**Wh-quantifier float in German diagnoses Ā-traces, and successive cyclicity in vP**

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**Claim** This paper defends proposition (P) pertaining to the German floating quantifier known as “invariant alles” (“all”; cf. Reis, 1992; Zimmermann, 2007), with the two consequences (C1)–(C2).


C1. vP is a landing site of successive-cyclic wh-movement in German. 
C2. Alles diagnoses the position of Ā-traces of its associate.

**Invariant alles** presupposes a plurality of answers, and creates the expectation that the question be answered with an exhaustive list. Alles is parasitic on certain wh-operators. (1) vs (2) show “floating” vs “adjacent” alles.

(1) Wen hast du t1 alles angerufen?
who have φ you all called
‘Who all did you call?’

(2) [Wen alles]1 hast du t1 angerufen?
who1 have φ you all called
‘Who all did you call?’

**P: 2 Arguments for deep constituency** A number of generalizations about alles are argued to follow from the deep constituency between alles and its associate ‘W’. This presentation focuses on two of them: (i) the distribution of alles; (ii) the uniqueness generalization about alles.

(i) Distribution: Building on Reis (1992), it is argued that the distribution of floated alles in a given derivation D is bounded by the base position, and the movement possibilities of its associate W in D. (3) shows that alles may occur in W’s base position. Wh-indefinites cannot scramble in German [(4)]. The DAT wh-indefinite therefore diagnoses its own base position, and the base position of the acc object to its right, given that it could not have moved in any other way either.

(3) Weiβt du, [was1] der Lehrer [VP wen t1 alles gezeigt] haben soll?
know φ you what acc the teacher nom who INDF dat all shown have MOD φ
‘Do you know what all the teacher supposedly showed to someone?’

(4) *dass wen1 keiner/’n Lehrer t1 gesehen hat.
that who INDF acc no-one/a teacher nom seen have φ
Intended: ‘that no-one/a teacher saw someone.’

Alles may occur in positions that W can reach via scrambling [(5)–(6)]; the base order for zeigen ‘show’ is DAT > ACC, so the different word orders indicated by braces are due to movement of W+alles over DAT rather than of the DAT object over alles. Conversely, alles may not occur in positions that W cannot reach via scrambling (or other types of movement); (7)–(8) show this for the position to the left of weak object pronouns. A presentation will add further arguments for (i).

(5) Was1 hat sie {t1 alles} den Leuten t1 {alles} gezeigt?
what acc have φ she all the people dat all shown
‘What (all) did she show the people?’

(6) Wer hat {was (alles)} den Leuten {was (alles)} gezeigt?
who nom have φ what acc all the people dat what acc all shown
‘Who showed the people what (all)’?

(7) Was hat {?#alles} ihm {alles} keiner t geben wollen?
what acc have φ all him dat all none nom give want
‘What all did no-one want to give him?’

(8) Wo {#was1} ihm {was1} keiner t1 abgegeben hätte, ist unklar.
where what acc him dat what acc none nom give have COND φ be φ unclear
‘It is unclear where no-one would have given him what.’

(ii) **Uniqueness**: “each alles is uniquely mapped to a W”. (A), there can be no multiple alles per one W [(9)]; braces indicate alternatives. (B), there can be no multiple Ws per alles [(10)]; else, if one alles could relate to multiple Ws, any additional alles should be unacceptable also in (10) with multiple Ws, as it is in (9) with one W. Instead, the number of Ws bounds the number of alles.

(9) [Wen {alles}] hat er {alles} da {alles} beleidigt?
whoacc all haveφ he all there all offended

‘Who all did he offend there/then?’

(10) (Und) wem1 hat wer2 alles2 dieses Foto t1 alles1 gezeigt?
and who dat haveφ who nom all this photo acc all shown

‘Who all showed this photo to who all?’

**C1: Successive-cyclicity**  McCloskey (2000) shows that wh-quantifier float in West Ulster English (WUE) argues for successive-cyclic wh-movement through CP. Similarly, alles argues for successive-cyclic wh-movement through vP in German (varieties with long-distance wh-movement). Alles must be clause-mate to the wh-trace it relates to [(12)–(13)]. In spite of this, with long movement, alles may be floated in the matrix clause just as well as in the clause of origin [(11)].

(11) [CP1 Wen1 hat Peter [tP t1 {alles} gemeint, [CP2 dass Maria t1 {alles} geholfen hat]]? who dat haveφ Peter all said that Maria all helped haveφ

‘Who all did Peter say/think that Mary helped?’

(12) *[CP1 Wen1 hat Peter t1 erzählt, [CP2 dass Maria alles1 Susi geholfen hat]]?
who dat haveφ Peter told that Maria all Susi dat helped haveφ

(13) *[CP1 Peter hat alles1 gewusst, [CP2 wen1 Maria t1 liebt]].
Peter haveφ all known who acc Maria loveφ

?P in (11) is most likely vP as alles in the matrix must occur to the left of wh-indefinites (whereas it was able to occur to their right in the clause of origin, cf. (3)): alles floated in the matrix is minimally outside the VP shell containing the subject. Conversely, alles can stay lower than a full DP subject [(11)]: it cannot be the case that matrix alles necessarily occurs as high as TP.

**C2: ˘A-traces**  There are four asymmetries in the distribution of alles: (i) alles may occur inside the complement of a raising verb if W is the infinitival’s object [(15)] but not if W is the infinitival’s subject [(14)]; (ii) alles may occur to the left of a subject that contains a pronoun/anaphor bound by W, but not to the right of such a subject (Weak Cross Over/Condition A); (iii) alles may occur adjacent to its overtly scrambled, “in-situ” W, but not floated at a distance from such a W. In (i–ii) the difference is whether alles occurs in a position corresponding to an A-trace (*) or an ˘A-trace (OK) of its associate. (ii–iii) therefore further argue for scrambling being A-movement in German, in these contexts, so that (iii) shows the same anti-A-trace effect. (14–15) show the contrast for (i).

(Scrambling of dem Max in (14) controls for de-accented nature of alles; low alles * regardless.)

(14) Krass, was1 t1 {alles} droht, [TP [dem Max]2 t1 {*alles} t2 das Leben zu versauen]!
crass wh nom t ˘A all threaten φ the Max t A all the life acc to spoil inf
‘Astonishing, what all threatens to ruin Max’s life!’

(15) Krass, was2 [diese App]1 (t2) {?alles} droht, [TP t1 dem Max t2 {alles} zu versauen]!
crass wh acc this app nom all threaten φ the Max all to spoil inf
‘Astonishing, what all this app threatens to ruin for Max!’
References


