

READY, WILLING AND ABLE – A REMARK^{*}

PATRICK GEORG GROSZ
University of Oslo

1 Overview

Example (1) illustrates German adjectives that select an infinitival complement (henceforth: *adjective-dependent infinitive constructions*, short: *AICs*).¹ German AICs appear to exhibit a rather uniform picture and have long been argued (e.g. Reis 2000, 2001, Rapp & Wöllstein 2013) to only select *non-restructuring (CP) infinitives* (using the terminology of Wurmbrand 2001:3).²

- (1) da Hans **fähig** / **froh** / **überzeugt** war, [_{CP} ein Licht in der Ferne zu sehen].
as Hans able glad certain was a light in the distance to see.INF
'because Hans was able / glad / certain [to see a light in the distance].'

In this remark, I discuss a class of German adjectives that stand out in that they optionally select a *restructuring (VP) infinitive*, (2); this class (as conceded by Reis 2001:310, Rapp & Wöllstein 2013:343) roughly encompasses adjectives that have the meaning of non-epistemic (root) modals, including *bereit* 'ready', *gewillt/willens* 'willing' and *fähig/imstande* 'able'.

- (2) weil diesen Preis niemand zu zahlen **bereit** / **gewillt** / **fähig** war.
as this price nobody to pay.INF ready willing able was
'because nobody was ready / willing / able [to pay this price].'

I present the following puzzle, which is due to Cook & Ørsnes (2010): what is the property of such adjectives that makes them stand out from others? I present the first sketch of an analysis of *fähig* 'able', which treats it as a modal operator that selects a <v,st> complement, i.e. an event

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¹ For expository simplicity, I omit *PRO* and traces (where applicable).

² In Bech's (1955/57) terminology, German AICs have been classified as *obligatorily incoherent* (Reis 2000).

description of the syntactic category VP. I conjecture that German AICs can only involve propositional infinitives or event-description infinitives, which correlate with the CP vs. VP distinction. Factive adjectives like *froh* ‘glad’ and epistemic modal adjectives like *überzeugt* ‘certain’ (see (1)) presumably take a propositional complement and can therefore only select a (non-restructuring) CP infinitive (see also Wurmbrand 2001, 2014).

2 German adjectives that select an infinitival complement

German AICs pose an interesting puzzle that has largely been ignored in the literature. Consider first some background on (*non-*)*restructuring* (e.g. Wurmbrand 2001). Predicates such as the verb *versuchen* ‘try’ can select an infinitival CP complement (= the *non-restructuring* case) or an infinitival VP complement (= the *restructuring* case).³ Certain diagnostics have been established (which largely originated with Bech 1955/57) to tease apart these two. First of all, if an infinitival complement is extraposed to a position that follows the base position of the verbs (German being underlyingly SOV), it is generally assumed that we are dealing with a CP complement, (3a). When an infinitival complement occurs sentence-medially, (3b), it is typically ambiguous between the restructuring VP variant and the non-restructuring CP variant. Scrambling of an object pronoun from within the infinitival clause to a position above the matrix subject is taken to be an indication of the VP variant, (3c), since it presumes clause union. Furthermore, if an adverbial (*nicht* ‘not’ in (3d)) is sandwiched between material from the infinitival clause and allows for a reading in which it scopes above the matrix predicate, (3d-ii), this also serves as a diagnostic for clause union and thus VP status of the infinitival complement.

- (3) a. dass diese Frau **versucht** hat, [CP ihn zu verraten].
 that this woman tried has him to betray.INF
 ‘that this woman tried to betray him.’
- b. dass diese Frau [VP/CP ihn zu verraten] **versucht** hat.⁴
 that this woman him to betray.INF tried has
- c. dass ihn₁ diese Frau [VP t₁ zu verraten] **versucht** hat.
 that him this woman to betray.INF tried has
- d. dass diese Frau ihn nicht zu verraten **versucht** hat.
 that this woman him not to betray.INF tried has
- i. TRY >> NOT: ‘that this woman tried [not to betray him].’
 ii. NOT >> TRY: ‘that this woman did not try [to betray him].’

As mentioned in the introduction, it has often been assumed that German adjectives can only select non-restructuring complements (i.e. CP complements), as in Reis (2001:310) and Rapp &

³ See Cook & Ørnes (2010), Rapp & Wöllstein (2013) for recent takes on the standard view on German, deriving from Bech (1955/57). Concerning the CP vs. VP distinction, compare also Wurmbrand (2001, 2014) for a more nuanced view in which restructuring infinitives can be *vPs* or *TPs/wollPs*.

⁴ Note that even verbs that only select non-restructuring (CP) infinitives such as *bedauern* ‘regret’ (cf. Wurmbrand 2001:328) allow for sentence-medial infinitives, as shown by (i).

- i. weil Peter [CP nicht da gewesen zu sein] **bedauerte**
 because Peter not there present to be.INF regretted
 ‘because Peter regretted [not to have been present].’ (Reis & Sternefeld 2004:493, stylistically adapted)

Wöllstein (2013:343). However, both texts concede that there may be a single class of German adjectives that also select restructuring infinitives, namely those adjectives that have the meaning of non-epistemic (root) modals. This is worked out in more detail by Cook & Ørsnes (2010), with predecessors in Askedal (1988, 1999) and de Kuthy & Meurers (2001), amongst others. To get a baseline, consider (4); all German adjectives with infinitival complements can apparently select a CP, as witnessed by the extraposition of the infinitival complement in (4).

- (4) weil er **fähig** / **froh** war, [CP trotz des Nebels etwas zu sehen].
 because he able glad was in.spite of.the fog something to see.INF
 ‘that he was able/glad [to see something in spite of the fog].’

To the extent that the infinitival complement can occur sentence-medially with both types of adjectives (Cook & Ørsnes 2010 observe that this is highly marked with factive adjectives), we notice that only *fähig* ‘able’ allows for scrambling of a pronoun to the left of the matrix subject, (5a), whereas this is impossible with *froh* ‘glad’, (5b). We can conclude that (5a) involves a restructuring infinitive, whereas *froh* ‘glad’, in (5b), requires a non-restructuring infinitive.

- (5) a. dass sie₁ der Wanderer [AP [t₁ zu sehen] **fähig**] war. *modal adjective*
 that her the hiker to see.INF able was
 b. *dass sie₁ der Wanderer [AP [t₁ zu sehen] **froh**] war. *factive adjective*
 that her the hiker to see.INF glad was
 ‘that the hiker was able/glad [to see her].’
 (example modeled after Rapp & Wöllstein 2013:344)

Moreover, negation can scope over the embedding adjective in the case of *fähig* ‘able’, as shown in (6a-ii), but this is more or less impossible in the case of *froh* ‘glad’, as shown in (6b-ii). (Note that (6b) is fairly unnatural to begin with, due to the strong preference for extraposition.)

- (6) a. weil er über dieses Thema nicht zu sprechen **fähig** war. *modal adjective*
 because he about this topic not to speak.INF able was
 i. ABLE >> NOT: ‘because he was **able** [not to speak about this topic].’
 ii. NOT >> ABLE: ‘because he was not able [to speak about this topic].’
 b.^{??} weil er über dieses Thema nicht zu sprechen **froh** war. *factive adjective*
 because he about this topic not to speak.INF glad was
 i. GLAD >> NOT: ‘because he was **glad** [not to be speaking about this topic].’
 ii.[?]*NOT >> GLAD: # ‘because he was not glad [to be speaking about this topic].’

While constructed AIC examples may seem rather marked, Cook & Ørsnes (2010) focus on naturally occurring corpus examples, which occur in a suitable, more natural context. A representative corpus example of my own is given in (7), where *nicht* ‘not’ follows both internal arguments of *vermitteln* ‘convey’ (namely *ihren Wählern* ‘to their voters’ and *als Positivum* ‘as a positive thing’), yet scopes over *fähig* ‘able’, cf. (7-ii).

- (7) Nein, der Minister übt sich im derzeit angesagten Einprägeln auf ein
 no the minister practices self in.the currently popular beating.up of a

„Europa“, das die vielredenden Politiker ihren Wählern als Positivum
 “Europe” which the much.talking politicians to.their voters as.a positive.thing
nicht zu vermitteln **fähig** waren.
 not to convey.INF able were
 ‘No, the minister exercises himself in bashing a “Europe” that the loquacious politicians
 were not able to convey to their voters as a positive thing.’

- i. ABL >> NOT:
 ^{?#} ‘they were **able** [not to convey Europe to their voters as something positive].’
- ii. NOT >> ABL:
 ‘they were not able [to convey Europe to their voters as something positive].’

(*DeReKo*: Nürnberger Nachrichten, 04.07.1992)

Moreover, while most investigations of AICs focus on their predicative use, Cook & Ørsnes (2010:136) also discuss the corpus example in (8), where *fähige* ‘able’ is used attributively (as witnessed by the agreement morpheme *-e*) and still permits restructuring.

- (8) Maresa Hörbiger als [_{NP} [_{AP} [die Konventionen ihres Standes] nicht zu sprengen
 Maresa Hörbiger as the conventions of.her class not to break.INF
fähig-e] Gabriele]
 able-F.SG Gabriele
 ‘Maresa Hörbiger as [Gabriele, who is not able [to break the conventions of her class],]’
 (*DeReKo*: Tiroler Tageszeitung, 26.05.1999; see also Cook & Ørsnes 2010:136)

Based on their corpus study and a pilot experiment, Cook & Ørsnes (2010:131) posit three classes of adjectives; *fähig* ‘able’ is part of a class where restructuring is optional, while *froh* ‘glad’ is part of a class where restructuring is impossible. The third class encompasses adjectives (including *eifrig/erpicht* ‘eager’, *interessiert* ‘interested’ and *zuversichtlich* ‘confident’) where restructuring is taken to be borderline acceptable; since I have not found convincing examples for this third class (and Cook & Ørsnes do not provide any), I will not address it further. Cook & Ørsnes (2010:131) proceed to systematically ask the question of why one class of adjectives stands out in permitting restructuring. I propose to restate their puzzle as follows: if German adjectives can, in general, only select non-restructuring (CP) infinitives, what is the decisive factor that allows non-epistemic modal adjectives to select a restructuring infinitive (e.g. a VP)?

3 A (Semantic) Piece of the Puzzle

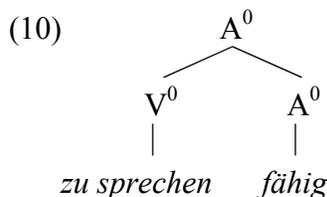
Let us recapitulate the core puzzle: all German adjectives that select an infinitival complement can select an infinitival CP complement. By contrast, only a small set of adjectives can select for a smaller infinitival complement; moreover, all of these (VP-selecting) adjectives appear to have the semantics of non-epistemic modals, which can be illustrated by means of equivalences such as (9). As illustrated, *fähig/imstande sein* ‘be able/capable to’ roughly correspond to *können* ‘can’ (though we will see that the adjectives have a more specific meaning, e.g. in that *fähig* requires a sentient subject, and only conveys ability, as opposed to permission). Similarly,

bereit/gewillt sein ‘be ready/willing to’ may be related in their meaning to the modal *wollen* ‘want’ (and possibly qualify as more specific variants thereof).^{5,6}

- (9) weil er über dieses Thema nicht zu sprechen **fähig/imstande** war.
 because he about this topic not to speak.INF able/capable was
 ‘because he was not able to speak about this topic.’
 ≈ weil er über dieses Thema nicht sprechen **konnte**.
 because he about this topic not speak could
 ‘because he could not speak about this topic’

Focusing on (9a), I now sketch a modal analysis of *fähig sein* ‘be able’ and then revisit the question of how exactly such modal adjectives differ from other adjectives, which cannot select restructuring infinitives. Note that for the variants in which adjectives like *fähig* select a non-restructuring CP infinitive, I assume a systematic ambiguity (i.e. a VP-selecting *fähig*₁ and a CP-selecting *fähig*₂), which seems to be independently warranted (see also Keine & Poole 2015 for English *tough*).⁷ I will not provide an analysis of the CP-selecting variant, which I take to be the garden-variety default case, cf. (4); a curious reader may consult analyses such as Pearson’s (2013:400) lexical entry for the English factive adjective *glad*.

Cook & Ørsnes (2010:135), working in HPSG, assume that restructuring involves the formation of a complex predicate, as in (10) (for (9a)). What I propose is similar (though I treat the infinitives as VPs rather than V⁰) in that I do not assume a null *PRO* or a subject trace inside the infinitival. Rather, I explore the possibility that the infinitivals in AICs with restructuring are event descriptions of type <v,st> for which *fähig* ‘able’ introduces the external argument.



Independent evidence for the lack of a null *PRO* in the restructuring case stems from the contrast in (11).⁸ The non-restructuring infinitive in (11a) can contain the agent-oriented adverb *freiwillig* ‘voluntarily’, which may be assumed to compositionally require the structural presence of an

⁵ There is a question of whether *bereit sein* ‘be ready to’ really shares a meaning component with *wollen* ‘want’, but *gewillt sein* ‘be willing to’ transparently does, and the two adjectives (*bereit* and *gewillt*) are sometimes listed as quasi-synonyms (cf. <http://www.duden.de/rechtschreibung/gewillt> – last accessed on 9 May 2016).

⁶ Susi Wurmbrand (p.c.) suggests that constructions where adjectives such as *einfach* ‘easy’ (in (i)) or *schwer* ‘difficult’ (in (ii)) occur with an infinitive may also classify as modal in the relevant sense. I will not address such configurations, as their analysis in German is controversial. While *einfach/schwer* may be analyzed as adjectives that select an infinitival complement, an alternative analysis holds that *einfach/schwer* are used adverbially (*einfach* roughly meaning ‘with ease’, in (i), and *schwer* ‘with difficulty’, in (ii)), modifying a so-called *modal passive* (the ‘auxiliary-infinitive construction’ of Wurmbrand 2001:29-30). For discussion of such constructions, see Wurmbrand (1993, 2001:27-29), Demske-Neumann (1994), Reis & Sternefeld (2004:506-507), and Haider (2010:300-301).

i. Das Motorrad ist **einfach** zu fahren. ii. Dieser Pilz ist **schwer** zu finden.
 the motorbike is easy to ride this mushroom is difficult to find

⁷ I remain agnostic as to whether *fähig*₁ and *fähig*₂ have two distinct lexical entries or arise compositionally from a single, underspecified lexical entry.

⁸ I am grateful to Sebastian Bücking for suggesting this diagnostic and a similar set of examples.

- (13) a. dass Beatrix [AP [VP **Bill zu töten**] **fähig**] ist.
 that Beatrix Bill to kill.INF able is
 ‘that Beatrix is able to kill Bill.’
- b. die [AP [VP **Bill zu töten**] **fähig-e**] Kämpferin
 the Bill to kill.INF able-F.SG fighter
 ‘this fighter who is able to kill Bill’

The sample derivation in (14a) and paraphrase in (14b) are based on Hacquard (2006; 2010). For concreteness’ sake, they are closely modeled after Hacquard’s (2006:104) analysis of the sentence *Elisabeth can talk to monkeys*, slightly adjusted in line with Hacquard (2006:146,(226)). I pursue the following core idea: certain modal operators (including *fähig* ‘able’) take event descriptions (of type $\langle v, st \rangle$) as their first argument. Events are relativized to possible worlds ($\text{kill}(e, w) \approx$ “*e* is a killing in *w*”), and the same event can occur in multiple worlds, based on Hacquard (2006:56-63) (and, specifically, her principle of *Event Identification Across Worlds*). As shown in (14), APs headed by *fähig* denote properties of individuals (on par with all APs that can be used predicatively; Heim & Kratzer 1998:62-66); *fähig* introduces generic quantification over events (Hacquard 2006:89-91,103-105). Non-epistemic root modals take a circumstantial modal base (Hacquard 2010:109-111); *fähig* thus conveys that there is a circumstantially accessible world, in which the individual that has the AP-property is the agent of the VP-event.

- (14) a.
- | | |
|---|---|
| AP | |
| $\lambda x. \lambda w. \forall e [[e \text{ is normal from the perspective of } w \text{ \& } e\text{'s preconditions hold}]$ | |
| $\rightarrow \exists w' [w' \in \text{CIRC}(e) \ \& \ \text{kill-Bill}(e, w') \ \& \ \text{Agent}(e, x)]]$ | |
| VP | A |
| Bill zu töten | fähig |
| $\lambda e. \lambda w. \text{kill-Bill}(e, w)$ | $\lambda P_{\langle v, st \rangle}. \lambda x. \lambda w. \forall e [[e \text{ is normal from the perspective of } w \text{ \& } e\text{'s preconditions hold}] \rightarrow \exists w' [w' \in \text{CIRC}(e) \ \& \ P(e, w') \ \& \ \text{Agent}(e, x)]]]$ |
- b. “a property of individuals *x* such that [for all normal/ideal events *e* from the perspective of *w*, where preconditions for killing Bill are met, [there is a world *w'* compatible with the circumstances of *e*, such that *e* is an event of *x* killing Bill]].”

Using a standard analysis of predicative and attributive APs (e.g. Heim & Kratzer 1998:61-73), we arrive at the denotations in (15), i.e. (15a) is the proposed analysis of the predicative use in (13a), whereas (15b) is the proposed analysis of the attributive use in (13b) (prior to combining the NP with the definite determiner; see Heim & Kratzer 1998:82-83).

- (15) a. [[dass Beatrix [AP [VP Bill zu töten] **fähig**] ist.]
 = $\lambda w. \forall e [[e \text{ is normal from the perspective of } w \text{ \& } e\text{'s preconditions hold}]$
 $\rightarrow \exists w' [w' \in \text{CIRC}(e) \ \& \ \text{kill-Bill}(e, w') \ \& \ \text{Agent}(e, \text{Beatrix})]]]$
- b. [[[AP [VP Bill zu töten] **fähige**] Kämpferin]
 = $\lambda x. \lambda w. \text{fighter}(x, w) \ \& \ \forall e [[e \text{ is normal from the perspective of } w \text{ \& } e\text{'s preconditions hold}] \rightarrow \exists w' [w' \in \text{CIRC}(e) \ \& \ \text{kill-Bill}(e, w') \ \& \ \text{Agent}(e, x)]]]$

Given the nature of this paper, (14)-(15) is merely a first stab at a full-fledged analysis, plausibly in need of further refinement. However, it should be clear that (14) can easily be extended to other modal adjectives such as *bereit* ‘ready’ and *gewillt / willens* ‘willing’.

In addition to Hacquard’s (2006, 2010) machinery of analyzing root modals, the specific analysis of *fähig* ‘able’ in (14) requires two assumptions: first, *fähig* ‘able’ itself (rather than, say, a *VoiceP*) introduces an ‘external’ thematic role; second, the semantics of *fähig* ‘able’ involves generic quantification over events (modeled as universal quantification over normal events). These components of my analysis are motivated by examples such as (16) and (17). Example (16a) shows that *fähig* ‘able’ requires a sentient subject (see also Hackl 1998), which is not the case for the modal auxiliary *kann* ‘can’. This supports the assumption that *fähig* ‘able’ introduces a thematic (Agent) role; note, however, that we must be dealing with *Proto-Agentivity* (Dowty 1991:572-573), since Experiencer roles are also compatible with *fähig*, as in (16b).

- (16) a. dass sein Haar wachsen **kann**. / ?* dass sein Haar zu wachsen **fähig** ist.
 that his hair grow.INF can that his hair to grow.INF able is
 ‘that his hair can grow.’ ‘that his hair is able to grow.’
- b. weil er nichts zu fühlen **fähig** ist.
 because he nothing to feel able is
 ‘because he is not able to feel anything.’

Furthermore, the idea that *fähig* ‘able’ involves generic quantification is backed up by the observation that statements with *fähig* cannot easily be located in time, (17a).^{10,11} Other modal adjectives may differ in this regard; e.g. *bereit* ‘ready’ does not exhibit the restriction in (17a).

- (17) a. dass Beatrix (?*gestern / ?* in ihrer Jugend) zu tanzen **fähig** war
 that Beatrix yesterday in her youth to dance.INF able was
 ‘that Beatrix was able to dance (yesterday / in her youth).’
- b. dass Beatrix {gestern / in ihrer Jugend} tanzen **konnte**
 that Beatrix yesterday in her youth dance.INF could
 ‘that Beatrix could dance (yesterday / in her youth).’

To explain our original puzzle (i.e. why do only non-epistemic modal adjectives permit restructuring infinitives?), we can now devise the following line of argumentation. First, assume that German adjectives can only select CP infinitives or “minimal” VP infinitives (as in (14)). If such “minimal” VP infinitives are event descriptions (of type <v,st>), this restricts the set of adjectives that VP infinitives can semantically combine with; in particular, it forces all adjectives that require a propositional argument (such as the factive adjective *froh* ‘glad’) to select a CP infinitive. Moreover, we predict that German should not allow for adjectives that express

¹⁰ This seems to be a genuine difference between German and English, since the English translation of (17a) is perfectly acceptable and may convey, for instance, that the external circumstances did not hinder her from dancing. Note also that, even in German, there is some variability in native speakers’ acceptance of examples like (17a), which indicates that a careful empirical investigation may be required to determine the factors that are at play.

¹¹ This is not due to the copula construction, as shown by the following example.

- i. dass Beatrix gestern **böse** war
 that Beatrix yesterday angry was
 ‘that Beatrix was angry yesterday’

epistemic modality to combine with restructuring (VP) infinitives, as they presumably operate on tensed propositions; this is confirmed by (18a-b).

- (18) a. dass Hans sich **sicher** war, [_{CP} Bill nicht zu töten].
 that Hans self certain was Bill not to kill.INF
 ‘because Hans was certain [not to be killing Bill].’ (*non-restructuring variant ok*)
 b. * dass Hans {sich} [Bill (nicht) zu töten] {sich} **sicher** war.
 that Hans self Bill not to kill.INF self certain was
 ‘because Hans was (not) certain [to be killing Bill].’ (*restructuring variant **)

The following puzzle emerges at the end of this remark: why would German only avail for two options in the case of infinitive-selecting adjectives, i.e. for full CPs or “minimal” VPs? This is particularly puzzling since verbal predicates have been argued to select intermediate categories (such as *v*Ps and TPs) as well (cf. Wurmbrand 2001, 2014). We might speculate that the relevant factor is ‘weight’, i.e. adjectival complements within the AP must be structurally small (and thus “minimal” VPs); since only CP complements can extrapose out of the AP, this derives the binary choice. However, as this is mere speculation, it needs to be explored further in future research.

4 Conclusion

In this paper, I focused on the question of why a very narrow set of German adjectives (including *bereit* ‘ready’, *gewillt/willens* ‘willing’, and *fähig/imstande* ‘able’) can select a restructuring infinitive. I outlined a semantic solution: all of these adjectives have the semantics of non-epistemic root modals and may be taken to combine with an event description of type $\langle v, st \rangle$ (i.e. a “minimal” VP). This paper thus corroborates an insight that has become standard in present day linguistic investigations: even when we investigate a puzzle that appears to be purely syntactic (i.e. how do we explain the small class of adjectives that select a restructuring infinitive if this is otherwise banned?), we may draw on insights from the semantic component and the syntax-semantics interface in order to attain new pieces to the puzzle (here: the adjectives in this small class may be analyzed as elements that can select a complement of type $\langle v, st \rangle$). Open questions include the status of adjectives like *eifrig* ‘eager’, which have been claimed (Cook & Ørnes 2010) to exhibit borderline acceptability when combined with a restructuring infinitive.

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