

# Austro-Bavarian Directionals: towards a bigger picture\*

pre-final version

to appear in: Bavarian Syntax, ed. G. Grewendorf and H. Weiß, Benjamins

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## Abstract

This paper discusses Austro-Bavarian directionals, which adhere to the following pattern: preposition plus suffix *-a* or *-i*, as for example in *auffa* (upwards-a) and *auffi* (upwards-i). These directionals indicate that movement occurs either towards the speaker's location (*-a*) or towards a location crucially distinct from the speakers location (*-i*). I propose that this alternation is an overt manifestation of Hale's (1986) semantic universal of central versus non-central coincidence. I analyze them as fully fledged PathPs whose internal syntax is based on Ritter and Wiltschko's (2009) implementation of the coincidence theme. These directionals show that dialectal data can confirm both semantic and syntactic universals that have been argued for on the basis of entirely unrelated domains and languages.

## 1 Introduction

Bavarian directionals exhibit an interesting dichotomy concerning the direction of the movement they refer to: either towards the speaker's location or towards a location crucially distinct from the speaker's location. This paper presents an in-depth study of the syntax and semantics of these directionals based on the Austro-Bavarian dialect of Gmunden. One such example is given in (1).<sup>1</sup>

- (1) a. Da Bua rennt **auffa**.  
the boy runs upwards-a  
'The boy runs up here (where the speaker is).'
- b. Da Bua rennt **auffi**.  
the boy runs upwards-i  
'The boy runs up there (where the speaker is not).'

These two sentences are a minimal pair whose only difference lies in the final vowel of the directional elements *auffa* and *auffi*. The interpretation of the two examples, however, differs fundamentally: whereas *auffa* indicates upwards movement towards the location of the speaker, *auffi* describes movement towards a location distinct from the speaker's location. Importantly, although the latter can be used in contexts in which movement occurs away from the speaker, this information is not part of the meaning of the directional. Whether

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\*I thank Alexis Dimitriadis and an anonymous reviewer for comments on this paper. All errors are mine.

<sup>1</sup>The data are based on written and oral elicitation as well as on personal observation. To the best of my knowledge, they mostly also extend to other Bavarian varieties; this, however, is still subject to further research.

movement occurs away from the speaker or not is contributed by the context. The directional with the suffix *-i* only indicates that movement occurs to a location other than the speaker's location.

I analyze these directionals as morphosyntactically complex, consisting of a prepositional element (*auf*) and the morphological markers *-a* and *-i*.<sup>2</sup> The evidence for this analysis is that these morphological markers appear systematically throughout the whole system of directionals and that this system is entirely based on independently occurring prepositions as shown in Table 1.<sup>3</sup>

⇒ speaker's location	⇏ speaker's location	prepositional occurrence
zuawa	zuawi	<b>zu</b> -m Haus
towards	towards	to-the.DAT house
âwa	âwi	<b>âb</b> -m Haus
downwards	downwards	from-the.DAT house
auffa	auffi	<b>aufn</b> Berg
upwards	upwards	up-the.ACC mountain
aussa	aussi	<b>ausm</b> Haus
out of	out of	out-of-the.DAT house
eina	eini	<b>ins</b> Haus
into	into	into-the.ACC the house
umma	ummi	<b>ums</b> Haus
around	around	around-the.ACC house
fira	firi	<b>vorm</b> Haus
to the front	to the front	in-front-of-the.DAT house
nocha	nochi	<b>nochm</b> Haus
behind	behind	behind-the.DAT house
durcha	durchi	<b>durchs</b> Haus
through	through	through-the.ACC house
dauni	dauna	— <sup>4</sup>
away	away	dauna vum Haus

Table 1: Austro-Bavarian directionals

The theoretical goal of this paper is to show that these morphological markers are overt manifestations of Hale's (1986) universal semantic theme of central versus non-central coincidence. Morphosyntactically, these markers are analyzed as relational heads which are widely used in the analysis of temporal relations (cf., e.g. Demirdache and Uribe-Etxebarria, 2000; Stowell, 2007); specifically, the analysis is based on Ritter and

<sup>2</sup>I notate the final vowel as 'i' according to the Austro-Bavarian variant of Gmunden. However, in other Bavarian varieties it may surface as an *-e* or a schwa.

<sup>3</sup>As pointed out by an anonymous reviewer, not all directionals appear to be unambiguously based on prepositions. Prima facie, there are 4 out of 10 cases in table (1) in which the preposition and the directional do not involve a simple mapping from one to the other: *zuawa* vs. *zu*, *âwa* vs. *ab*, *eina* vs. *in*, *fira* vs. *vor*. As for the first two, they are mere phonological alternations conditioned by the suffixes that induce the insertion of a glide; note that both prepositions, if used without an enclitic determiner, surface as *zua* and *â*, respectively. *eina* and *fira*, although not entirely transparently derived from the respective prepositions, are both diachronically related to them (cf. Grimm and Grimm, 1854).

<sup>4</sup>Synchronically, there is no independent preposition corresponding to *daun*. I hypothesize that it is diachronically derived from *dannen* (away) which is no longer in use in Bavarian.

Wiltschko's (2009) implementation of a relational head based on the coincidence theme. In the Austro-Bavarian directionals, this head is argued to establish whether the movement encoded by the preposition is towards the speaker's location or not. These microvariational data thus support both semantic and syntactic universals that have independently been argued for elsewhere. In what follows, both issues will be addressed in turn: first, the interpretation of the directionals will be discussed during the introduction of the core data. Then I will propose a syntactic analysis for both the internal and external syntax of these elements.

### 1.1 What this paper is not about

The Austro-Bavarian directionals are in many respects reminiscent of the German *hin-/her-* alternation, which has – unlike the Bavarian directionals – already received a fair amount of attention in the literature (e.g. van Riemsdijk, 1990; Zeller, 2001; van Riemsdijk and Huybregts, 2002; Noonan, 2005). The most obvious connection between the two lies in the fact that the Standard German equivalent of many of the directionals given in Table 1 involve *hin-/her-*. This is exemplified in (2) by the Standard German equivalent of the sentences in (1).<sup>5</sup>

- (2) a. Der Bub rennt **hinauf**.  
           the boy runs upwards  
           'The boy runs up here.'  
       b. Der Bub rennt **herauf**.  
           the boy runs upwards  
           'The boy runs up there.'

But there are at least two reasons that warrant independent consideration of the Bavarian data: the interpretation of the Standard German morphemes *hin* and *her* and their morphological status.

As for the first, the general consensus in the literature appears to be that *her-* indicates movement towards the speaker, and *hin-* indicates movement away from the speaker or some reference point. This is indeed reminiscent of the interpretation of the Austro-Bavarian suffixes *-i* and *-a*; if they were parallel, then *hin* would be the equivalent of *-i* ( $\neq$  speaker's location) and *her* would be the equivalent of *-a* (= speaker's location). However, some preliminary data collection suggests that the distinction in Standard German is not quite as clear-cut as it is in Austro-Bavarian. This is supported by McIntyre (2001, 249) who claims that they do "not [...] specify whether [someone] moved closer to or further away from the speaker." He discusses a range of corpus data that show the reverse use of these elements, i.e. where *her* is used instead of *hin* in cases of movement away from the speaker. Additionally, he also brings up the following argument: the lack of combinations like *herdurch* (her-through), *herzu* (her-to), or *hinum* (hin-around). This is unexpected if the distinction between *hin* and *her* were indeed based on the dichotomy away from/towards the speaker, since the relevant counterparts exist in all three cases: *hindurch* (hin-through), *hinzu* (hin-to), *herum* (her-around). This is particularly interesting with respect to the Austro-Bavarian data discussed here, since all these elements exist in the dialect each conveying exactly the compositional meaning that one would expect: *durcha* (through-a) indicates movement through a place towards speaker's location, *zuawa* (to-a) indicates

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<sup>5</sup>Note at this point that instead of *hinauf* or *herauf* Standard German could also use the complex form *nach oben* (to on-top). However, this form does not include any information about the speaker's location and, more importantly, these forms do not appear in the dialect under discussion but are entirely replaced by the directionals.

movement towards speaker's location, and *umi* (around-i) indicates movement around a location towards a place other than speaker's location.

As for the second difference, the morphological status of *hin*, *her* is crucially different from *a-*, *i-*: whereas the Standard German morphemes can occur independently or as particles on verbs, e.g. *herlaufen* (run towards), the Austro-Bavarian *a-/i-* only occur on directional adpositions but never independently or attached to a verb, e.g. \**alaufen* (*intended*: run towards).

From these observations I conclude that the Austro-Bavarian data merit attention independently of Standard German. This constitutes the main empirical goal of the current paper whereas the comparative perspective, although certainly interesting, will be left for further research.

## 2 The Core Data

All directionals summarized in Table 1 encode specific types of movement (into, upwards, downwards, ...) by means of a prepositional element. Their suffixes encode whether this movement occurs in the direction of the speaker's location or in a direction distinct from the speaker's location. This has already been illustrated in (1) where the directional is the only element providing information about the movement. But since the suffixes themselves do not convey any specific information on the exact location of the speaker, they can also appear with overt locations as shown in (3).

- (3) a. Da Bua kummt **zum Haus zuawa**.  
           the boy comes to-the house towards-a  
           'The boy comes to the house (= speaker's location).'  
       b. Da Bua geht **zum Haus zuawi**.  
           the boy goes to-the house towards-i  
           'The boy goes to the house ( $\neq$  speaker's location).'

Both sentences now also contain some information on where the speaker is located: In (3a) the speaker is located in or near the house, whereas (3b) tells us that the speaker is in a location crucially distinct from the house's position. We can therefore test the claim that the crucial piece of information contributed by the suffixes *-a* and *-i*, respectively, concerns the direction of the movement with respect to the speaker's location. First of all, we expect that only one of the two morphemes is compatible with the speaker as the explicit goal, namely the suffix *-a* which encodes movement towards the speaker. The second suffix, *-i*, should be incompatible with the speaker as a goal since it is argued to indicate that the movement takes place to a location crucially distinct from the speaker's location. This prediction is borne out as illustrated by the examples in (4):

- (4) a. Spring **owa zu mia!**  
           jump downwards-a to me  
           'Jump down to me!' (= speaker's location)  
       b. \* Spring **owi zu mia!**  
           jump downwards-i to me

In these examples the goal of the movement is overtly defined as the speaker by the prepositional phrase *to me*. As expected, this is only grammatical with the directional *owa*. Conversely, we expect a first person agent of a verb that indicates movement of said agent to

be incompatible with *-a* (movement towards the speaker) since the speaker cannot move towards herself. Additionally, these contexts should only allow an overt location that is explicitly distinct from the speaker's location. This is evidenced by the examples in (5):

- (5) a. \*I spring jetzt **owa**                **zu dia**.  
           I jump    now downwards-a to you  
       b. I spring jetzt **owi**                **zu dia**.  
           I jump    now downwards-i to you  
           'I'll jump down to you now.' (≠utterance location)

Now the speaker is the undergoer of the movement and thus only compatible with *owi*, indicating movement towards a location distinct from the speaker's location. Additionally, this goal is overtly expressed by a prepositional phrase designating the addressee as the goal of the movement.

So far, the examples illustrated the interaction of the directionals with PPs that further specify the target of the movement. Next, we'll take a look at their interaction with overt sources. The suffixes themselves provide no information about the source of the movement. Consequently, we only expect incompatibilities if an overt source refers to the speaker's location. In such a case only *-i* is expected to be felicitous since it locates the goal of the movement somewhere other than the speaker's location; thereby it is also distinct from the source, a trivial but necessary precondition for movement. This is illustrated in (6) and (7):

- (6) a. D'Johanna rennt **vu mia** (weg) **auffi**.  
           the-Johanna runs from me away up-i  
           'Starting from where I am, Johanna runs upwards.'  
       b. D'Johanna rennt **vum Bâch** (weg) **auffi**.  
           the-Johanna runs from-the creek away up-i  
           'Starting from the creek, Johanna runs upwards.'
- (7) a. \*D'Johanna rennt **vu mia** (weg) **auffa**.  
           the-Johanna runs from me away up-a  
           'Starting from where I am, Johanna runs upwards.'  
       b. D'Johanna rennt **vum Bâch** (weg) **auffa**.  
           the-Johanna runs from-the creek away up-a  
           'Starting from the creek, Johanna runs upwards.'

In light of these examples it should be noted again that the suffix *-i* does not necessarily imply that the movement occurs away from the speaker; it merely encodes that the movement is towards a location distinct from the speaker's, but just like the suffix *-a* it contains no information about its source. Since the speaker's location is not the target of the movement, it is naturally available as a possible source, as illustrated in (6a); but with a different overt source, as in (6b), we have no information about where the speaker is situated.

To sum up, the directional suffixes *-a* and *-i* encode the information given in (8):

- (8) a. **-a**: movement  $\Rightarrow$  speaker's location  
       b. **-i**: movement  $\nRightarrow$  speaker's location

In the next section, I argue that this opposition is an overt manifestation of a semantic language universal proposed by Hale (1986).

### 3 Central versus non-central coincidence: Hale (1986)

Hale (1986) argues that universally languages are endowed with the concept of “central” versus “non-central” coincidence. The basic idea is illustrated by the examples in (9).

- (9) a. The horses are standing in the shade.  
b. He (just) cleared out from this place ...

[Hale, 1986, 239f.]

In (9a) an individual spatially coincides with a place, i.e. the horse centrally coincides with the shade. In (9b), on the other hand, the relation between *he* and the place is non-central in that the two do not occupy the same space (any longer). According to Hale, coincidence is “an abstract and general semantic category”, which “comprises the fundamental theory of relations” (op.cit.:242). He refers to it as a grammatically underlying “theme” or “motif” (op.cit.:234) and suggests that it can be detected in areas as diverse as complementizers, case morphology, or tense-aspect morphology. Hale primarily focusses on Warlpiri (Australian), which he argues to manifest the coincidence-theme overtly in its morphology. This is illustrated in the examples in (10), one with an infinitival complementizer representing coincidence (10a) and one with an infinitival complementizer representing non-coincidence (10b).<sup>6</sup>

- (10) a. Wawirri karna nyanyi parnka-**kurra**.  
kangaroo PRES see run-COMP  
‘I see a kangaroo running.’  
b. Karrku kalu rdakangku manyamani ngapangku yarlinrinja-**rla**.  
ochre PRES hand soft water wet-COMP  
‘They soften the ochre with their hands, having wet it with water.’

[Hale, 1986, 246f.; glosses adapted by BG]

Example (10a) illustrates the suffixal complementizer *-kurra*, which encodes coincidence. Hence, it indicates that the eventuality of the matrix clause (seeing a kangaroo) and the infinitival clause (running of the kangaroo) coincide, i.e. happen at the same time. Example (10b) shows a complementizer encoding non-coincidence. Consequently, the eventuality of the matrix clause (softening of the ochre) does not happen at the same time as the eventuality of the infinitival clause (wetting with water).

Hale argues that whereas this theme is visible in overt morphology in some languages, it is hidden in others: Warlpiri morphemes within one domain, e.g. complementizers as illustrated above, come in two different guises; one corresponds to central coincidence and the other to non-central coincidence. In other languages, however, the theme remains morphologically unexpressed and is only underlyingly present. To this effect, Hale says:

[...] Warlpiri differs from English, say, not by virtue of the presence of the theme but rather by virtue of its constancy in distinct areas of grammar and the relative purity with which it is represented. [Hale, 1986, 238]

From this perspective, (Austro-)Bavarian is much more like Warlpiri than English: the directional suffixes overtly encode a clear dichotomy centred around one common denominator, namely the speaker’s location. I therefore propose that these suffixes are an overt

<sup>6</sup>For ease of exposition, glosses are simplified and only the relevant morpheme breakdowns are indicated. Also, Warlpiri has more than just the two complementizers exemplified in the sentences in (10); Hale (1986) argues that all of them can be divided into the two basic classes of central vs. non-central coincidence.

instantiation of central versus non-central coincidence. The definitions given in (8) can then be refined as in (11).

- (11) a. **-a**: movement  $\Rightarrow$  speaker's location  
*central coincidence* of target and speaker's location  
b. **-i**: movement  $\nRightarrow$  speaker's location  
*non-central coincidence* of target and speaker's location

In conclusion, Bavarian data support the existence of the semantic language universal of central versus non-central coincidence that has been argued for independently on the basis of Warlpiri, an entirely unrelated and geographically distant language, and that can otherwise not be directly detected in the morphosyntax of Standard German.<sup>7</sup>

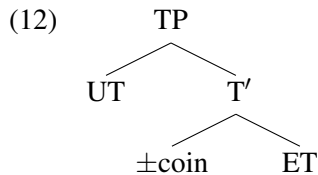
In the next section, I will now turn to the internal syntax of the directionals: I propose to model them parallel to an already established syntactic implementation of the coincidence theme in the domain of temporal interpretations.

#### 4 The internal syntax of Austro-Bavarian directionals

In the previous section, I established that the alternation between *-a* and *-i* in the Austro-Bavarian directionals is an overt manifestation of the binary relation of central versus non-central coincidence, henceforth  $\pm$ coin. Regarding their internal syntax, I build on analyses that integrate  $\pm$ coin into the clausal spine, specifically on Ritter and Wiltschko (2009) who provide the most explicit proposal along these lines.

##### 4.1 The relational head $\pm$ coin elsewhere

Building on ideas developed in Enç (1987); Demirdache and Uribe-Etxebarria (2000, 2007), Ritter and Wiltschko (2009) analyze the inflectional head in the clausal spine as a relational head which establishes a coincidence relation between its two arguments; these arguments refer to the utterance (Spec-INFL) and the eventuality (VP), respectively. They argue, following the previously cited literature, that these arguments in English refer to times: utterance time (UT) and eventuality time (ET), respectively. The relevant syntactic configuration is depicted in (12).



Whether the relation between these two is +coin or -coin is determined by the specific morphological content of the head. Take, for instance, the examples in (13) and (14).

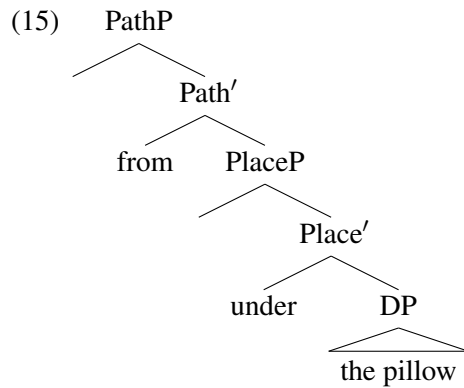
- (13) Sophia is babbling in bed.  
(14) Sophia babbled all day long.

<sup>7</sup>For reasons already detailed in section 1.1, I do not assume that the Standard German *hin/her*-alternation can be analyzed along the same lines.

Setting aside the contribution of aspect, the present tense in (13) triggers a +coin relation between UT and ET, i.e. the utterance and the eventuality of Sophia babbling occur at the same time. The past tense *babbled* in (14), on the other hand, triggers a -coin relation between the utterance and the eventuality, which leads to a past tense interpretation.<sup>8</sup> Thus, it is the morphological content appearing in the inflectional head that determines how its two arguments are related to each other.

#### 4.2 Application to Austro-Bavarian directionals

Building on Ritter and Wiltschko (2009), I propose to analyze Austro-Bavarian directionals as containing a relational head whose function is to establish a relation between its two arguments. This head essentially denotes a location that is defined with respect to the speaker's location and embedded under a preposition. Specifically, since the whole directional denotes a path (towards, upwards, forwards, . . .), I propose that we are dealing with a standard prepositional structure of a PlaceP embedded under a PathP (cf. Jackendoff, 1983; Koopman, 1993; van Riemsdijk and Huybregts, 2002; den Dikken, 2003; Gehrke, 2008) as illustrated in (15).



In what follows, I will discuss this structure bottom-up for the Austro-Bavarian directionals, starting with the PlaceP and its content. I propose that the head of PlaceP is another instantiation of Hale's (1986) coincidence theme, and that it establishes a spatial relation between a figure and a ground.<sup>9</sup> Talmy (1975b) describes these two notions as follows:

The FIGURE object is a moving or conceptually movable point whose path or site is conceived as a variable, the particular value of which is the salient issue. The GROUND object is a reference-point, having a stationary setting within a reference frame, with respect to which the FIGURE's path or site receives characterization. [Talmy, 1975a, 419]

The figure is thus defined as the entity whose location needs to be established with respect to another entity. Essentially, this is what PlacePs are generally taken to be: "Place elements give information about the physical configuration of the relationship between a figure (an object whose location is at issue) and a ground (the reference landmark for the location of the figure)." (Svenonius, 2010, 127) A textbook example of such an element is *in*, as illustrated in (16):

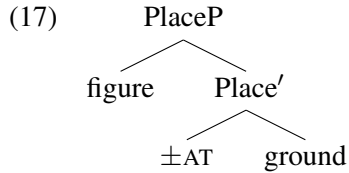
<sup>8</sup>Ritter and Wiltschko (2009) analyze the Future as a modal. It is therefore not based on the the dichotomy of  $\pm$ coin.

<sup>9</sup>Of course, this raises the question whether the head of any PlaceP is always underlyingly associated with the theme of coincidence. While I consider this an interesting question that merits further discussion, I limit the current discussion to the Austro-Bavarian directionals and leave the more general issue for further research.



- (16) The elephants remained in the boat. [Svenonius, 2010, 127]

“The elephants” are the figure whose location is evaluated with respect to “the boat”, which is the ground. Whereas in this case the relation is established by the whole sentence, I propose that in Austro-Bavarian directionals the relation is established locally within the PlaceP by a mediating relational head, expressing coincidence, which I will gloss as  $\pm AT$ . This leads to the configuration given in (17):



As a next step, we now need to identify the actual content of this structure. Reconsider the directionals given in (1), repeated here for convenience.

- (1) a. Da Bua rennt **auffa**.  
           the boy runs upwards-a  
           ‘The boy runs up here (where the speaker is).’  
       b. Da Bua rennt **auffi**.  
           the boy runs upwards-i  
           ‘The boy runs up there (where the speaker is not).’

In both cases we are dealing with a path upwards towards a location which is only defined with respect to the speaker’s location. We can thus equate the ground with the speaker’s location: it is the constant in relation to which the target of the path is defined. Recall from section 2 that the directionals themselves do not contain any information about the actual location, i.e. they do not convey whether the speaker is on a mountain, to the left, or in the house. All we know is that we are dealing with another location. In other words, the figure is also a location. In the internal structure, this is implemented as the silent nominal PLACE in the sense of Katz and Postal (1964); Kayne (2005). Originally, Katz and Postal (1964) proposed a silent PLACE as part of the underlying structure of *here* and *there*. They structurally decomposed the first into *at this place*, and the second into *at that place*. The idea was then further developed by Kayne (2005) who observed that English *here*, *there* resemble a dialectal counterpart, namely *this here place* and *that there place*. He then attributes the locative interpretation of the Standard *here*, *there* to the presence of a silent PLACE in their internal structure. Assuming that this silent noun is generally available, I propose that it is also part of the Austro-Bavarian directionals and that it denotes a location that is ultimately interpreted with respect to the speaker’s location.

As a final step, I propose that the suffixes *-a* and *-i* are the spell-out of the spatial relational head  $\pm AT$ . They encode the dichotomy of central versus non-central coincidence and establish the necessary relation between the target of the movement (PLACE) and the speaker’s location.

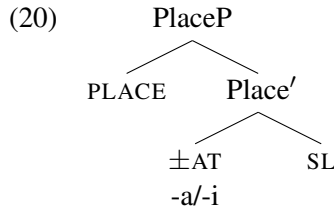
Support for analyzing the suffixes *-a* and *-i* as the head of the structure comes from the following two facts: First, if they were to spell out of the speaker’s location, we would not expect morphological variation depending on whether the goal of the movement is identical to or distinct from it. It is the goal of the movement that differs in those cases, not the location of the speaker itself. Second, if they were to spell out PLACE, i.e. the specifier, we would expect them to behave like an XP and occur independently of the directionals. For instance, given the previously discussed view of Katz and Postal (1964); Kayne (2005) we

might expect them to appear in spatial adverbs. Or we might expect them to occur entirely independent of any other element, just like *place* itself occurs as an independent lexeme, e.g. as a complement of a locative preposition. Neither is, however, the case. Both *-a* and *-i* only occur in the previously discussed environments, i.e. as suffixes to adpositions that can denote movement. We do not find them on adverbs, (18), or independently as the locative complement of a purely locative preposition such as *bei* (at), (19).

- |  |  |
|--|--|
| (18) a. I bin do-*(a)<br>I am here               | b. Du bist dortn-*(i)<br>You are there           |
| (19) a. * I bin bei a.<br>intended: I am at 'a'. | b. * Du bist bei i.<br>intended: You are at 'i'. |

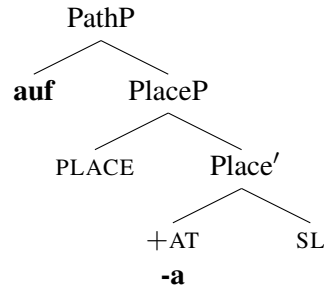
Put differently, they never appear as a simple location, hence are unlikely to be the spell-out of PLACE.<sup>10</sup>

To summarize, so far I have proposed a complex syntactic structure for the suffixes *-a*, *-i* with the configuration in (20), where SL stands for speaker's location. As a result, the structure denotes a location (PLACE) with respect to the speaker's location (SL), both of which are phonologically empty.



As shown in Table 1, all directionals consist of an independently occurring preposition and the suffixes *-a*, *-i*. In all cases, the complex directional denotes movement towards a location where the preposition conveys the specific type movement (up, down, in, ...). This essentially corresponds to the definition of Paths: "Path elements give information about a trajectory."<sup>11</sup> (Svenonius, 2010, 127) I therefore propose that the preposition is syntactically located in the head of a PathP that selects a PlaceP. The complex structure of a directional then looks as exemplified on the basis of *auffa/auffi* (upwards) in (21).

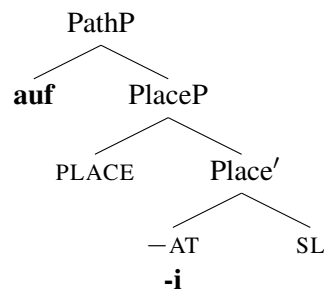
- (21) a. *auffa*: upwards movement targets speaker's location:



<sup>10</sup>This still leaves open the question why the whole PlaceP can not appear independently of a PathP but only as its complement. I hypothesize that this might be due to a phonological requirement that forces cliticization of the morpheme onto a preceding host: assuming a general adpositional structure as given in (15) only leaves PathPs as potential hosts.

<sup>11</sup>The quote continues: "Path elements may specify whether a Place is a goal [...] or a source [...] and may specify the orientation of a trajectory [...]." This leaves open the question why in directionals we are always dealing with goals but never with sources. I do not have an answer to this question at this point.

- b. *auffi*: upwards movement targets other location:



Now we get the desired readings: in one case, a path leads towards a place that is located at the speaker's location (central coincidence), and in the other case a path leads towards a place that is *not* located at speaker's location (non-central coincidence).<sup>12</sup> Having discussed the internal syntax of the directionals, I now move on to their status in the external syntax.

## 5 The external syntax of Austro-Bavarian directionals

In the previous sections, I have shown that Austro-Bavarian directionals provide two pieces of information about movement: the type of movement (upwards, forwards, ...) and the target of the movement in relation to the speaker's location ( $\pm$ AT). In this section I turn to the external syntax of the directionals. The goal of this section is to provide further evidence for their status as syntactic constituents by discussing the following three constructions: a directional as the only complement of the verb (22a), a directional together with another PP (22b), and a directional together with a DP (22c).

- (22) a. De Mama geht auffi.  
           the mum goes upwards-i  
           'Mum is going up.'
- b. De Mama geht aufn Berg auffi.  
           the mum goes on-the mountain upwards-i  
           'Mum is going up on the mountain.'
- c. De Mama geht en Berg auffi.  
           the mum goes the.ACC mountain upwards-i  
           'Mum is going up the mountain.'

### 5.1 Demonstrating constituency

As a first step, it needs to be shown that the directionals are constituents in their own right. A first indicator is the fact that the directionals can appear as the only complement of a verb

<sup>12</sup>An anonymous reviewer raises the question why the directionals are analyzed as prepositions and not adverbs of location. The reviewer points out that they are only partly homophonous to prepositions and that the directional markers never appear on prepositions taking nominal complements. While the first issue has already been addressed in footnote 3 and does not pose an immediate problem, the latter is even expected under the proposed approach: the PlaceP hosting the marker already contains a nominal complement, namely the silent speaker location. Since, as we have seen throughout, this constitutes a crucial part of the meaning of the directionals we do not expect it to appear overtly, let alone be replaced by an NP with a different meaning. Given their interpretation and their morphological make-up, I therefore maintain the analysis as PPs, while conceding that most of the analysis could probably also be accommodated in an approach that treats them as adverbs.

like *go*, as in (22a). However, since in many cases the directionals appear with a PP that contains the same preposition as the directional, as in (22b) and (23), one might consider them part of this PP.<sup>13</sup> However, as the sentences in (24) clearly show, the PP and the directional need not mirror each other at all.

- (23) D'Sophia roit **zum** Tisch **zuawi**.  
the-Sophia rolls to-the.DAT table towards-i  
'Sophia rolls towards the table.'
- (24) a. D'Sophia roit **zum** Tisch **fiari**.  
the-Sophia rolls to-the.DAT table forwards-i  
'Sophia rolls forwards to the table.'
- b. D'Sophia roit **zum** Tisch **dauni**.  
the-Sophia rolls to-the.DAT table away-i  
'Sophia rolls away towards to the table.'

The fact that directionals can appear by themselves and that any combination that is contextually feasible is grammatical warrants an investigation of their status as independent constituents. Further support for this analysis comes from the fact that the directional can scramble and appear in a position preceding the PP. This is exemplified in (25) for both a directional mirroring the PP and a directional distinct from the PP:

- (25) a. D'Sophia roit **zuawi** zum Tisch.  
the-Sophia rolls towards-i to-the.DAT table  
'Sophia rolls towards the table.'
- b. D'Sophia roit **fiari** zum Tisch.  
the-Sophia rolls forwards-i to-the.DAT table  
'Sophia rolls forwards to the table.'

Additionally, both the PP and the directional can topicalize by themselves (26), either one can be targeted by a question (27), and a directional can be coordinated with a second directional (28).

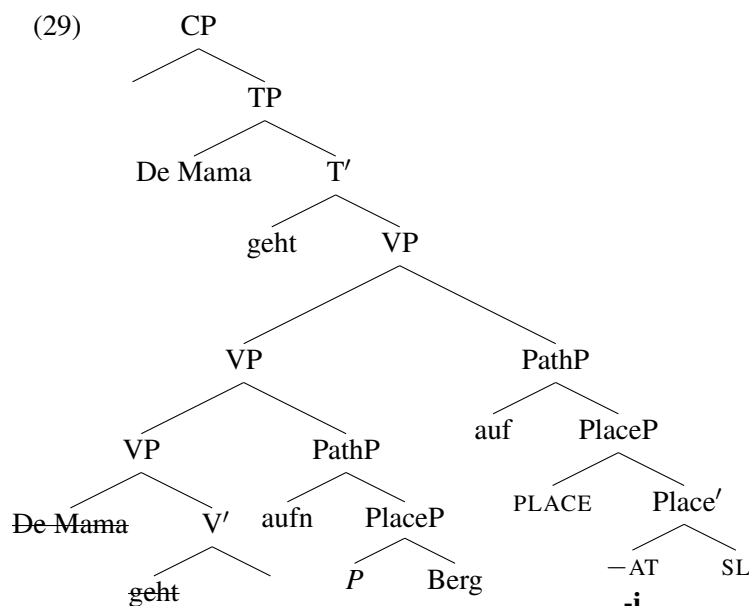
- (26) a. **Auffi** geht de Mama aufn Berg.  
upwards-i goes the mum on-the.ACC mountain  
'It is upwards that mum goes on the mountain.'
- b. **Aufn Berg** geht de Mama auffi.  
on-the.ACC mountain goes the mum upwards-i  
'It is on the mountain that mum goes upwards.'
- (27) a. **Wohi** geht de Mama aufn Berg? *Answer: Auffi.*<sup>14</sup>  
where-to goes the mum on-the mountain? upwards-i  
'Where to on the mountain does mum go? Upwards.'
- b. **Wo** geht de Mama auffi? *Answer: Aufn Berg.*  
where goes the mum upwards-i on-the mountain  
'Where does mum go upwards? On the mountain.'
- (28) a. De Mama geht **aufn Kätznstoa und aufn Traustoa** auffi.  
the mum goes up-the Katzenstein and up-the Traunstein upwards-i  
'Mum goes up on the Katzenstein and the Traunstein.'

<sup>13</sup>In fact, this is what has been claimed for Standard German directionals involving the *hin/her*-alternation. Cf. e.g. van Riemsdijk, 1990; van Riemsdijk and Huybregts, 2002; Noonan, 2005.

- b. De Mama geht heit en Kâznstoa **auffi** **und åwa**.  
 the mum goes today the Katzenstein upwards-i and downwards-a  
 ‘Today, Mum goes up and down the Katzenstein.’

Since both the directional and the prepositional phrase therefore pass standard constituency tests, I take these data as evidence for the constituent status of the directionals. This further supports the analysis of their internal syntax being like that of any other adpositional phrase. For reasons of concreteness, I propose to analyze them as entirely independent constituents, although no part of the above analysis depends on this particular view. The whole structure for (3a), repeated below, then looks as in (29).<sup>15</sup>

- (22b) De Mama geht aufn Berg auffi.  
 the mum goes on-the mountain upwards-i  
 ‘Mum is going up on the mountain.’



Under this view, the two directional phrases are now simply two prepositional phrases within one clause; this structure now also straightforwardly allows for the lower PP to scramble out of its base position into a position above the higher PP. As pointed out by an anonymous reviewer, the structure in (29) allows for any directional, i.e. also fully fledged PPs, to additionally adjoin to the VP. While this is excluded in some cases, e.g. (30) as given by the reviewer, there are also examples that allow two fully fledged directional phrases, as in (31).

- (30) ?? De Mama geht aufn Berg aufn Güpfi.  
 the mum goes on-the mountain on-the peak  
 ‘Mum is going up on the mountain to the peak.’

<sup>14</sup>Some speakers found the question targeting the directional degraded. I tentatively hypothesize that this is due to pragmatic rather than grammatical reasons since the PP *aufn Berg* also provides some directional information.

<sup>15</sup>For ease of exposition, I am using the contracted preposition that includes the case morphology of the determiner associated with the nominal. I am thus abstracting away from case assignment and the morphological complexity of the contracted preposition. Additionally, the structure contains a silent preposition, which I indicated as ‘P’; this is standardly assumed in cases in which a preposition denoting a path is directly followed by a place noun (cf., e.g. Koopman, 1997, 2010).

- (31) a. De Mama geht aufn Berg aufd Hittn.  
 the mum goes on-the mountain on-the hut  
 ‘Mum is going up on the mountain to the hut.’  
 b. Da Frosch springt in Teich ind Mittn.  
 the frog jumps into pond into-the middle  
 ‘The frog jumps into the pond into the middle.’

Given the sentence in (30), indeed there appears to apply some sort of restriction on the directional phrases that can appear together. However, in light of (31) I take this restriction to be of pragmatic rather than syntactic nature: going up on a mountain usually implies that one goes all the way to its peak, while it does not imply that one goes to a hut on that mountain; likewise, one does not necessarily jump into the middle of a pond.

Ultimately, whether to analyze both constituents as independent of each other or as part of a single, larger constituent is partially a theory internal matter; for present purposes, I content myself with showing that the directionals are fully fledged PPs, leaving additional aspects of their external syntax for further research.

## 5.2 *A remaining issue: Verb third*

Besides the constituency tests presented earlier, one more has not been discussed: since Austro-Bavarian is a verb second language we only expect one constituent to be grammatical in front of the main verb. Therefore, if my analysis of the directionals as independent constituents is correct, nothing else should be allowed to appear together with it in sentence initial position. However, this is not confirmed by the data. The prepositional phrase that can optionally occur together with the directional, as in (22b), can easily topicalize together with the directional in both possible orders as illustrated in (32).

- (32) [Auffi] [aufn Berg] geht de Mama.  
 upwards-i on-the.ACC mountain goes the mum  
 ‘It is upwards that mum goes on the mountain.’  
 [Aufn Berg] [auffi] geht de Mama.  
 on-the.ACC mountain upwards-i goes the mum  
 ‘It is upwards that mum goes on the mountain.’

At first, this immediately seems to refute my analysis since it is standardly assumed that only one constituent can occupy the sentence initial position in German and Bavarian. However, it has long been observed that this view is too strict: there are countless reported examples in Standard German with more than one, sometimes as many as three constituents in front of the main verb, and these examples naturally extend to (Austro-)Bavarian. An extensive collection of data is presented in Müller (2003) who also provides a brief overview of existing analyses (Haider, 1982; Wunderlich, 1984; Lötscher, 1985; Fanselow, 1993, e.g.). Examples include the ones in (33).

- (33) a. [Der Maria] [einen Ring] glaube ich nicht, daß er je schenken wird.  
 the Mary a ring think I not that he ever give will  
 ‘I don’t think that he will ever give a ring to Mary.’ [Fanselow, 1993, 67]  
 b. [Gestern] [am Strand] habe ich ihn gesehen.  
 yesterday on-the beach have I him seen  
 ‘Yesterday, I saw him on the beach.’ [Müller, 2003, 47]

Without going into further detail, I take these examples to show that (32) need not negate an analysis of the Austro-Bavarian directional as separate constituents since it is not uncommon for more than one constituent to appear in sentence initial position.

### 5.3 Specified Paths

We are now left with one more construction to account for, namely (22c), repeated below for convenience.

- (22c) De Mama geht *en* Berg *auffi*.  
the mum goes the.ACC mountain upwards-i  
‘Mum is going up the mountain.’

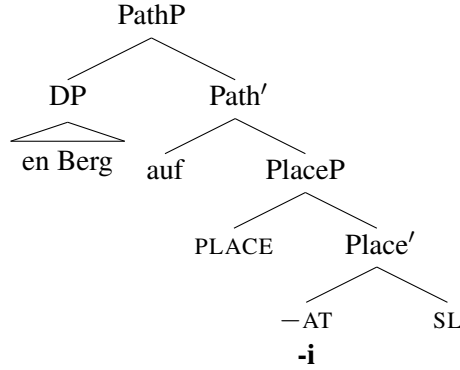
First of all we need to make sure that we are not dealing with a postposition (*auffi*) and its argument (*en Berg*). This is fairly straightforward since we have already seen that the DP is optional. Thus, it cannot be the nominal complement of the directional but needs to occupy some other position. Considering the type of information the DP provides, I propose that it specifies the path of the movement. This idea is supported by the fact that only DPs that refer to potential paths for the relevant directional movement can appear in this position, as exemplified in (34) and (35).

- (34) a. \*De Mama geht **den** Kuchn *auffi*.  
the mum goes the.ACC cake upwards-i  
b. De Mama gibt de Kirschn *aufn* Kuchn *auffi*.<sup>16</sup>  
the mum puts the cherries on-the.ACC cake up-i.  
‘Mum puts the cherries on the cake.’
- (35) a. S’Dirndl geht **de Stroßn** *zuawi*.  
the-girl goes the street towards-i  
‘The girl walks down the street towards ≠ speaker’s location.’  
b. \*S’Dirndl geht **des Haus** *zuawi*.  
the-girl goes the house towards-i  
c. S’Dirndl geht *zum* Haus *zuawi*.  
the-girl goes to-the.DAT house towards-i  
‘The girl goes to the house.’ (≠ speaker’s location)

These examples illustrate that the DP that is inserted in front of the directional needs to be an appropriate path for the movement: the mum cannot walk up a cake, and the girl cannot walk on a house towards somewhere. The last sentences in each set show that this restriction has nothing to do with the DP being incompatible with the preposition as such, as they can easily appear given the right context. I therefore suggest that the DP adds information about the path that the movement refers to; consequently I suggest that it appears as a modifier in the specifier of PathP, resulting in the structure in (36):

- (36) ‘*en Berg auffi*’: up the mountain

<sup>16</sup>Note that only the directional with the suffix *-i* is possible in this case even though the movement itself does not straightforwardly include speaker’s location. Still, *auffa* would be infelicitous since it would imply that the speaker was located *on* the cake.



This leads us to expect that a directional with a DP in its specifier can appear together with an additional PP. Indeed, this is the case as shown in (37).

- (37) De Mama geht en Schotterweg auffi aufn Berg.  
 the mum goes the gravel-path upwards-i on-the mountain  
 ‘Mum is going up on the mountain via the gravel path.’

All sentences given in (22) have thus been accounted for: in every case the directional element was analyzed as an independent syntactic constituent. An additional PP was assigned an equally independent status whereas an additional DP was argued to provide information about the path and thus appear as a modifier of the PathP.

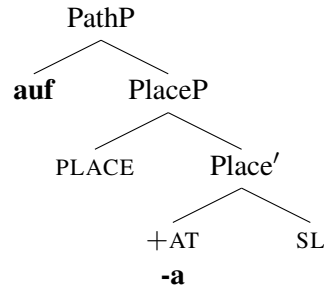
## 6 Conclusion

In this paper, I presented a detailed discussion of Austro-Bavarian directional elements. They form a comprehensive paradigm in which independently existing prepositions take on one of the following two suffixes: *-a* to indicate movement towards the speaker’s location or *-i* to indicate movement towards a place that is crucially distinct from the speaker’s location. I argued that this dichotomy is an overt manifestation of Hale’s (1986) universal semantic theme of central versus non-central coincidence. Whereas this opposition is generally not directly mirrored in the morphology of Standard German, mirco-variational data from Austro-Bavarian provide direct evidence for the universality of the theme.

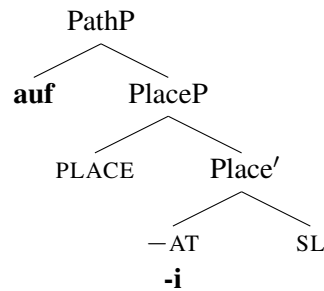
Having analyzed the alternation of the suffixes *-a/-i* as an instantiation of  $\pm$ AT, I further analyzed the syntax of the directionals parallel to an independently established syntactic mechanism of the coincidence-theme. Building on Ritter and Wiltschko (2009), I argued that the suffixes are the morphological content of a relational, locational head: they determine whether this head is to be interpreted as +AT or -AT. More specifically, I proposed that this head establishes the spatial relation of  $\pm$ AT between an unspecified location and the speaker’s location. Thereby the structure accounts for the dichotomy of movement towards the speaker’s location (+AT) or movement towards a location distinct from the speaker’s (-AT). I analyzed this structure as a PlaceP which, following standard assumptions, is embedded under a PathP. This PathP then hosts the prepositional element that the suffixes attach to. This leads to the structure given in (21) and repeated here.



- (21) a. *auffa*: upwards movement towards speaker's location:



- b. *auffi*: upwards movement towards other location:



As for their external syntax, I showed that the directionals behave like independent constituents that can be scrambled, topicalized, questioned, and coordinated. Additionally, they can appear with a regular DP that I showed to further specify the path and therefore analyzed as a modifier located in the specifier of the PathP.

The Bavarian directionals confirm independently established semantic and syntactic universals that have been argued for on the basis of distinct domains and languages. Interestingly, these universals are not equally obvious in the related standard variant and thus provide encouraging support for micro-variational research.

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