**That-trace effects and resumption as the result of Improper Movement**

**That-trace effects in German.** In the 1980s German has been claimed to lack strong configurationality and as a consequence of this not to show the *that*-trace effect. Nevertheless, this effect appears in constructions where (due to the absence of an intervening adverb) the trace can only be postulated in the highest clausal position below C°, arguably TopP, cf. (1). This echoes Rizzi & Shlonsky's (2007) generalization in terms of a subject-freezing effect. However, German shows equally clearly that the effect is independent of the subject and nominative case. It is rather arises with any XP that appears in the topic position immediately below C, e.g. also with quirky subjects (2) and scrambled objects, cf. the splitting construction in (3) in which extraction is ungrammatical if wh-movement takes place from the scrambled position above the vP-delimiting particle *denn*. The same pattern is found with subject-splits (Diesing 1992), cf. (4).

**That-trace effects in English.** In English, this can be seen in Bresnan's (1994) example of a *that*-trace effect after movement of a locative-inverted PP, cf. (5). It can thus be argued that the classical subject effect is in fact an epiphenomenon of a more general ban against A’-movement of the sentence topic (often camouflaged by wh) across a(n overt) complementizer. The complementizer imports a feature for contrastive focus which is incompatible with the topic-feature. Extraction from Spec, TP (which in our view coincides with a topic position in English)/TopP (in German) via Spec, CP thus leads to Improper Movement in both languages.

**Avoiding that-trace effects.** Both in English and in German *that*-trace effects disappear once an element other than the wh-phrase occupies the topic position; in that case, extraction takes place from a lower position, and no conflict between the features [topic] and [contrast] obtains, cf. again (1) and (6) for English Locative Inversion. The fact that *that*-trace-effects are less pervasive in German is the result of the reordering possibilities in the middle-field. Interestingly, in some cases of wh-extraction, Spec, TopP is not a possible landing site for semantic reasons, e.g. when an amount-wh is extracted. In this case, no *that*-trace-effects obtain, even in the absence of intervening adverbials, cf. (7). We analyze such cases as involving a silent stage-topic, cf. (8).

**Resumption in Zurich German relatives.** Strong additional evidence for this theory of *that*-trace effects comes from relativization in Zurich German (ZG). Unlike the standard language, ZG relatives do not feature relative pronouns. Rather, relative clauses are introduced by the invariant complementizer *wo*. In local relativization, there are gaps for subjects and direct objects, but resumptive pronouns for oblique positions including datives, cf. (9). The distribution is related to recoverability and locality: Extraction from PPs is impossible in German, which explains resumptives after P. Resumptives for datives follow from an independent constraint that requires the phonetic realization of oblique morphological case, cf. Bayer et al. (2001). Subjects and direct objects do not require resumptives because they are transparent, and there is no recoverability problem. In long-distance relativization, however, there are resumptive pronouns for subjects and direct objects, cf. (10). This is unexpected given that embedded subjects and direct objects can in principle be wh-extracted as in Standard German. These facts follow straightforwardly under the proposed theory of *that*-trace-effects, given the assumption that due to their semantics (Bianchi 2004), relative operators obligatorily target the high topic position in the middle field. As a consequence, further extraction through the [+contrast] Spec of *dass* is as impossible as in wh- movement. Unlike wh-movement, ZG relatives can resort to resumption in this case – as in all cases where extraction would violate locality. Evidence for movement to TopP comes from the position of resumptives, which normally occur in the highest position in the middle-field right below C, cf. (10), the landing-site of the first movement step. From there, a non-movement relationship is established between the matrix C and the resumptive. Interestingly, amount relative clauses, like amount wh-questions, cannot target Spec, TopP due to their semantics. As a consequence, long-relativization with amounts is predicted to be possible since a stage-topic occupies Spec, TopP, and relativization does not pass through Spec, TopP. This prediction is borne out, cf. (11): There are no resumptives with amount relatives. Additionally, as in other languages (cf. Bianchi 2004), long-distance relativization with resumptives prevents scope reconstruction. One can, however, marginally force a scope-reconstruction reading by omitting the resumptive, cf. (12). This indicates that in such a case, the (non-referential) relative operator does not proceed through Spec, TopP. The asymmetry between short- and long-distance relativization concerning resumption for SU and DO follows from the absence of a contrastive spec in matrix clauses – as in wh-movement.
(1) Wer glaubst du, dass *(morgen) kommt?
   Who do you think will come tomorrow?    SU
(2) Wem glaubst du, dass *(beim Busfahren)schlecht wird?
   Who do you think will become nauseous during the bus ride?    EXP
(3) a) Was glaubst du, dass Peter denn [t₁ für Bücher] kaufen würde?
   What kind of books do you believe that Peter would buy?    OBJ
   b) Was glaubst du, dass [t₁ für Bücher] denn Peter kaufen würde?
   What kind of books do you believe that Peter would buy?    OBJ
(4) a) Was glaubst du, dass wohl [t₁ für Bewerber] berücksichtigt werden?
   What kinds of applicants do you believe will be considered?    SU
   b) Was glaubst du, dass [t₁ für Bewerber] wohl berücksichtigt werden?
   What kinds of applicants do you believe will be considered?    SU
(5) [In which villages], do you believe (*that) t₁ can be found examples of this cuisine?
(6) [On which table], were you wondering {whether/if} *(under certain circumstances) t₁
   might have been put the books that you had bought?    Culicover (1993: 98, 104)
(7) Wie viel Champagner glaubst du, dass getrunken wurde?
   How much champagne do you believe was drunk?
(8) [.. Wie viel Champagner] glaubst du [CP [wie viel Champagner] dass [TOPP [STAGE TOPIC]
   [vP [wie viel Champagner] getrunken wurde]]?    + res: 2 > ∀; *∀ > 2; – res: 2 > ∀; ∀ > 2
(9) a) de Maa, wo (*er) immer zu spät kommt
   The man who is always late
   b) de Maa, wo (*en) niemals gesehen hat
   The man no one has seen
   c) de Maa, won (*em) de Urs es Velogeë hat
   The man Urs gave a bike
   d) de Maa, won i von (*em) gehört
   The woman I heard about
(10) die zwäi Wuche, won er gesagt hat, dass er (*si) in die Ferien gegangen
   ‘the two weeks he said he was on vacation’
(11) die zwäi Wuche, won er gesagt hat, dass er (*si) i de Ferien gessi isch
    ‘the two weeks he said he was on vacation’
(12) die zwäi Studänte, won i glaubte, dass (si) jede Lehrer mag
    ‘the two students that I think every teacher likes’

References
Bayer, Josef, Markus Bader and Michael Meng (2001): Morphological underspecification meets