Semantics of the DP wh-island
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This paper provides a semantic analysis of the ban on wh-subextraction out of Austro-Bavarian
German “strong” definite DP. The main claim is that the effect is due to the semantics of the strong
definite article, which, by default, does not allow for the denotation of its DP to co-vary with the
wh-bound variable. Wh-subextraction out of strong-DP is shown to give rise to a question whose
possible answers have the same asserted content, which, given question’s existential presupposition,
has to be part of the Common Ground when the question is asked. Such questions thus can only
have uninformative answers. This contrasts with the licit wh-subextraction out of DP headed by
“weak” definite articles. The analysis relies on Schwarz’s (2009) proposal for the articles’ semantics
based on pragmatic ill-formedness of the answer-set (Szabolcsi & Zwarts 1993, Fox & Hackl 2006, Oshima

Wh-subextraction contrast. Austro-Bavarian, together with a number of other varieties of Ger-
man, distinguishes between two series of definite articles, “strong” and “weak” ones. As noticed in
Brugger & Prinzhorn (1996), strong articles make wh-subextraction impossible, similar to English
demonstratives and unlike weak articles, as (1) illustrates.

(A visa officer says “Yesterday Hans brought one passport picture”. A colleague of his replies,)

(1) Vo wem1 hot da Hans [*des/s Possbüdl] t1 brocht?
of whom has det,w Hans det,s/det,w passport.picture t brought
‘Who did Hans bring *that/the passport picture of?’

To be sure, in the same context, (2) with strong-DP without wh-subextraction is fine, meaning that
the offending factor in (1) is indeed the wh-subextraction out of strong-DP, rather than a failure
to provide the right context for the strong article.

(2) I hob [des Possbüll] vom Peda] scho ogschaut.
I have det,s passport.picture of Peter already looked.at
‘I have already looked at that passport picture of Peter.’

I show below that, while the denotation of the weak-DP can co-vary with the wh-bound trace, the
denotation of strong-DP is fixed to a contextually given individual, which precludes diversity in
what possible answers assert.

demonstratives and German strong articles respectively, I propose that the crucial semantic com-
ponent responsible for the wh-subextraction ban is a silent pronoun, which, unless bound,
makes the denotation of strong-DP a constant in a given context (i.e. rigid designator). (English in LF
and formulae for clarity.)

(3) [[D_s [R 1] picture of Peter]]
    ([D_s [R 1] picture of Peter]]^\# \text{LF of strong-DP}
Relational predicate R denotes a function which takes an individual (index value) and returns a
property of being identical to that individual ([R 1]^\# = \lambda x . x=g(1)). The strong article denotes a
function which takes two properties, [NP] and [R i], and, if defined, returns a unique individual with
both properties.

(4) [[D_s R 1 picture of Peter]]^\# is defined iff \exists x[x=g(1) & x is a picture of Peter]
    \text{if defined, } [[D_s R 1 picture of Peter]]^\# = \lambda x[x=g(1) & x is a picture of Peter]
Notice that \lambda x[x=g(1) & x is a picture of Peter] is identical to simply g(1). More generally, given LF
in (3), whenever defined, strong-DP denotes the individual picked out by the index. I will propose
that this property of strong-DP is the source of the wh-subextraction ban.

Wh-subextraction out of strong-DP. That the strong-DP is a rigid designator has the effect
of preventing its denotation from co-varying with a variable in the wh-extraction site. In (5) [[D_s
[R 1] picture of t2] always denotes the same picture g(1) under a given assignment g, irrespective of
the wh-trace t2.

(5) who \lambda_2 [Hans brought [[D_s [R 1] picture of t2]]]
    LF of wh-subextraction
Consequently, the intension of TP is a constant function, which maps all individuals for which it
is defined to truth in a world where it is true that Hans brought g(1).

(6) \lambda x . [Hans brought D_s R 1 picture of t2]^\#[2\rightarrow x] =
    = \lambda x . \forall w : in w, g(1) is a picture of x . Hans brought g(1) in w
Below I demonstrate that building a question based on such TP gives rise to the possible answers
having identical asserted content.

Question interpretation. Assuming Hamblin/Karttunen type of question semantics, (5) denotes
a set of possible answers to the question. Given a domain of the wh-word which consists of Otto,
Heinrich, and Elsa, this gives (7) as the question’s denotation.

(7) \[[5]\] = \{w : in w, (\lambda w : in w, \exists g(1) \in g(2)\) is a picture of Otto . Hans brought g(1) in w], \{w : in w, (\lambda w : in w, \exists g(1) \in g(2)\) is a picture of Heinrich . Hans brought g(1) in w], \{w : in w, (\lambda w : in w, \exists g(1) \in g(2)\) is a picture of Elsa . Hans brought g(1) in w]\}

Thus, the possible answers differ only in what they presuppose, whereas their assertive content is identical by virtue of the strong-DP \[[D_s[R1]\ picture of t_1]\ always denoting g(1) under a given assignment g, no matter which value is assigned to the bound variable corresponding to the interpretation of the trace \(t_2\) (Otto, Heinrich, or Elsa).

Moreover, assuming, following Abusch (2010), that expressions evoking an alternative set generate a presupposition that at least one of the alternatives is true, the asserted content shared by all the answer propositions must be entailed by the C(ommon) G(round) that serves as the context of the question (to use Stalnaker’s (1974) term). But this means that a question with a strong-DP in (1) can be uttered only in a CG that entails the asserted content of its possible answers. In addition, for an answer to be felicitous, the function it denotes has to be defined, i.e. its presupposition has to be entailed by the CG (on Stalnaker’s bridging principle linking definedness to pragmatic felicity). That is, the content of any assertable answer, presupposed and asserted alike, has to be entailed by the CG. Informally, the answer has to be already known in any context where the question can be asked. This, I propose, is what makes such a question ungrammatical: any assertable answer to this question will be completely uninformative. Note that this will hold in any context, setting these cases apart from rhetorical questions.

In contrast to the wh-subextraction out of strong-DP, wh-subextraction out of a weak-DP results in the set of possible answers with different asserted contents. The denotation of \[[D_w picture of t_1]\, where D_w has “regular” Fregean definite semantics, covaries with the interpretation of the trace.

(8) \{w : in w, there is a unique picture of Otto . Hans brought the unique picture of Otto, w : in w, there is a unique picture of Heinrich . Hans brought the unique picture of Heinrich, w : in w, there is a unique picture of Elsa . Hans brought the unique picture of Elsa\}

The resulting Abusch’s (2010) type existential presupposition is of the form \(\exists x [Hans brought the unique picture of x]\), which means that assertable answers update the CG and are thus informative.

**Prediction.** This analysis assumes that strong-DP is a rigid designator, which means that if it has a denotation, its semantic value does not allow for co-variation with a quantifier binding into it. Surprisingly, strong-DP with relative clauses need not be interpreted as rigid designators. This is shown by (9), which is taken to mean that there is a distinct moment for every father.

(9) A jeda Vota fiacht si voa [dem Moment [wenn s’ ödeste Kind ausziagt]].

a every father dreads refl for det_s.DAT moment when det_w eldest child moves.out

‘Every father dreads that moment when his eldest child moves out.’

While it remains to be understood why a relative clause enables “quantifying in” uses of strong-DP (to use King’s (2001) term), a novel prediction is now made about questions with strong-DP, which happens to be borne out. In (10) adding a relative clauses “repairs” wh-subextraction.

(10) Vo wem_1 hot da Hans [des Possbüldl t_1 [was a jo söwa gmocht hot]] brocht?

of whom has det_w Hans det_s passport.pict. t that he prt himself made has brought

‘Who did Hans bring that picture of that he made himself?’

**Conclusions.** I proposed a semantic take on the problem of definite wh-island DP whereby the key property of an island DP is that it denotes rigidly, which makes any permissible context for the question pre-empt the informational import of its answers. The analysis of the wh-subextraction contrast between strong- and weak-DP in German varieties is predicated upon the difference in articles’ semantics which was proposed by Schwarz (2009) to cover an entirely different set of data. It also makes (correct) predictions about yet another set of contexts, (10).