DAT with two-way prepositions, and I will confront the cognitive account with an alternative approach that can be derived from Hermann Paul's *Deutsche Grammatik* (1916–1920). The two main questions guiding the inquiry are:

i)   Assuming that a "conceptual" cognitive approach to variable case marking following two-way prepositions in German has only limited value for developing a coherent theory of case meanings, what are the advantages of an approach along the lines set out in Hermann Paul's *Deutsche Grammatik*, which may be considered as "constructionist" *avant la lettre*?

ii)   What can be learned from a corpus-linguistic perspective on constructions with variable case marking which subscribes to the importance of empirically valid classifications and semantic analyses based on natural occurring utterances rather than predominantly introspective speculations?

2. *Case meanings, "conceptual motivation", and constructional templates*

Like most 19th and early 20th century linguists, cognitive linguists such as Langacker (1987, 1991a, 1991b, 1999, 2007), Smith (1987; 1993; 1995), Janda (1990), Luraghi (2009), among others, maintain that the choice for a morphological case depends on a particular kind of "cognitive or conceptual motivation" (Langacker 1991b: 381, on the difference between accusativity and ergativity in languages). If this assumption is correct, then it may be expected that such a motivation is especially apparent when the grammar leaves a certain amount of freedom to the speaker in using one of two cases. On the face of it, this

is the situation that applies to the variation between ACC and DAT following two-way prepositions in German. The nine prepositions listed in Section 1 are all compatible with both cases and consequently do not determine the choice of case in and of themselves. Thus, with regard to the grammatical knowledge (linguistic competence) of prepositions such as *in* and *auf* in German, syntagms such as *in das Wasser, in das Meer* ('into the water, into the sea') and *in dem Wasser, in dem Meer* ('in the water, in the sea') or *auf das Wasser, auf das Meer* ('onto the water, onto the sea') and *auf dem Wasser, auf dem Meer* ('on the water, on the sea') are both possible and grammatical.

However, if the recent upsurge of a "constructionist" view of grammar (Goldberg 1995; 2009; Fried and Östman 2004) has taught us something, it is that syntactic structures are not adequately analysed solely from a rigid bottom-up, "projectionist" perspective. According to this perspective, multiple word or morpheme structures are built up, incrementally and unidirectionally, from lexical material. The projectionist perspective may be contrasted with the constructionist perspective.[6] This perspective assumes that structures consisting of a series of words or morphemes, e.g. argument structures, word formations, etc., not only instantiate the words and morphemes that are, so to speak, their building blocks. At the same time, these structures instantiate syntactic patterns or "templates" of a categorial nature which exist independently of the lexical items that realise them as part of the grammar. Like words and morphemes, the templates too are "pairings of form and meaning" in their own right, albeit of a more abstract nature. This means that the semantic features of the templates are not reducible to the meanings of the components that serve as their lexical building blocks.

If the constructionist point of view (with due qualifications, see, e.g., Coene and Willems 2006) is applied to the case alternation between ACC and DAT following two-way prepositions in German, then it follows that both the formal and the semantic aspects of the alternation go beyond the variation of case with a finite set of prepositions. That is to say, the alternation must, at least partly, be due to constructional regularities which do not follow from the grammatical (formal and

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[6] In the remainder of this article, I will adopt the term "projectionist perspective" from Levin and Rappaport (2005: 189) to refer to the perspective the authors contrast with the "constructional perspective".

semantic) features of the prepositions alone. Equally important is the interaction of these features with formal and semantic features of the syntactic templates the prepositions are merged with in actual discourse.

With regard to the choice of ACC and DAT following two-way prepositions in German, the first important constructional level to be taken into account is arguably the combination of the preposition with the verb, and German indeed abounds with prepositional verbs. As mentioned above, the case difference between *in das Wasser* and *in dem Wasser* cannot be accounted for on the basis of the grammatical knowledge of the locative prepositional phrase alone, but once it is combined with a verb, the case alternation becomes amenable to analysis. Compare the two examples below:

(5)   *ins Wasser tauchen* 'to dive into the water':
     Es war ein imposantes Bild, diese Menge Sportler *ins* (ACC) Wasser *tauchen* zu sehen. (DeReKo)
     'It was impressive to see this amount of athletes diving into the water.'

(6)   *im Wasser schwimmen* 'to swim in the water':
     Ein Mann *schwimmt im* (DAT) Wasser … (DeReKo)
     'A man is swimming in the water …'

It might be argued that *tauchen* and *schwimmen* profile the preposition *in* differently, giving rise to ACC in (5) and DAT in (6). On this view, the difference in profiling would be entirely attributable to the combination of the prepositional phrase with a verb that either prompts ACC or DAT. (Observe that the traditional dichotomy between "direction"/"motion"/ "dynamic process" and "location"/"no motion"/"static event" does not capture the nature of such a difference in profiling and hence cannot explain the case alternation, given that both diving and swimming are arguably dynamic processes.)[7]

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[7] Observe that 'directionality', too, may be involved in both diving and swimming, although *schwimmen* may be said to be neutral vis-à-vis the feature 'direction' whereas it is positively marked in the feature structure of *tauchen*. At any rate, 'directionality' is not a discriminative feature between the two verbs. Note also that the case distinction between DAT and ACC does not coincide with the well-known (albeit controversial) distinction in valency theory between complements and adjuncts (cf. Van de Velde 1995).

However, from a constructionist point of view, a projectionist analysis has a major flaw: the prepositional verb *tauchen in* does not obligatorily require that its complement be marked ACC, nor does *schwimmen in* obligatorily require a DAT complement. Consider the examples below:

(7)   [Die Fische] *schwimmen in den* Ozean zum Laichen. (Web-Corp)
       'The fish swim/are swimming into the ocean to spawn.'
(8)   12. Juni 2010: Cousteau-Enkel *taucht im* Öl: "Absoluter Albtraum". (WebCorp)
       'June 12, 2010: Cousteau's grandson dives/is diving in the oil: "An absolute nightmare".'

Instances such as these are the reason why motion "confined to the locative configuration specified by the preposition" (Smith 1995: 294), is traditionally also said to motivate the use of DAT (see also Dal 1966:§ 45, Schröder 1978 and Leys 1989).

From the above examples it is clear that the case marking of *tauchen in* and *schwimmen in* is not purely a matter of combining the prepositional phrase with a particular verb.[8] This is strong evidence that locative prepositional verbs such as *tauchen in* and *schwimmen in* instantiate different abstract constructions whose templates are not only determined by the categories Verb and Preposition but also by morphological case, viz. either ACC or DAT, and which are themselves systematic form-meaning pairings. In this context, "systematic" means that the templates of grammatical constructions have to be treated like other linguistic signs, i.e. as bilateral units which are delimited through functional oppositions within a grammatical paradigm (see Willems and Coene 2006 for discussion), with the particularity that the formal features of such templates are categorially rather than phonologically determined (and consequently more abstract than, e.g., lexical units, idioms, etc.). The templates of the Verb Prep constructions being of a categorial nature, they may provisionally be rendered, in a simplified format, as follows:

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[8] Of course, one could assume that verbs such as *tauchen* and *schwimmen* are highly polysemous and that the case alternation between ACC and DAT ensues from the different meanings of the verbs. However, to take such a stance would ultimately be circular.

(9)   [Verb Prep + ACC],
(10)   [Verb Prep + DAT].

In the remainder of this article, I refer to structural patterns such as (9) and (10) as "constructional templates". Lexical combinations of a verb and a preposition (e.g., *tauchen in*, *schwimmen in*, *verschwinden in*, *sich stellen hinter*, etc.) are referred to as "prepositional verbs". Lexically specified structures which are additionally marked for case (e.g., *ins Wasser tauchen*, *im Meer schwimmen*, *im Meer verschwinden*) are called "Verb Prep constructions". The challenge, then, is to determine the contribution of the morphological cases to the overall semantic profiles of the constructional templates. In the course of the discussion, I will point out additional reasons supporting the conclusion that prepositional case alternation not only is lexically-driven but also constructionally motivated.

3. *German locative prepositional verbs:*
A preliminary classification

If the research programme that emerges from the constructionist perspective on two-way prepositions presented in the previous section is combined with the current widely accepted view of a "conceptual motivation" of morphological cases, then some further distinctions are required in order to establish the interrelationship between the meaning of the constructional templates and the meanings contributed by the lexical items, in particular the prepositional verb. In this section, I present and discuss a preliminary classification of prepositional verbs in German that should allow us to differentiate between the varying degrees of idiomaticity that the morphological cases ACC and DAT exhibit in particular constructions. I distinguish four subclasses of prepositional verbs. The relationship between them is provided schematically in Figure 2 at the end of this section.

Unambiguous prepositional verbs. On the one hand, there are locative prepositional verbs that may be said to be entirely unambiguous, in the sense that there is no case variation whatsoever. For example, *richten auf* always occurs with ACC, *liegen in* always with DAT:

(11)   Michaux *richtet* seinen Blick *auf* Phänomene: er misstraut mit
        allen Mitteln seiner Kunst. (DeReKo)
        'Michaux turns his attention to phenomena: he distrusts by all
        means his art.'
(12)   Die Gaststätte *liegt in der* Fußgängerzone. (DeReKo)
        'The restaurant is located in the pedestrian zone.'

To put it in constructionist terms: *liegen in* is systematically con-
fined to the [Verb Prep + DAT] template, *richten auf* to the [Verb Prep
+ ACC] template. I refer to prepositional verbs such as these as
the class of "unambiguous" prepositional verbs. It is interesting to
note that the correlation between Verb Prep constructional templates
and unambiguous prepositional verbs is confined to the original non-
metaphorical locative use of these verbs. Metaphorical, highly idio-
matic uses may be at odds with the correlation. Compare, e.g., the
German idiomatic expression *ins Haus stehen* ('be imminent') which
includes a prepositional verb that requires DAT in its non-metaphori-
cal locative use. It is not uncommon in the German language to find
literal and metaphorical uses of prepositional verbs going hand in
hand with the DAT/ACC alternation, compare also *sich halten an* +
DAT ('hold fast') vs. + ACC ('stick to, contact'), *sich verwickeln in* +
DAT ('get entangled in') vs. + ACC ('get tangled up with'), *versinken
in* + DAT ('sink into') vs. + ACC ('be fully absorbed by, engrossed'),
etc.

Ambiguous prepositional verbs. On the other hand, a number of lo-
cative prepositional verbs are not confined to a single template and
present the ACC/DAT alternation discussed above.[9] This second class
of verbs can again be further divided into two subclasses. One subclass
contains prepositional verbs that may be termed "transparent", in the
sense that the internal structure of the choice for either ACC or DAT
is relatively straightforward. (As will become clear shortly, this is not
tantamount to saying that the systematic meaning of ACC and DAT is
itself a straightforward matter.) The other subclass consists of verbs

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[9] I might add that this peculiarity of German grammar has left many, even
    advanced, learners of German as a second language with a feeling of frustration.
    The subject of this article is therefore relevant to second language acquisition
    research as well (cf., Zamir and Neumeier 1992, Van de Velde 1995), but I will
    not pursue this avenue of inquiry here.

that do not lend themselves to such an analysis. I refer to the latter type as "opaque" prepositional verbs. I discuss both subclasses in turn.

Transparent prepositional verbs. What I call "transparent" prepositional verbs may be said to be the prototypical prepositional verbs with variable case marking. They consistently show up in grammars of German and are generally learned relatively early in L2 acquisition (cf. Sylla 1999, Baten 2009). Moreover, they seem to have the same degree of psychological entrenchment in the competence of native speakers as the first class of "unambiguous" verbs. For example, although most native speakers may have difficulties explaining the exact difference between ACC and DAT after two-way prepositions, they usually readily assert that the prepositional verbs in the example sentences (5)–(7) require ACC, whereas they require DAT in (6)–(8). The examples are repeated below for convenience as (13a–b) and (14a–b), respectively:

(13)   a. Es war ein imposantes Bild, diese Menge Sportler *ins* Wasser *tauchen* zu sehen.
       b. [Die Fische] *schwimmen in den* Ozean zum Laichen.
(14)   a. 12. Juni 2010: Cousteau-Enkel *taucht im* Öl: "Absoluter Albtraum".
       b. Ein Mann *schwimmt im* Wasser …

It is my contention that both the traditional *status/motus* dichotomy advanced by scholars since the 19th century and the "image schemas" that cognitive linguists have proposed in terms of the trajectory/landmark asymmetry (compare, e.g., Langacker 1991b: 399–403, Smith 1995: 297–301 and Langacker 1999: 35) are useful in clarifying the varying introspective "conceptual motivations" that may guide the use of the two cases in "transparent" constructions. Contrary to the usual assumption, however, I argue that such motivations are not to be mistaken for the linguistic meanings of the cases themselves. This can be illustrated by considering the two image-schemas proposed by Langacker (1999: 35):
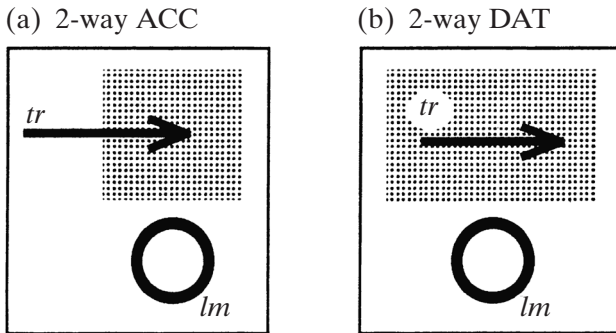
(a) 2-way ACC   (b) 2-way DAT

Figure 1: Image schemas of case marking
with two-way prepositions in German (Langacker 1999)

"tr" stands for trajector, "lm" for landmark, the shaded part represents the preposition's "search domain". The "search domain" is the area to which a preposition confines its trajector: "Accusative case is used when the trajector's path reaches and enters the search domain, making it the goal in terms of a source-path-goal image schema, and dative case when this is not so (e.g. when the trajector's motion is entirely confined to the preposition's search domain)" (Langacker 1999: 35). Not surprisingly, image schemas such as these focus on simple, prototypical examples which designate straightforward spatial scenes such as those illustrated above.[10] For instance, image schema (b) can easily be applied to the construction *im Öl tauchen* in (14a), given that the sentence expresses that the diver is already located in the oil when he carries out the act of diving (the example actually refers to a situation in the context of the water pollution because of the large oil spill caused by the explosion and subsequent sinking of the drilling rig Deepwater Horizon in the Gulf of Mexico in April 2010). Conversely, *ins Wasser tauchen* in (13a) illustrates image schema (a), inasmuch as the act of diving results in a change of state through which the athletes end up being submerged in the water. In sum, to these sentences the two figure/ground configurations proposed in the cognitive account

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[10] Langacker's own examples include: *Wir wanderten in den* (DAT) *Bergen* ('We wandered around in the mountains') vs. *Wir wanderten in die* (ACC) *Berge* ('We wandered into the mountains') and *Das Auto steht hinter dem* (DAT) *Baum* ('The car is standing behind the tree') vs. *Er stellt das Auto hinter den* (ACC) *Baum* ('He parks the car behind the tree'), see Langacker (1999: 35).

can be readily applied because they are examples of constructions involving "transparent" prepositional verbs.[11]

The subclass of transparent prepositional verbs also includes, e.g., *(sich) auflösen in*, whose variable case marking corresponds to a fix semantic distribution that verges on homonymy. More specifically, *(sich) auflösen in* means 'to turn into, to dissolve into' if combined with the ACC but 'to dissolve' if combined with the DAT. However, in the latter case, the prepositional phrase functions as a locative adjunct rather than a prepositional complement to the verb *(sich) auflösen*, as can be seen from the following examples taken from Schumacher (ed. 1986: 95) (cf. also Rehbein and van Genabith 2006: 61):

(15)   Die Spannung *löste sich in ein* Gelächter *auf.*
       'The tension turned/dissolved into laughter.'
(16)   Der chemische Stoff *löst sich in* (DAT) Alkohol *auf.*
       'The substance dissolves in alcohol.'

Opaque prepositional verbs. Other prepositional verbs presenting the ACC/DAT alternation depart markedly from the transparent ones in that the semantic difference between the two alternative cases cannot be ascertained straightforwardly in terms of a prototypical alternation. Moreover, most of the time neither dictionaries nor grammars offer any satisfying explanation for the case alternation. Because the semantic difference between ACC and DAT is not distinct enough to be motivated either in terms of the traditional dichotomy (*status/*

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[11] It bears pointing out, however, that image schema (a) is not entirely adequate to explain the "scene" construed in sentence (13a) because it only applies to one possible interpretation and does not account for all possible interpretations the sentence can receive. The situation in which athletes jump into the water from a platform or springboard may very well be the prototypical one, but sentence (13a) could also be used to refer to a situation in which the athletes are, e.g., wading in shallow water and then dive into it when the water is deep enough. A partial solution to this problem of multiple interpretations consists in characterising the trajector in terms of an "active zone" analysis (Langacker 1987: 271–274, Taylor 2002: 110–112). This could mean, e.g., that a verb such as *dive* does not profile the entire body of the agent but rather the body part that is the "active zone" in the act of diving (a human being, for instance, usually dives with his head or feet first). However, such an explanation would not solve the essential part of the problem, given that an "active zone", too, is an interpretative concept rather than a linguistic meaning category. I return to this latter distinction in Section 4.

motus) or the cognitive image schemas discussed above, I refer to these verbs as "opaque" prepositional verbs.

Again, two subclasses can be distinguished, which I term "idiosyncratic" and "versatile" prepositional verbs. It may occasionally be hard to determine to which of the two subclasses particular items belong. Still, although they do not provide a set of necessary and sufficient conditions, the finer-grained subdivision into two subclasses presented here is a useful heuristic to clarify the issue of variable case marking, as will become clear in what follows. Consider the examples below:

(17) Johan sieht seine Mutter auf dem Hotelkorridor, wie sie mit dem fremden Mann nach gieriger Umarmung *in einem* unbenützten Zimmer *verschwindet* [Das Schweigen, 1963, I. Bergmann] (*Filmklassiker*, Bd. 2, Stuttgart: Reclam, 1998: 536)
      '… how she disappears, after a passionate embrace, in a free room with the stranger.'
(18) Boeing *verschwindet im* Meer (WebCorp, Stuttgarter Zeitung, newspaper headline)
      '[A] Boeing crashes into the sea and disappears (literally: disappears in the sea)'.
(19) Die Sonne *verschwand* hier also nie *hinter dem* Horizont, sondern warf die ganze Nacht ihr tiefrotes Licht auf die bizarre Küstenszenerie der Inseln. (DeReKo)
      'Here, the sun never disappeared below [literally: behind] the horizon, …'
(20) Durch einen geplatzten Reifen geriet der Lastwagenfahrer ins Schleudern, durchbrach die Mittelleitplanke und *landete auf der* Gegenfahrbahn Richtung Kassel (WebCorp)
      '… and he landed on the opposite lane of the road to Kassel.'
(21) Elizabeth: erschrickt, *verbirgt* die Kette *hinter ihrem* Rücken [und antwortet:] "Sein Name ist William Turner …" (WebCorp)
      'Elizabeth: she is startled and hides the chain behind her back …'
(22) a. Möchten Sie ein Kind *in Ihrer* Familie *aufnehmen*? (DeReKo)
         'Would you like to adopt a child in/into your family?'
      b. Frauen, die bereit sind, als Tagesmütter zu arbeiten, und die gerne ein Kind *in ihre* Familie *aufnehmen*. (DeReKo)
         ' … and who would love to adopt a child in/into their family.'

(23) a. Weil eine laufende Sendung immer parallel *auf der* Fest-
          platte *aufgenommen* wird, kann der Zuschauer … (DeReKo)
          'Because a running program is always parallelly recorded on
          hard disk, …'
      b. CDs können in wenigen Minuten *auf die* Festplatte *aufge-
          nommen* werden. (DeReKo)
          'Compact discs can be recorded on hard disk within a few
          minutes.'

(24) a. Der US-Agrokonzern Monsanto will die Gentech-Soja-
          bohne Roundup Ready *in der* Schweiz *einführen*. (DeReKo)
          'The US agricultural company Monsanto wants to import
          the genetically engineered soybean Roundup Ready to
          Switzerland.'
      b. Pfundweise habe dieser Rauschgift von Holland *in die* Bun-
          desrepublik *eingeführt* und im Hunsrück mit großem Ge-
          winn verkauft. (DeReKo)
          'It is claimed that he imported large amounts of drugs from
          the Netherlands to the Federal Republic of Germany, …'

(25) a. Sie sind teilweise *aufgegangen in den* anderen Parteien.
          (DeReKo)
          'They were partly absorbed into other parties.'
      b. 1949 beteiligte sich Reimann an der Gründung des "Ver-
          bands der Unabhängigen", als deren Vertreter er bis 1956 –
          also bis der VdU [Verband der Unabhängigen] *in die* FPÖ
          [Freiheitliche Partei Österreichs] *aufging* – im Nationalrat
          saß. (DeReKo)
          '… until the VdU was absorbed into the FPÖ …'

(26) a. Wer den Homo heidelbergensis besucht, darf sich *im* Gäste-
          buch *eintragen*. (DeReKo)
          'Those who visit the homo heidelbergensis, are allowed to
          register in the guestbook.'
      b. Zum Schluss durfte sich jeder Besucher noch *ins* Gästebuch
          eintragen. (DeReKo)
          'Finally, all visitors were allowed to register in the guest-
          book.'

The sentences (17)–(26) have in common that the motivation in fa-
vour of DAT or ACC is much less transparent than in the examples
under (13)–(14). However, the above series of sentences (17)–(26) is

deliberately divided into two parts, (17) through (21) and (22) through (26), respectively. The reason for this division is that, although the prepositional verbs instantiated in (17)–(26) all occur with variable case marking in the corpus, differences in the degree of variability among the constructions are considerable and they must be taken into account in order to achieve descriptive adequacy.

Idiosyncratic prepositional verbs. In sentences (17)–(21), a single case, viz. DAT, is unquestionably the idiomatically preferred case in present-day German, as corpus searches show. Yet, the motivation in favour of DAT is arguably opaque, it defies all attempts at a straightforward semantic explanation. For example, the Verb Prep construction *im Meer verschwinden* in (18) designates a "dynamic process", with "direction" and "motion" not confined to the locative configuration specified by the preposition *in*. Or, to put it in cognitive terms, the path of the trajector (the air plane) reaches and enters the search domain in relation to the sea, making it the goal in terms of a source-path-goal image schema. But the normally required case is DAT, not ACC. With "normally required" case, I mean the case that is expected to occur in accordance with normal language usage, in the sense of Coseriu's definition of "norms of language" (Coseriu 1975; 1985), and which is, as a rule, the most frequent one in a specific construction in the corpus. Among the subclass of idiosyncratic prepositional verbs with a clear, though functionally not immediately transparent, preference for one case are:[12]

– preference for DAT:
aufknüpfen an ('hang on'), *befestigen an* ('fasten on'), *einbegreifen in* ('include in'), *sich einfinden in/auf* ('arrive at'), *einkehren in* ('make a stop at'), *(ein)parken hinter/vor* ('park behind/before'), *landen auf* ('land on'), *sich niederlassen in/auf* etc. ('settle down in, sit down on etc.'), *unterkommen in* ('find accommodation in'), *verbergen hinter* ('hide behind'), *verschwinden in/hinter* ('disappear in/into/ behind'), *versickern in* ('seep in/into'), *vorfahren vor* ('drive up to');

– preference for ACC:
aufhocken auf ('sit/crouch/jump on to'), *bauen auf* ('build on'), *betten auf* ('bed down on'), *einbetten in* ('embed in'), *einpflanzen in/unter* ('plant in/into/under, implant'), *festnageln auf* ('nail on'), *festschmieden an* ('to forge, bind in'), *grenzen an* ('border on'), *halten vor* ('to hold in front of/over'), *verstricken in* ('entangle in').

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[12] Again, the paraphrases of the German prepositional verbs in English between brackets are merely semantic approximations.

These are just small samples. I refer to this opaque subclass as "idiosyncratic" prepositional verbs. The case marking does not appear to be conditioned by semantic factors inherent to the prepositional verbs, but rather by certain norms of language use. Norms of language use are commonly regarded as traditions of discourse in variously defined linguistic communities. They are, functionally speaking, midway between the strictly grammatical rules of the language system and the variation on the level of individual performance (cf. also the theory of "default" or "normal" interpretation in Levinson 2000). Being in accordance with normal language usage and not "systematic" in the sense just outlined, the "normally required" case marking with idiosyncratic prepositional verbs may however still be subject to variation, though arguably to a lesser extent than in the subclass to be discussed next. Some factors that might contribute to this variation will be discussed in Section 5.

Versatile prepositional verbs. Perhaps even more puzzling is the case marking in the second subclass of opaque verbs, illustrated in (22)–(26), which I call "versatile" prepositional verbs. This subclass includes the following verbs (the list is again only provided for illustration purposes and does not in any way claim to be complete):

> *aufnehmen in* ('adopt in, absorb in'), *aufnehmen auf* ('record on'), *aufgehen in* ('absorb into'), *begraben unter* ('bury under'), *einführen in* ('introduce in/into'), *einschließen in* ('include in, lock up in'), *eintragen in* ('register in'), *eintragen auf* ('register on'), *münden in* ('flow into'), *sich verirren in* ('get lost in'), *sich verlaufen in* ('lose one's way in'), *versenken in* ('sink, lower into').[13]

All these prepositional verbs occur, with notable frequencies, with both ACC and DAT in our corpus. They are classified as versatile for two reasons. On the one hand, they share with the idiosyncratic prepositional verbs case markings that do not lend themselves to straightforward explanations in terms of the aforementioned traditional

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[13] Recall that these prepositional verbs are here considered as complex lexical units, not as verbs with freely selected prepositions. For this reason, a prepositional verb such as *aufnehmen in* is not analysed as a metaphorical use of *aufnehmen* accompanied by *in*, in accordance with standard lexicographical practice. It should also be borne in mind that the ACC/DAT alternation after a prepositional verb such as *münden in* does not correspond, to judge from the available corpus data (DeReKo), to the difference between literal and metaphorical uses, given that the two uses regularly occur with both cases.

and/or cognitive categories. On the other hand, and contrary to the subclass of idiosyncratic items, it is hard to establish, on the basis of corpus research, an idiomatically preferred case for versatile prepositional verbs, given that both ACC and DAT are relatively frequent. I will elaborate on the subclass of opaque prepositional verbs in the next section.

To round off this section, the classification of German locative prepositional verbs (pv in Figure 2 below) with variable case marking presented above can be summarised as follows:
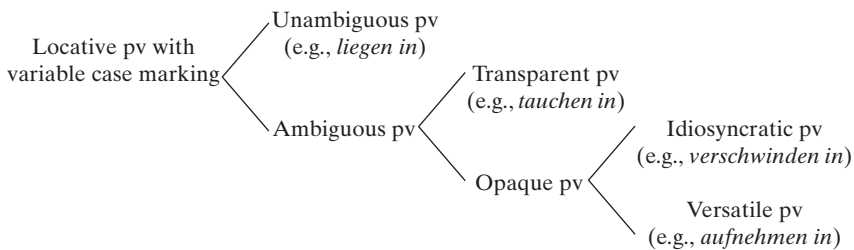
Locative pv with variable case marking
— Unambiguous pv (e.g., *liegen in*)
— Ambiguous pv
  — Transparent pv (e.g., *tauchen in*)
  — Opaque pv
    — Idiosyncratic pv (e.g., *verschwinden in*)
    — Versatile pv (e.g., *aufnehmen in*)

Figure 2: Classification of locative prepositional verbs in German

4. *Semantic definitions and paraphrases: The limits of the conceptual approach*

With regard to the classification provided in Section 3, the following questions arise:

i)   How can the DAT and ACC be accounted for in sentences with opaque prepositional verbs such as (17)–(26)? What is the correct paraphrase of the meaning of these sentences with respect to the choice for DAT or ACC?

ii)   Does the case marking in (17)–(26) fit into a putative semantic definition of the case opposition between ACC and DAT following two-way prepositions, or do the examples contradict any supposed semantic homogeneity of these cases after prepositional verbs in present-day German?

In this section, I discuss the answers to these questions that can be derived from Smith's (1987; 1993; 1995) account of opaque constructions, before turning to an alternative approach along the lines of

Paul's *Deutsche Grammatik* (1916–1920) in the next section. Smith's
account elaborates on Langacker's conceptual approach outlined in
Section 3 and has been widely adopted in the cognitive literature (see
Leys 1989; 1995, Serra-Borneto 1997, Vandermeeren 2004, De Knop
2008, among others).

In Section 3 it was pointed out that both the traditional concep-
tual categories of *status* and *motus* as well as the cognitive image
schemas are not adequate to explain the case marking in construc-
tions with idiosyncratic prepositional verbs illustrated in (17)–(21).
It is my understanding that the same holds true for the versatile
prepositional verbs illustrated in (22)–(26). In what follows, I will
expand on this proposal by focusing on the modern cognitive ap-
proach.

First of all, the generally accepted distinction in cognitive linguistics
between a prototypical usage and less prototypical instances or exten-
sions of a category seems of little or no use in the task at hand. Con-
sider, for instance, the DAT in (18) *[Eine] Boeing verschwindet im
Meer.* On the one hand, the use of DAT in this sentence does not mean
that the motion of the trajector (the air plane) is conceived of as being
confined to the search domain expressed by the preposition, because
that would make no sense. On the other hand, the DAT in (18) also
does not bear any family resemblance to the ACC schema in Figure 1.
The sentence *[Eine] Boeing verschwindet im Meer* does not imply, to
be sure, that the air plane is conceptualised as entering the search do-
main expressed by the preposition before disappearing into the sea.
What the sentence says is that the air plane crashes into the sea and
disappears, no more and no less. A similar reasoning applies to the
other constructions with idiosyncratic prepositional verbs (17)–(21)
and, even more so, to the versatile prepositional verbs (22)–(26).
After all, what image-schematic difference, in terms of a different
conceptualisation of a source-path-goal image schema, could reason-
ably be said to be involved when language users opt for ACC in *ein
Kind in die Familie aufnehmen* in stead of the equally correct and fre-
quently attested DAT (cf., 22)? The answer, I venture to say, is that no
image-schematic difference is involved, because the case variation
found in (22)–(26) is, quite simply, not a matter of the image schemas
represented in Figure 1. This does not imply, to be sure, that no sem-
antic difference whatsoever exists between (22a) and (22b). I return
to this issue in the concluding Section 6.

Secondly, it might be argued that the cognitive image-schematic approach is generally correct nevertheless, but that it should be couched in conceptual terms that render the aforementioned examples more amenable to such an approach. This is essentially the position taken by Michael Smith, who elaborates on Langacker's approach in a number of publications (e.g., Smith 1987; 1993; 1995) in an attempt to come to terms with the more problematic instances of DAT and ACC after two-way prepositions in German. To this end, Smith recasts the image-schematic concepts discussed above into a considerably more general form, arguing that the cognitive motivation for ACC or DAT with two-way prepositions in German can be stated in the following terms: "change > ACC", "no change > DAT". On this view, the prototypical spatial senses of the two image schemas in Figure 1 are, just like the traditional "motion" vs. "no motion" account, only special cases of the "more general phenomenon of change vs. no change in a given situation that is coded linguistically" (Smith 1995: 294). The image-schematic terminology is nevertheless maintained as basic: the central hypothesis is that, with the ACC, different aspects of a path are highlighted (spatially as well as temporally, hence a focus on "change"), whereas DAT instantiates endpoint focus or profile restriction (hence a focus on "no change") (for further explanation and illustration, see Smith 1995: 297–304).

Smith's account of the semantics of constructions with two-way prepositions in present-day German is flawed for a number of reasons (see also Willems, forthcoming). First of all, Smith proceeds entirely from the point of view of introspection. More specifically, he relies on judgements of native speakers from different regions in Germany who are confronted with constructions in which prepositional verbs are either combined with DAT or ACC. Crucially, the semantic judgements of the informants are elicited on the basis of a diverse array of sentences, most of which are apparently of Smith's own making and not derived from any corpus of naturally occurring sentences.[14]

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[14] The object of Smith's analysis is therefore, strictly speaking, the ability of speakers to evaluate meaningful sense oppositions between two cases in identical syntactic environments and only indirectly the semantic contrast of the ACC and DAT as they naturally occur in combination with two-way prepositions.

Among these are sentences of which the grammaticality is at least questionable, which biases the outcome of the analysis, given that no corpus analysis is carried out. Moreover, no attempt is made to differentiate between various types of prepositional verbs and the corresponding kinds of variable case marking (see the discussion in the previous section), which results in a skewed treatment of a heterogeneous set of example sentences. Consider some of Smith's examples, together with the semantic paraphrases provided by the author (Smith 1995: 305–315):

(27) a. ?Er *brachte* die Lampe *an die* Decke *an*.
       'He attached the lamp to the ceiling.'
     b. Er *brachte* die Lampe *an der* Decke *an*.
       'He attached the lamp to the ceiling.'
(28) a. ?Er *druckte* den Text *auf dünnem* Papier.
       'He printed the text on thin paper.'
     b. Er *druckte* den Text *auf dünnes* Papier.
       'He printed the text on thin paper.'
(29) a. Das Backbordbeiboot *setzte* hart *auf das* Wasser *auf*.
       'The portside-lifeboat dropped hard on the water.'
     b. Das Backbordbeiboot *setzte* hart *auf dem* Wasser *auf*.
       'The portside-lifeboat dropped hard on the water.'
(30) a. ?Der Feind ist *in der* Stadt *eingedrungen*.
       'The enemy overran the town (speaker is personally affected).'
     b. Der Feind ist *in die* Stadt *eingedrungen*.
       'The enemy overran the town (neutral tone).'
(31) a. Die Tablette *löst sich in das* lauwarme Wasser *auf*.
       'The tablet dissolves (turns into) lukewarm water.'
     b. Die Tablette *löst sich in dem* lauwarmen Wasser *auf*.
       'The tablet dissolves/disappears in the lukewarm water (the water is construed as medium).'
(32) a. Er hat ein Zitat *in dem* Text *eingefügt*.
       'He added a citation to the text.' (The text is finished except for a missing citation.)
     b. Er hat ein Zitat *in den* Text *eingefügt*.
       'He added a quote to the text.' (Neutral with respect to the text being finished.)

The a.-sentences (27)–(32) are without exception awkward, because one expects DAT in the sentences in which ACC is used, and

vice versa.[15] Only the b.-sentences conform to normal language usage. The sentences illustrate the subclass of idiosyncratic prepositional verbs, as delimited above. On the other hand, Smith also supplies examples such as the following:

(33) a. Wir *wanderten in den* Bergen.
           'We hiked in the mountains.'
      b. Wir *wanderten in die* Berge.
           'We hiked into the mountains.'
(34) a. Ich werde die Briefmarke *in meiner* Sammlung *aufnehmen*.
           'I'll take that stamp into my collection'. (The collection is finished except for a missing stamp.)
      b. Ich werde die Briefmarke *in meine* Sammlung *aufnehmen*.
           'I'll take that stamp into my collection'. (The collection is expanded to include a new section.)

(33) illustrates a completely transparent prepositional verb, whereas (34) illustrates an opaque prepositional verb. Confounding the three subclasses of prepositional verbs involved adds to confusion.

Another moot point in Smith's account is the particular way the elicited judgements are interpreted. As pointed out in Section 3, image schemas form the framework of explanations on a conceptual basis, i.e., the case alternation is described as linguistically meaningful in the full sense of the word (cf., Langacker 1991b: 378). However, although the criterion of meaningfulness seems entirely plausible, it is a matter of dispute, and supreme importance, how the meaning differences emerging from case alternations have to be evaluated. That this is a different level of inquiry altogether becomes particularly clear when the semantic interpretations along the lines of the image schemas in Figure 1, which may reasonably be applied to unambiguous and transparent cases, are extended to opaque cases. For example, the additional motivations provided along with the paraphrases in the above examples (30)–(32) come across as fanciful and ill-founded.[16] The

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[15] It is unclear why only three of the six sentences taken here from Smith's much more elaborate set of examples receive a question mark indicating limited acceptability, all the more so that a question mark seems inapt with respect to the apparent grammatical defectiveness of most a.-sentences.

[16] The opposition between DAT and ACC with *sich auflösen in* illustrated in (31) is erroneously linked to the case alternation after two-way prepositions at issue in

same holds for the motivation Smith provides regarding the allegedly different status of the stamp collection in the examples with the versatile prepositional verb in (34), which seems quite arbitrary.

One of the most pervasive problems with the conceptual approach just outlined is that the provided paraphrases and motivations overspecify the semantic features that are considered part of the meaning of the case morphemes. At the same time, the importance of inference is underestimated. For example, with regard to the – as I pointed out before, improbable if not downright ungrammatical – DAT in a sentence such as (30a) *?Der Feind ist in der Stadt eingedrungen*, Smith argues that DAT "evokes more of a personal reaction on the part of the speaker to the action than does the accusative version. This suggests that the portion of the path travelled by the trajector which is located internal to the landmark is viewed as more important than parts of the path which lie outside this region (thus leading to a connotation of a personal reaction), which motivates an endpoint focus analysis" (Smith 1995: 309). However, in the unlikely event that such a motivation would actually be responsible for the use of DAT, even then this would not support the view that the trajector-landmark configuration sketched in the above quote is part of the encoded semantic contribution of the DAT to the meaning of the entire sentence. At best, it is a layer of associations that may be associated, *post hoc* and by individual language users, to the expression in particular circumstances and contexts.[17]

On this view, the trouble with the conceptual approach advocated by cognitive linguists is that it amounts to an attempt to integrate two different things into a unified concept of meaning: on the one hand,

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the other sentences. (31a) is actually nonsensical, so much so that *eine Tablette löst sich auf in Wasser* can hardly mean that a pill "turns into" water. Conversely, in (31b) the NP *Wasser* is not a complement of *sich auflösen in* but a locative adjunct to *sich auflösen* (I imagine that the remark in parentheses, "the water is construed as medium", goes in the same direction); cf. the discussion of sentences (15)–(16) above. A similar confusion can be found in Schmitz (1974: 53).

[17] Note that the concepts "change" and "no change", which are proposed by Smith (1995) to account for the ACC/DAT alternation in general terms, are equally problematic, but for another reason. These two concepts are so general that it is difficult to link them to linguistically encoded meanings in a measurable way (see also De Knop 2000: 58). For a brief but lucid general discussion of the problems related to the abstract meanings of grammatical morphemes, see Haspelmath (2003: 211–215).

associative data and experiences which pertain to the level of subjective interpretations or perhaps to the level of individual norms, and on the other hand, systemic meanings of cases as grammatical devices in the system of the language. Obviously, the outcome of such an endeavour goes far beyond what is commonly understood under 'meaning' in linguistic theory. It seems more accurate to say that Smith's enterprise deals with what could be designated, with a term I borrow from European (structuralist) linguists of the 1960s and 70s, as "effets de sens". Such sense effects build on meanings, but in the process of their realisation, the meanings are enriched beyond that which is properly encoded in the language. However, the present section may have shown that if, in the way advocated by Cognitive Linguistics, essentially externally delimited sense effects are to be equated with (or lumped together with) language-specific, systemic meanings in order to make sense of the supposed semantic homogeneity of the ACC and DAT, then this is a high price to pay.[18]

To conclude this section, it bears pointing out that the "meaning" of a case as a systemic, and fairly abstract, notion in the "intuition" of speakers should be distinguished from metalinguistic, psychological introspections *about* meanings. Under "intuition" I understand "primary intuition" in the sense of linguists working in the structural-functional paradigm such as Coseriu (1988; 1992) and Itkonen (2003). On this view, a "meaning" is a distinctive meaning potential defined by oppositions in the language system (or case system, for that matter), i.e., it is a systemic invariant. "Introspection", on the other hand, is a "secondary", psychological and associative interpretation of meanings in context (cf., Wasow and Arnold 2005: 1482), that which cognitive linguists understand under "meaning" in a broad, holistic sense of the term. This important difference can be further illustrated by confronting the cognitive account with the observations on case meanings Hermann Paul published in his *Deutsche Grammatik* almost 100 years ago, to which I turn in the next section.

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[18] This is, moreover, additional evidence that the cognitive approach runs into trouble when confronted with less straightforward (non-prototypical) instantiations of ACC and DAT case marking which are at odds with the postulated image schemas and the conceptual "change"/"no change" distinction; see also Gibbs (2006: 146–149) for a more general observation along the same lines, and Levinson (2000: 21, 192).

5. *Towards a construction-based approach of German locative Verb Prep constructions*

In this section, I first briefly present the observations made by H. Paul in his *Deutsche Grammatik* (1916–1920) on the subject of variable case marking in German in general, and with locative prepositions in particular. Subsequently, I will interpret Paul's approach as an insightful endeavour to explain variable case marking essentially from a constructionist perspective and I will give a number of reasons why such a perspective may be considered superior to the projectionist cognitive approach discussed above.[19]

In recent studies on the subject, only few scholars have paid serious attention to Paul's observations on case meanings in German, apart from O. Leys (1989; 1995) who however stresses the similarities between Paul and recent cognitive accounts (cf., Willems 1997 for a more detailed discussion). The sections in Paul's *Deutsche Grammatik* that are of particular interest to our investigation are Chapter 5, *Gebrauch der Kasus obliqui (ausgenommen nach Präp[ositionen])*, and Chapter 6, *Rektion und Gebrauch der Präpositionen*. These two chapters are part of the grammar's fourth part which deals with German syntax (*Teil IV: Syntax*). Together they cover 302 pages, most of which are filled with corpus examples. As always in his writings, Paul's focus is that of a historical linguist. However, although this focus also informs his observations on case meanings, Paul carefully distinguishes between the diachronic perspective, which is considered basic, and the synchronic perspective, which consistently hinges on a résumé of the historical developments of the morphological and semantic categories at issue.

In the introduction to the syntax part of his grammar, Paul states from the outset that syntax is part of semantics (Paul 1919: 3). Cases are considered means to express dependency relations ("zur Bezeichnung der Abhängigkeit", 1919: 215), just like prepositions, which constitute a

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[19] Of course, it is important to avoid the pitfall of misinterpreting earlier scholarly work and in particular not to skew Paul's observations and findings by insisting on their (pre-)constructional nature. However, I take it for granted that a constructionist approach to syntax is not theory-bound but actually present in much theoretical and empirical work on syntax long before it came to be known under the now current designation, as will become clear from the following discussion.

separate class of morphemes that has emerged from locative adverbs (Paul 1920: 3; cf. also Dal 1966 and Eroms 1981; 1985). According to Paul, the relation between cases and prepositions is as follows:

> Später sind in der idg. [indogermanischen] Grundsprache die obliquen Kasus ausgebildet, durch die eine genauere Bestimmung des Verhältnisses möglich geworden ist.[20] Die Bestimmung durch die Kasus ist dann weiter durch die Zuhilfenahme der Präp[ositionen] noch spezieller gestaltet. (Paul 1919: 216)

Thus, cases have relational meanings according to Paul, and the use of prepositions made it possible to further delimit the relational meanings formerly expressed by case morphemes.

Paul devotes considerable attention to the question of the "Grundbedeutung" of the cases, both from a diachronic and synchronic point of view. The term "Grundbedeutung" not only refers to the 'basic meaning' of cases in the historical sense but also to their 'unitary meaning' from a synchronic perspective. Whether cases ever had "Grundbedeutungen" and, if so, how they should be defined, had been a much-debated issue in 19th century German case theory. In the 20th century, the quest for synchronic "Grundbedeutungen" continued to be of central concern to many scholars until the 1930s and well beyond, when linguists such as Jakobson, Hjelmslev, Benveniste, among others, developed structuralist theories of homogeneous unitary case meanings (cf., Willems 1997: 79–96 for discussion).[21] Paul takes a fairly pragmatic view on the "Grundbedeutung" debate. He concedes that it is relatively easy to delimit such meanings for the original Indo-European Locative, Ablative, and Instrumental. However, the other three oblique cases are a different matter, not only diachronically (with the influence of case syncretism being an additional factor of importance) but also synchronically:

> Dagegen für den Dativ läßt sich kaum eine Grundbedeutung aufstellen, aus der sich alle Verwendungsweisen ableiten ließen, noch weniger für den Akkusativ und Genitiv. Man wird sich schon für die Grundsprache begnügen müssen, mehrere verschiedene Funktionen nebeneinander zu stellen, denen der nämliche Kasus dienen muß. (Paul 1919: 216; cf. also 284 and 380)

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[20] Cf.: "Die Bedeutung vieler Wörter weist auf ein Verhältnis zu etwas anderem, das in der Regel auch sprachlichen Ausdruck verlangt" (Paul 1919: 215).

[21] Recall that Jakobson (1936) formulated his theory of cases in terms of "Gesamtbedeutungen" ('general meanings') rather than "Grundbedeutungen", partly in contrast to Hjelmslev (1935). However, the differences between both concepts may not be as significant as both authors suggest.

At the same time, Paul does not hesitate to characterise the ACC and DAT in terms of two homogeneous semantic functions standing in opposition to one another once they are combined with locative prepositions, so much so that for both of them a clear diachronic continuity can be observed (for our purposes, the GEN may be disregarded). Paul writes:

> Wie in den übrigen idg. Sprachen gibt es im Deutschen eine Anzahl lokaler Präp[ositionen], die eine doppelte Rektion je nach dem Sinne haben, wobei die ursprüngliche Bedeutung der Kasus noch zur Geltung kommt. Der Akkusativ steht, wo ausgedrückt werden soll, dass das räumliche Verhältnis zu einem Gegenstande erst hergestellt wird, der Dat[iv] als Ersatz des alten Lokativs, wo dieses Verhältnis als schon bestehend gedacht wird. Bei der Übertragung auf andere als Raumverhältnisse ist die dieser Übertragung zugrunde liegende Raumanschauung maßgebend. Hierher gehören *an*, *auf*, *in*, *hinter*, *unter*, jetzt auch *vor* und *über* […]. Die Regel über die Verteilung von Akk[usativ] und Dat[iv] ist zwar einfach, lässt aber doch der individuellen Auffassung einen gewissen Spielraum. Daher finden sich Unterschiede im Gebrauche zwischen den verschiedenen idg. Sprachen. Auch das Got[ische] zeigt Abweichungen vom Deutschen, und innerhalb des Deutschen selbst finden sich mancherlei Schwankungen. (Paul 1920: 5)

I have quoted Paul at some length at this point for several reasons. First of all, Paul presents the hypothesis of unitary case meanings in an explicit focus on the prepositional phrase as a structural whole, thus effectively promoting a constructionist perspective on relational meanings. (Below I will adduce further evidence supporting the claim that the level of constructions plays a major role in Paul's reasoning.) Secondly, Paul does not define relational meanings in terms of *status* and *motus*, nor in specific image-schematic terms, nor in general conceptual terms such as "change" and "non-change". This is significant. The inadequacy of the traditional dichotomy between *status* and *motus* is self-evident from the discussion in the previous sections. The concept of "change", on the other hand, does not itself point to a relation – anything in the world can change, resulting in a "relation" between a former and a later state, but this is not what a relational meaning understood as a linguistic category is about. Conversely, the relations involved in image schemas (between a trajector and a landmark, a path and a goal, active zones and situations, etc.) are, as noted above, of an interpretative, referential nature and do not immediately relate to the semantic conditions of language production. This points to the conclusion that the traditional distinction between "relational"

and "non-relational" concepts in Cognitive Linguistics (see, e.g., Langacker 1987: 214–220) differs markedly from what Paul understands by the term "relationship" ("Verhältnis") in order to capture the function of prepositions and cases. According to Paul, ACC is selected when a spatial relationship to an object is being established ("incipient", Leys 1989: 97), DAT when such a relationship is conceived of as already established ("existing").

Thirdly, Paul's more abstract characterisation of relational meanings obviously owes more to the ideational realm of language-specific differences than to the interpretation of real-world phenomena. This approach allows Paul to account for instances of unexpected or deviant ("abweichend", 1920: 5) case marking after prepositions in such a way as to admit that the choice for ACC or DAT is readily semantic-driven without falling into the pitfall of a virtually unconstrained conceptual explanation along the lines discussed in Section 4. According to Paul, case variation is partly due to the fact that speakers have a certain amount of freedom of choice to interpret the semantic/functional opposition between ACC and DAT ("die Regel […] lässt aber doch der individuellen Auffassung einen gewissen Spielraum"). For example, Paul observes that prepositional verbs that normally take ACC are occasionally construed with DAT (Paul 1920: 5, for examples see below).

In what follows, I will further explore some of the details of Paul's exposition because it may shed an illuminating light on the constructional aspects of locative Verb Prep constructions that we have been considering so far and help clarify the conditions under which the variation between ACC and DAT occurs in these constructions in present-day German. However, before going into details, let me explain why I consider Paul's account of variable case marking with two-way prepositions in German as a "constructionist" analysis *avant la lettre*. First, there is the plain observation that the terms "Konstruktion" and "Konstruktionsweise" occur regularly in the syntax part of Paul's grammar (vol. 3 and 4 of the *Deutsche Grammatik*).[22] Of course, this terminology was not uncommon in German linguistics at the time (compare, e.g., the works of W. von Humboldt going back to the beginning of the 19th century, in which the term "Construction"

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[22] Compare also the chapters 6–8 in Paul's landmark book *Prinzipien der Sprachgeschichte* (1968, 8th edition).

occurs regularly, see Humboldt 1963 [1820–1835]), but Paul undeniably makes abundant use of it, and in a way that foreshadows current principles of a construction-based approach to grammar. Interestingly, Paul uses the term "Konstruktion" in a twofold way, both in a projectionist and a constructionist sense, yet without inconsistency. The projectionist use is exemplified by the numerous references that Paul makes to words developing specific constructions, e.g., when he states that, at a certain point in time, verbs give rise to a construction that formerly did not exist with that verb, e.g. *mir ahnt > ich ahne* ('I suspect'), *mir träumte > ich träumte* ('I dreamed'), *das freut mich > ich freue mich darüber* ('I am pleased about that'). In Paul's words:

> Einige Verba, neben denen ursprünglich die Bezeichnung einer Sache oder eines Vorgangs oder auch ein Satz als Subj[ekt] und eine Personenbezeichnung im obliquen Kasus steht, haben daneben eine andere Konstruktion entwickelt, bei der die Personenbezeichnung zum Subj[ekt] gemacht wird. (Paul 1919: 34)

The constructionist use, on the other hand, is illustrated by the many references to the constructional templates themselves, irrespective of the lexical items that develop them. For this second, constructionist, use of the term "Konstruktion", Paul occasionally also employs the term "Konstruktionsweise" ('way or method of construction', e.g., Paul 1920: 11, 22, etc.), which is even more precise. From this angle, words do not themselves develop a construction but may come to comply with a constructional pattern that already exists in the grammar. For example, many transitions ("mannigfache Übergänge", Paul 1919: 35) can be observed in German between the personal and impersonal construction. Although weather verbs are normally used in complementless constructions, most of them occasionally also occur in sentences in which they take a complement, either a subject or object, or both, e.g.: *es regnet > der Himmel regnet* (literally: 'the sky rains'), *es schneit > der Baum schneit Blüten* (literally: 'the tree snows blossoms') (Paul 1919: 35). Finally, "Konstruktion" in the projectionist sense and "Konstruktion(sweise)" in the constructionist sense may merge in a term such as "Konstruktionswechsel". This term is sometimes used by Paul to refer to a (diachronic) development that is both lexically and syntactically driven, e.g., when the original prepositional construction *einen womit verehren* ('to give something to somebody') is said to be replaced by the ditransitive construction *einem etwas verehren*, with the same meaning, under the analogical influence of verbs

such as *einem etwas schenken* ('to give something to somebody as a present') (Paul 1919: 390; cf. also 418–419 and 448–454).

Let us now return to the Verb Prep constructions with ACC or DAT. Paul pays close attention to instances of case marking after two-way prepositions that run counter to the case marking one would normally expect to occur.[23] The explanations he offers are evidence that the constructionist focus is well-established in Paul's approach. Paul does not so much focus on the prepositions and their case as such but rather on the verbs with which the exceptional case marking following the prepositions occurs. This leads to a number of interesting observations.

Paul first considers constructions which normally take ACC but from time to time are construed with DAT (Paul 1920: 5–10). To Paul, this is proof that speakers may judge an emerging relationship between two entities as an already established relationship:

> Bei den meisten lässt sich wohl zur Erklärung geltend machen, dass der Sprechende oder Schreibende die Annäherung eines Gegenstandes an einen andern schon als vollzogen fasst und nur noch die besondere Behandlung desselben im Auge hat. (Paul 1920: 5)

There follow more than four pages of examples, including (Paul 1920: 5–10):

(35) a. *Am* Pfahl der Schmach hast du mich *angekettet*
         'You have tied me up to the pole of disgrace.'
      b. Entzücken, welches … auf einmal *in hellen* Flammen *ausbrach*
         'Joy which … suddenly broke out in bright flames.'
      c. Ich habe … Brust und Lippen kühlend *eingetaucht im* frischen Born
         'I have … sunk my chest and lips into the fresh spring to get cooled off.'

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[23] Note that, although the term "Norm" (cf., Section 3) does not occur, as far as I know, in the syntax part of Paul's *Deutsche Grammatik*, the concept itself is again clearly known to the author. For example, Paul observes that changes in case marking may be purely a matter of a "durch die Tradition gebunden[e] Verwendung der Kasus", without a corresponding change in the relational meaning involved, e.g., when *ich habe dessen vergessen* (with GEN) was replaced by *ich habe das vergessen* ('I have forgotten it', with ACC) (Paul 1919: 217). In Paul (1968: 29), the author explicitly refers to "das eigentlich Normale in der Sprache, der Sprachusus" (compare also Paul 1968: 60, 126, 128, 199, etc.).

    d. *auf dieser* Bank von Stein will ich *mich setzen*
       'I want to sit down on this stone bench.'
    e. ich *vertiefe mich* sonst zu sehr *in diesem* Labyrinthe
       'otherwise I am too much absorbed in that labyrinth.'

Paul goes on to point out that the DAT regularly co-occurs in conjunction with past participles. This is a significant correlation because past participles usually designate the result of an action or event of which the effect is still apparent at the time of the utterance:

> Besonders häufig ist der Dat[iv] neben dem Part[izipium] Perf[ektum], so weit dasselbe noch adjektivische Natur bewahrt. Es liegt dies daran, dass das Part[izipium] […] ursprünglich ein Ergebnis bezeichnet, dessen Wirkung fortdauert. (Paul 1920: 11–12)[24]

Many examples support this assertion, some of which are here rendered in abbreviated form (for the full sentences, see Paul 1920: 12–15; see also Dal 1966: § 45):

(36) a. *in seinem* Haus *aufgenommen* 'taken into his house'
      b. *in allen* Wissenschaften *eingeweiht* 'initiated into all the sciences'
      c. *in einem* Kloster *eingesperrt* 'locked up in a monastery'
      d. *auf diesem* Papier *geschrieben* 'written on this piece of paper'.

Conversely, a number of verbs which normally take DAT occasionally occur with ACC, although this is less common than vice versa, e.g., *ankommen in/auf* ('arrive at'), *einkehren in*, ('make a stop, call in') *eintreffen in* ('arrive at'), and *beruhen auf* ('to be based on') (Paul 1920: 17–19):

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[24] The correlation of DAT and the past participle has been regularly reported in 20th century German linguistics. Smith (1995: 307) also mentions the correlation in passing, referring to a similar observation made by Langacker (1991a), yet without a reference to Paul (1920). Duden (2006: 617) maintains that the case of the active clause is normally retained in the passive clause with *sein* ('be') ("Zustandspassiv"), unless "die Vorstellung der Lage" ('the idea of a location') is predominant, in which case DAT may be used, e.g.: *Alles ist im Klassenbuch eingetragen* ('Everything is written down in the class book'). This observation is not entirely accurate, however. Not only is the out-dated concept of "Lage" ill-founded and not generally applicable, unlike the semantic opposition advanced by Paul, but *eintragen in* ('write down in, sign') is a versatile prepositional verb. A corpus search in DeReKo shows that it regularly occurs with ACC and DAT both in the active voice and the passive voice (i.e., with the past participle).

(37)   daß ich … *auf die* Wartburg *ankam*
          'that I … arrived at the Wartburg'.

Interestingly, Paul (1920: 17) maintains that with *ankommen* a speaker is inclined to think of the endpoint of the action rather than its process ("bei *ankommen* denkt man nicht an den Verlauf, sondern an den Abschluß einer Bewegung"). This reminds us of the explanation we find among cognitive linguists today (compare the distinction between "focus on the path" vs. "endpoint focus" discussed in Section 4). However, whereas the image-schematic terminology is considered basic in the cognitive approach, accounting for a strong conceptual interpretation of the case alternation, Paul takes a more differentiated view of the subject. On the one hand, he leaves no doubt as to the original spatial meaning of the prepositions and cases at issue (Paul 1920: 5, 15 and 26, "die zugrunde liegende Raumanschauung" in the diachronic sense). He also stresses that this meaning can often be traced back in the secondary synchronic uses of the prepositions and cases as well, in particular when a more abstract relationship is designated metaphorically ("Übertragung", 1920: 5). On the other hand, it is clear that in the above sentences the focus on the course or the endpoint of an action is not basic to Paul, unlike the image-schemas in the cognitive approach. The case alternation with, e.g., *ankommen an*, is presented as a special case of the general relational meaning Paul attributes to the ACC and DAT following two-way prepositions, rather than vice versa.[25] Hence, although this might not be immediately apparent, Paul's approach is, in a sense, opposite to the cognitive approach in so far as the synchronic relation between the basic meanings of ACC and DAT and the secondary "special cases" is reversed.

It stands to reason that this difference in point of view bears directly on the nature of the analyses. This is particularly clear from the treatment of opaque prepositional verbs. In the wake of Smith's (1987; 1993; 1995) approach, Serra-Borneto (1997: 189–193) and De Knop (2008: 56–60) provide a number of examples of ACC and DAT mark-

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[25] Leys (1989: 98) also points out that Paul's semantic distinction between an already existing relationship and a relationship that is being established provides for a rule that is "nicht lokalistisch gedacht" in Paul's account of the ACC/DAT alternation after prepositions (see also Leys 1995: 44–45).

ing considered to be non-prototypical and therefore more difficult to explain from the point of view of the basic image schemas represented in Figure 1 (Section 3). The examples include: *hinter einem Baum hervorkommen* (DAT, 'come out from behind a tree'), *an einer Tür befestigen* (DAT, 'attach on a door'), *in der reißenden Strömung untergehen* (DAT, 'sink in the raging current'), *an die Tafel schreiben* (ACC, 'write on the blackboard'). Serra-Borneto primarily resorts to various entailments of the 'container' image schema (confinement, relative fixity of location etc.) in order to capture the conceptual motivations behind the not immediately transparent case markings. De Knop relies on extending the concept of 'motion' so as to include metonymy and metaphor (compare also Vandermeeren 2004: 182–189), comparable to Smith's account discussed in Section 4. However, from the point of view of a non-encyclopaedic distinction between a relationship being established (ACC) and a relationship conceived of as already established (DAT), many interpretations provided by the authors seem to be projections of pre-established conceptual imagery into the (admittedly particularly intricate) examples, but this approach finds little support in the data if one does not subscribe to the holistic, imagery-driven view adopted by the authors. Moreover, from a perspective informed by Paul's work, the opacity of the case marking in the aforementioned examples is conceived as a historical, and hence variable, linguistic reality, not as an area of general cognition to which timeless conceptual ('cognitive') notions such as the ones discussed can be applied. Thus, if *hinter einem Baum hervorkommen*, *an einer Tür befestigen*, *in der reißenden Strömung untergehen* etc. appear with an idiosyncratic DAT in the corpus data, then this means that the arguments brought into relationship with one another by the verbal predicates are not conceptualised consecutively but simultaneously, in accordance with Paul's basic conception of a relationship conceived of as already established. This means that the above mentioned Verb Prep constructions are conceptualised in such a way that the two entities referred to in the constructions – i.e., a person and a tree, a poster and a door, an object and a raging current – are part of a single object of discourse.

In this section, I examined some consequences of the finding that Paul favours a constructionist rather than a projectionist approach to the case alternation at issue in his *Deutsche Grammatik*. Although the construction-based approach, too, is clearly "semanticist" in kind, the

way Paul conceives of linguistic meaning differs considerably from the way it is thought of in the cognitive approach, without however being less articulate. It is worthwhile to highlight the two most conspicuous differences. Firstly, in a constructionist approach there is no need to interpret all instances of variable case marking in conceptual terms, with the bizarre consequences discussed above. Secondly, the semantic contribution of case morphemes to the overall constitution of meaning (in prepositional phrases as well as argument structures, an area that I have not addressed in this article[26]) is not only a bottom-up, lexically-driven process but also driven in a top-down way, controlled by the level of the (Verb Prep) construction. To conclude this study, I briefly discuss the implications of these two aspects in the final section.

6. *Conclusion:*
Constructional templates and normal language usage

From a constructionist point of view, the examples of constructions with idiosyncratic and versatile prepositional verbs provided by Paul have in common that the case marking is not fully licensed by the lexical and/or morphological items entering the constructions. Neither the preposition nor the verb, nor even the two combined, account for the occurrence of DAT or ACC. On the other hand, in Section 5 we saw that Paul queries the view that ACC and DAT have homogeneous "Grundbedeutungen" of their own. Only if considered in combination with locative prepositions can the meanings of these two cases be assigned homogeneous semantic functions which stand in opposition to one another. Paul even goes a step further by insisting on the important role played, e.g., by the past participle. Recall that it has been common in prescriptive grammars of German as a foreign language, since the 19th century, to emphasise that Tense and Voice have no effect on the case marking of prepositional verbs (cf., e.g., Dal 1966: § 45, Sylla 1999: 153, Ten Cate et al. 2004: 377). However, the reality is somewhat different given that the occurrence of the past par-

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[26] Compare, however, a more elaborate attempt at a synthesis of valency theory and current constructionist theorising in Willems and Coene (2006).

ticiple may be an important factor in the selection of either ACC or
DAT, as illustrated in (36) above. This observation supports a non-
projectionist approach to variable case marking after two-way prep-
ositions in present-day German locative constructions, because as a
case-triggering factor the past participle is not so much a lexical or
morphological factor associated with a single lexical item in the con-
struction but a factor on the level of the constructional template, with
the factor Voice ("Zustandspassiv") including the "adjectival" use of
the past participle (see Paul 1920: 11).

The general conclusion, then, is that a constructional template,
which is specified for case, may motivate the use of DAT or ACC
with specific locative prepositional verbs, even when the latter have a
"default" (or "normal") case. From a constructionist perspective, such
a conclusion is entirely reasonable: the constructional Verb Prep tem-
plate with ACC marking is in opposition, as a form-meaning pairing in
its own right in the competence of the speakers, to the template with
DAT, whereby the semantic difference between both templates re-
volves, if Paul is correct, around the contrast between two kinds of re-
lationships. The merit of this approach becomes particularly evident
when the constructions that are the most difficult to explain are taken
into account, viz. the constructions with opaque prepositional verbs,
both the idiosyncratic and versatile ones (see Figure 2 in Section 3).

Note that the Verb Prep constructions in (35) can all be said to in-
volve idiosyncratic prepositional verbs, the ACC being the normal
case (or default case in terms of relative frequency) and the DAT
being rather unusual. At the same time, Paul points out that with
respect to a number of prepositional verbs it is not easy to determine
whether the idiosyncratic case is ACC or DAT, e.g., *befestigen an/auf*
('attach to'), *begraben/vergraben in/unter* ('bury in/under'), *be-*, *ein-*,
verschließen in ('to lock up in'), *sich niederlassen auf/in* ('to settle
down on/in'), and *verstecken in/unter* ('to hide in/under') (Paul 1920:
10–11). With the proviso that some of these prepositional verbs today
are outdated (e.g., *beschließen in*), Paul's hesitation with regard to a
preferred case is still justified, as corpus investigations reveal. Hence,
these prepositional verbs qualify as versatile constructions according
to the classification presented in Section 3.

Consider again the versatile constructions in (22)–(26), repeated
below in abbreviated form:

(38)   a. ein Kind *in Ihrer/ihre* Familie *aufnehmen*
       b. eine Sendung/eine CD *auf der/die* Festplatte *aufnehmen*
       c. Sojabohnen/Rauschgift *in der* Schweiz/*in die* Bundesrepublik
           einführen
       d. Parteien *gehen in den* anderen Parteien/*in die* FPÖ *auf*
       e. sich *im/ins* Gästebuch *eintragen.*

A projectionist analysis along the lines of the traditional dichotomy *status/motus* (cf., e.g., Duden 2006: 617) is obviously not viable. Given that the case alternation not only occurs in combination with a past participle but with all tenses and in both voices, there is no denying the relevance of the *motus*-feature in both variants, which leaves the (partly well-established) DAT with these prepositional verbs unaccounted for. The conceptual dichotomy between "change" (ACC) and "no change" (DAT), as suggested by Smith (1995), can be ruled out for the same reason. A cognitive interpretation along the lines of "focus on the path" (ACC) vs. "endpoint focus" (DAT), which is also suggested by Smith (1995), might seem more appropriate at first glance. However, the claim that, e.g., in (38b) a difference in focus on the 'path' or the 'endpoint of the recording process' goes hand in hand with the ACC/DAT alternation would be unfounded. Firstly, for the reasons discussed in Section 4, in such an interpretation the case alternation is eventually linked up, in a projectionist fashion, with semantic aspects of an associative nature which go far beyond what is linguistically encoded in the constructions themselves. Secondly, even under a liberal interpretation of the 'path'/'endpoint' contrast, there is no evidence that the ACC in the (38) examples makes 'endpoint' interpretations improbable, nor that the DAT precludes 'process' interpretations.[27]

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[27] An explanation similar to Smith's, which is fairly common in learner's grammars of German, is provided in Duden (2007: 115). There it is argued that the case alternation with, e.g., *aufnehmen in/unter/auf* may reflect different degrees of conceptual integration, with the ACC indicating a stronger relationship between the trajector and the landmark than the DAT ("weniger enge Bindung"). However, a close examination of a random sample of 200 occurrences of *aufnehmen in* [article]$_{ACC/DAT}$ *Familie* ('adopt in(to) a/the family') in the Mannheim corpus DeReKo does not reveal any correlation between the selected case and a difference in conceptual integration.

The constructionist approach in the spirit of Hermann Paul presented in this article avoids these pitfalls. The ACC-template and DAT-template are both available as form-meaning pairings in the grammar of German, with discrete oppositional meanings contrasting a relationship being established (ACC) with a relationship conceived of as already established (DAT). Crucially, both these templates appear to be compatible with a whole range of prepositional verbs. Such a combination may give rise, in effect, to subtle differences in profiling, all the more so that certain "sense effects" may be reinforced by additional constructional features, e.g., the use of the past participle. Thus, the DAT in (39) below may be said to typically express an established relationship between a company and the register of companies ("das Verhältnis [wird] als schon bestehend gedacht"), given that there is no particular reason to focus on the process of the registration by using the ACC ("das Verhältnis zu einem Gegenstande [wird] erst hergestellt"):

(39)   Faktisch nehme der Eigenbetrieb Westerwaldkreis Abfallwirts-
        chaftsbetrieb (WAB) die Geschäftsführung wahr, rechtlich *ein-
        getragen im* Handelsregister sei jedoch niemand. (DeReKo)
        'It is claimed that the WAB looks after the management, but
        that no one is legally registered in the register of companies.'

Obviously, the more the case marking tends to be idiosyncratic in the sense discussed above, the less likely it will be that the case alternation is fully functional – which additionally limits the possibility of *post hoc* interpretations along the lines discussed in Section 4.

Returning in conclusion to the simplified templates (9) and (10) introduced in Section 2, we see that these templates can be further specified, in the manner suggested by Paul, with respect to particular subclasses of prepositional verbs. For example, in order to capture the role of the past participle, the templates may be rendered as follows:

(40)   [Subclass Verb Prep + ACC],
(41)   [Subclass Verb PAST PARTICIPLE Prep + DAT].

Other specifications may be added. It has long been observed in grammars of German, for instance, that certain composite verbs favour DAT while their non-composite basic forms normally take the ACC (cf., Schmitz 1974: 51 and Sylla 1999: 154), e.g.:

(42)   *hängen an* + ACC ('hang on', e.g. a picture on the wall) > *auf-hängen an* + DAT

(43)   *bauen auf* + ACC ('build on') > *aufbauen auf* + DAT

(44)   *sich klammern an* + ACC ('to cling to') > *sich festklammern an* + DAT

(45)   *binden an* + ACC ('tie to') > *festbinden an* + DAT

(46)   *sich setzen auf* + ACC ('sit down on') > *sich niedersetzen auf* + DAT

(47)   *fahren vor* + ACC ('drive up') > *vorfahren vor* + DAT.

If such a correlation would indeed prove to be significant – a claim that remains speculative as long as it has not been verified through reliable corpus-linguistic research – the following specification of the templates would be in order for certain prepositional verbs:

(48)   [^{Subclass}Verb$_{SIMPLE}$ Prep + ACC],
(49)   [^{Subclass}Verb$_{COMPLEX}$ Prep + DAT].

Other factors that might influence the case alternation from a constructionist point of view include the type meaning of the prepositional verb (cf. Vendler's distinction between verbs designating states, activities, achievements, and accomplishments, Vendler 1967), the proper and figurative use of the prepositional verb, the abstract or concrete nature of the relational objects, and the preposition itself as a lexical item.

Much research is still needed to determine the role the above mentioned factors play with respect to the variable case marking in German Verb Prep constructions. It has to be stressed, however, that the format of the templates we have been discussing captures tendencies based on normal language usage (see Section 3), not strict rules of grammar. For instance, the past participle is by no means a sufficient condition for DAT across the entire class of locative prepositional verbs. Similarly, if we take another look at the list of examples of preferential ACC or DAT provided in Section 3, we see that combining a simplex verb with *fest-* (which more or less means 'firmly') to form a composite verb does not automatically entail that a change from ACC to DAT applies to the entire subclass, as witnessed by the very frequent use of ACC with *festnageln auf* ('nail on') and *festschmieden an* ('to forge, bind in') and the frequent use of ACC with *festbinden an/unter* ('tie to/under') in our corpus. With verbs beginning in *auf-* ('on'), the picture is even less clear (cf. the Appendix for an overview

of 60 German verbs beginning in *auf*- with respect to their preferential case on the basis of a random dictionary and corpus sampling).[28] It is therefore reasonable to assume that several factors simultaneously play a role in the observed alternation, as is often the case with conventions governing normal language usage.

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[28] In addition to the DeReKo corpus, the dictionaries used for this sampling were Klappenbach and Steinitz, Wörterbuch der deutschen Gegenwartssprache (1978) and Duden, Das große Wörterbuch der deutschen Sprache (1999).

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Appendix

Locative prepositional verbs in German with the verb beginning in *auf-* and their preferential case on the basis of a random dictionary and corpus sampling

Preference for ACC

aufbinden auf (etwas auf den Rucksack), aufbumsen auf (der Ball auf das Pflaster), aufdrucken auf (Muster auf den Stoff), auffahren auf (auf ein parkendes Auto), aufheften auf (eine Papierrose auf ein Kostüm), aufhocken auf (auf den Barren), aufklatschen auf (auf das Wasser), aufkleben auf (auf die Sammelkarten), aufkleistern auf (auf den Körper), aufknallen auf (auf den Gussbeton), aufmalen auf (auf die Fahrbahn), aufmontieren auf (auf den Pkw), aufnähen auf (auf den Stoff), aufpacken auf (auf den Lkw), aufpropfen auf (ein Reis auf einen Stamm), aufprägen auf (auf die Löffel ein Monogramm), aufrücken in (in diesen Kreis), aufschrauben auf (auf ein Brett), aufschütten auf (Wasser auf die Teeblätter), sich aufschwingen in (in die Luft), aufspalten in (in mehrere Gruppen), aufsplittern in (in kleinere Einheiten), aufstecken auf (Kerzen auf den Leuchter), aufsteigen auf/in (auf das Fahrrad, in die zweite Klasse), aufstempeln auf (auf ein Blatt ein Siegel), aufsteppen auf (Verzierungen auf die Bluse), aufsticken auf (auf den Stoff), aufstreichen auf (auf das Gewebe), aufstreuen auf (Pulver auf den Teppichboden), auftreffen auf (auf die Oberfläche), aufwickeln auf (einen Bindfaden auf eine Spule), aufwinden auf (ein Kabel auf eine Rolle), aufzeichnen auf (auf eine Festplatte), aufziehen auf (Saiten auf ein Instrument)

Preference for DAT

aufbauen auf (auf alten Plänen), aufhängen an (ein Bild an einem Nagel), sich aufknüpfen an (an einem Pfahl), aufruhen auf (auf den Fundamenten), aufstapeln auf (auf der Fläche), aufstellen in/auf (eine Falle im Keller, Tische auf der Terrasse), aufsitzen auf (auf den Fahrzeugen), aufstehen auf (Körbe auf der Erde)

ACC and DAT (no clear preference)

aufhauen auf (sie ist mit dem Kopf auf die/den Fliesen), aufknien auf (Turnen: auf dem Kasten; sich aufknien: auf die Bank), aufkommen auf (Sport: sie kam auf das/auf dem Netz auf), auflaufen auf (auf eine/einer Sandbank), auflehnen auf (die Arme auf das/auf dem Fenstersims), aufleimen auf (etwas auf die/der Unterlage), aufnehmen in (in ein/einem Krankenhaus), aufprallen auf (auf das/dem Wasser), aufreihen auf/in (Perlen auf eine Schnur, Bücher im Regal), aufschlagen auf/an (mit dem Kopf auf der/die Straße), aufschreiben auf (auf einen/einem Zettel), aufsetzen auf (den Tonarm auf die Schallplatte, das Flugzeug auf der Piste), aufstoßen auf (auf die/der Schulter), aufstützen auf (auf den/dem Tisch), auftragen auf (das Make-up auf das/dem Gesicht)

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