

Noun phrase structure and movement: a cross-linguistic comparison of *such/ sådan/ solch* and *so/så/so*

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Clauses/nominals project: www.hum.au.dk/engelsk/engsv/clauses-nominals

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1. Introduction

The focus of this paper will be on *so* and *such* in Germanic and their position with respect to “articles”. The relevant forms are:

(1)	En.	so	such	
	Da.	så	sådan	(slig)
	Ge.	so	solch	
	Du	zo	zulk	

Syntax: position in relation to the indefinite article

Semantics: kind (identifier) and degree (intensifier)

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1.1 Questions that a cross-linguistic focus on *so* and *such* might shed light on:

Nominal/clausal parallels: movement in the DP

e.g. predicate raising in the DP (Moro 1997; Bennis, Corver & den Dikken 1998; Corver 1998:314)

- (5) So tall (of) a man (that he had to lean on the basket)
- (6) The man is so tall (that he had to lean on the basket)

Grammaticalisation cycle (van Gelderen 2004:18)

One common path of language change is for phrases to become heads.

i) 'such' in Germanic is a grammaticalised form of 'so' formed from *swa*, 'so' + **liko*, 'body', 'form'. Has *such* become a syntactic head, after starting out as a full phrase?

ii) German *so ein* is, in colloquial speech, becoming *so'n*, analysed by Hole & Lump (2000) as a 'type referential' article (see also Lenerz & Lohnstein 2004).

- (7) a. so'n Pullover singular
a sweater like that /of that kind
- b. so'ne Pullover plural
sweaters like that /of that kind

Syntactic doubling

Article doubling has been reported in several languages, compulsory e.g. in Bavarian, optional e.g. in standard German, Dutch and English:

- (8) My rules are to cut down drinking, control my temper if I am drinking, not to drink in a such a large group and not to waste much money.
(Wood 2002:109)

2. Kind and degree

As was first observed by Bolinger (1972) for English, there are semantically two *such*'s a "kind" reading and a "degree" reading and they behave differently syntactically:

(9) English *such*: syntactic, semantic and register differences (Wood 2002:97):

Kind	Degree
Referential—requires a defining referent in the context ((10)-(12))	Degree—requires a gradable element in its noun phrase ((13)-(16))
Paraphrased by 'of that kind' or 'like that'	Paraphrased by 'so' + adj.
Correlative clause is restrictive (10)	Correlative clause is comparative or resultative (13),(14)
May be a post-determiner (17),(18)	Never a post-determiner
May co-occur with quantifiers (17),(18)	Does not co-occur with quantifiers
Pronominal may be partitive	
Tends to be used in more formal registers	Tends to be used in less formal registers

Examples of **kind** *such*:

- (10) Had Appleby felt himself to be in charge he could no doubt have assembled in ten minutes such preliminary facts as there were.
- (11) Dann wird es klar, wie klug und peinlich solch ein Künstler wie Wagner war
then it becomes clear how intelligent and embarrassing such an artist like Wagner was (Fabricius-Hansen et al. 2005:331).
- (12) Det vanskelige ved sådan et forbud er ...
The problem with such a ban is . . . (<http://ordnet.dk/korpusdk>)

Examples of **degree** *such*:

- (13) She gave way to such grief that I was alarmed.
- (14) No other manufacturer makes such a wide variety of shirts as the CWS.
- (15) a. mit einem solch großen Aufwand (Fabricius-Hansen et al. 2005:330)
 b. mit solch einem großen Aufwand
with a such big effort / with such a big effort
- (16) Du gør sådan et sympatisk indtryk på mig (http://ordnet.dk/korpusdk)
You make such a pleasant impression on me

Both the degree and the kind readings are possible with and without an adjective. So, for example *such grief* in (13) could have a kind reading (*grief like that*), but because *grief* is a gradable noun, the degree reading comes to the fore.

Only kind *such* may be a “post-determiner”, i.e. it may follow a quantifier:

- (17) on the basis of any such a proposal or application form
 (18) For the time being at least, no such a change in Congressional attitudes would occur. (Wood 2002:110).

3. *such*

3.1 *such* constructions in English, Danish and German

There are 4 possible combinations of word order and meaning:

(19)

	pre-article	post-article
kind	a	b
degree	c	d

As may be seen, *such* obligatorily precedes the article in English, but in Danish and German pre- and post-article orders are found.

(20) **English**

	pre-article	post-article
kind	such	-
degree	such	-

- a. such a hotel
 b. *a such hotel
 c. such a bad hotel/
 *such bad a hotel
 d. *a such bad hotel

(21) **Danish**

	pre-article	post-article
kind	sådan(t)	sådant
degr.	sådan(t)	-

- a. sådan(t) et hotel
 b. et sådant hotel
 c. sådan(t) et dårligt hotel/
 *sådan(t) dårligt et hotel
 d. *et sådan(t) dårligt hotel

(22) **German**

	pre-article	post-article
kind	solch	solches
degree	solch	solch

- a. solch ein Hotel
 b. ein solches Hotel
 c. solch ein schlechtes Hotel/
 *solch(es) schlecht(es) ein Hotel
 d. ein solch schlechtes Hotel

- **English** is the most restrictive.

It does not allow *such* to follow the article.

- **Danish** allows *sådan* to follow the article, in which case *sådan* is inflected to agree with the noun and only has a kind reading.

-

- **German** is the least restrictive. It allows *solch* to follow the article, both inflected and uninflected. When *solch* is inflected following the article it has a kind reading (as in Danish). When *solch* is uninflected following the article it is a degree adverb modifying the adjective.

3.2 German *solch*

English *such* has been analysed as adjective, adverb and determiner. Grammars of German likewise say that *solch* can be adjective or determiner. Unlike English, German (and Danish) morphology gives an indication of the word class.

Kind *solch*:

When *solch* precedes the indefinite article it is uninflected (as also are Ge. *manch ein* and *welch ein*) ((11) repeated here):

- (23) Dann wird es klar, wie klug und peinlich solch ein Künstler wie Wagner
 war
 *then it becomes clear how intelligent and embarrassing such an artist like
 Wagner was* (Fabricius-Hansen et al. 2005:331).

Apparently this identifying function of *solch* is archaic and being replaced by *so'n*, as will be seen in section 4.2).

Following the article, kind *solch* inflects like an adjective:

- (24) [. . .] was ein solcher Künstler für eine Gage bekommt
 what a such artist receives for a fee

According to Zifonun et al. (1997: 1936), *solch* is changing from a determiner to an adjective.

They give the following judgements:

- (25) Solcher Wein schmeckt mir.
 Such wine I like (= that kind of wine)
(26) ? Solche Theorie taugt nichts.
 Such a theory is worth nothing (= a theory like that)
(27) ?? Solcher Mann kam gestern.
 Such a man came yesterday (= a man like that)

“Uses of *solch*- with abstract substance expressions and *solch*- with individual reference in the singular are questionable and sound archaic” (Zifonun et al. 1997:1937).

This might indicate that determiner *solch* really is an empty article followed by *solch*.

However, determiner *solch* can (but does not have to) be followed by a weak adjective:

- (28) a. für *solche* neuen Wege
for such.STR new.WK approaches
b. für *solche* neue Wege
'for such.STR new.STR approaches' (Fabricius-Hansen et al. 2005:330)

(28)a shows that *solch* can be a determiner and (28)b shows that *solch* can be an adjective. (The strong + weak pattern in (29)a is only possible for determiner + adjective sequences in German, whereas e.g. in Old English it was also possible for adjective + adjective sequences. This weakens the arguments for *solch* as determiner.)

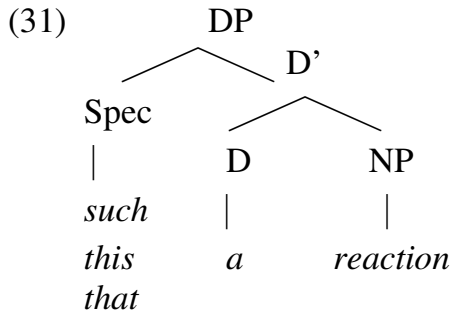
Degree *solch*:

When used as a degree adverb (=of that quality or quantity, to that degree) *solch* is uninflected, regardless of whether it precedes or follows the article.

- (29) mit einem solch großen Aufwand (Fabricius-Hansen et al. 2005:330)
with a such big effort
(30) Selten hat ein solch dickes Buch meine Aufmerksamkeit mehr gefesselt
als dieses (Fabricius-Hansen et al.
2005:332).
Seldom has a such thick book captured my attention more than this.

3.3 Deriving prearticle *such* from an attributive

According to Alexiadou, Haegeman & Stavrou (2007:108-9), “as a first approximation it can be proposed that *such* occupies SpecDP”. On that basis they hypothesize that demonstratives are specifiers as shown below:



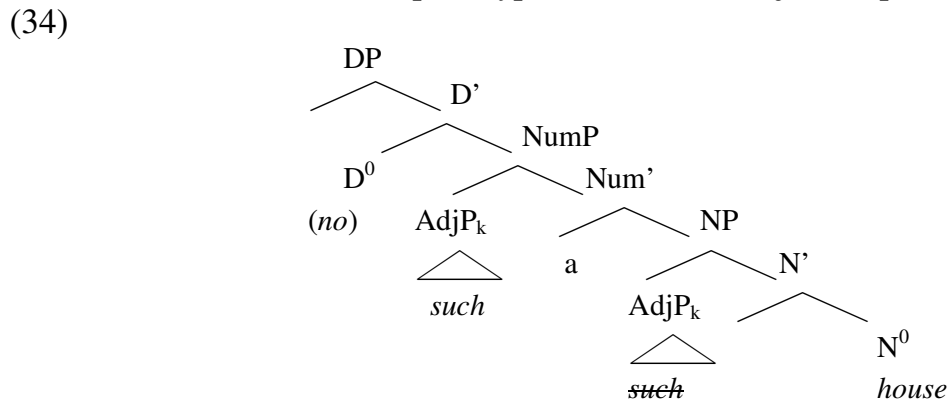
However, there are two reasons for finding a different derivation first that kind *such*, that is *such* with a demonstrative reading, can co-occur with another determiner and therefore clearly is not in Spec-DP, cf. (17) and (18) above, repeated here:

- (32) on the basis of any such a proposal or application form
 (33) for the time being at least, no such a change in Congressional attitudes would occur. (Wood 2002:110)

Secondly, a structure such as (31) says nothing about the interaction with adjectives.

One possible derivation of pre-article *such* is for it to be base generated in the prototypical adjective position and then moved to a position preceding the indefinite article. One implementation based on Ritter (1991) was suggested by Wood (2002) (see also Matushansky (2002)).

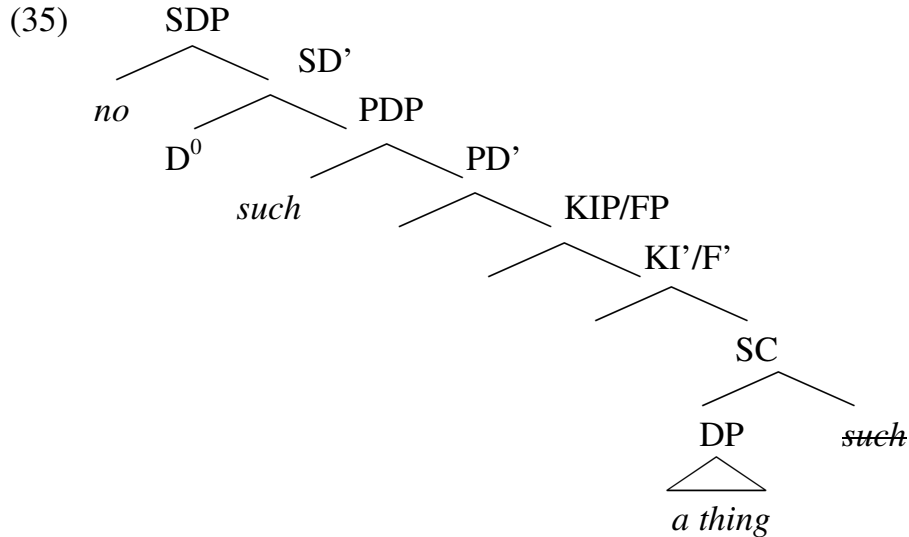
Here, *such* moves from the prototypical attributive adjective position:



3.4 Deriving pre-article *such* from a predicative

Another possible derivation is predicate raising (Wood 2002:112), taking the idea from Zamparelli (1995) and Bennis, Corver & den Dikken's (1998) derivation of *wat voor* constructions. The main idea is that *such* originates as a predicate in a small clause that has a DP subject.

The structure below is according to Zamparelli (1995):



Deriving German pre-article *solch* from a predicative would also account for why it is never inflected, given that predicative adjectives are never inflected in German, (see e.g. Vikner 2001).

Danish pre-article *sådan* is peculiar in that it may be, but most often is not, inflected. This is completely in line with it being derived from a predicative, because also with predicative *sådan* agreement is only a rarely used option, not a must.

A Google search (August 2008) turned up the following figures:

(36)	<i>det er sådan<u>t</u> at</i>	101	(it-NEUT is such-NEUT that ...)
	<i>det er sådan at</i>	43700	(it-NEUT is such-COM that ...)
	<i>den er sådan<u>t</u> at</i>	0	(it-COM is such-NEUT that ...)
	<i>den er sådan at</i>	2000	(it-COM is such-COM that ...)

4. *so*

English *so* belongs to a class of degree adverbs that are part of the leftmost functional structure of the AdjP (Bresnan 1973, Corver 1997). The class includes the degree adverbs: *how, as, too, this, that*. (Danish: *så, for, hvor* and German *so, zu, wie*).

4.1 *so* constructions in English, Danish and German

If we again look at the logical possibilities:

(37)

	pre-article	post-article
kind	a	b
degree	c	d

(38)

English

	pre-article	post-article
kind	-	-
degree	so	[%] so

- a. *so a hotel
- b. *a so hotel
- c. so bad a hotel/
[%]so a bad hotel
- d. [%]a so bad hotel

(39)

Danish

	pre-article	post-article
kind	-	-
degree	så	så

- a. *så et hotel
- b. *et så hotel
- c. så dårligt et hotel/
*så et dårligt hotel
- d. et så dårligt hotel

(40)

German

	pre-article	post-article
kind	so	-
degree	so	so

- a. so ein Hotel
- b. *ein so Hotel
- c. *so schlecht ein Hotel/
so ein schlechtes Hotel
- d. ein so schlechtes Hotel

- English and Danish only have degree *so/så*.
- English and Danish pre-article *so/så* does not occur on its own preceding the article (though it is perhaps becoming marginally possible in English), but it does occur together with an adjective preceding the article, as in (38)c, (39)c.
- English post-article *so* needs stress to be grammatical, as in (38)d, whereas this is not the case for Danish in (39)d and German in (40)d.
- German pre-article *so* is not only possible with a degree interpretation like English and Danish, as in (40)c,d, but also with a kind interpretation, as in (40)a. Both German types of pre-article *so* must occur on their own preceding the article, with adjectives (if there are any) following the article.

4.2 Pre-article *so*

German is again the most complex as it is possible to have a kind reading for *so*. It appears that *so* is moving into the area earlier covered by *solch*.

In German and Dutch the order [**so** ART (ADJ) NOUN] is grammatical. This construction is equivalent to those with *such* in English (*such a big house*).

- (41)
- | | |
|-----|----------------------|
| En. | %so a (big) house |
| Da. | *så et (stort) hus |
| Ge. | so ein (großes) Haus |
| Du. | zo'n (groot) huis |

The grammaticalization of German *so* is evident from the observation that (42)b, in the plural, is possible (Hole & Klump, 2000; Lenerz & Lohnstein 2004):

- (42)
- | | | |
|----|--|--|
| a. | so'n Pullover | |
| | <i>a sweater like that /of that kind</i> | |
| b. | so'ne Pullover | |
| | <i>sweaters like that /of that kind</i> | |

Although often reported as ungrammatical in present-day English, the construction was, however, grammatical in Middle English with *so* and also seems to be acceptable in colloquial PDE (cf.(38)a):

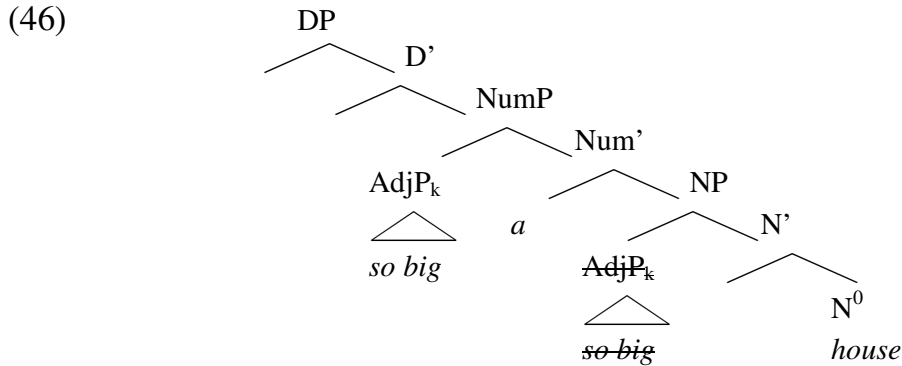
- (43) Ther roose so a grete torment in the see
there arose such a great torment in the sea
(1471 CAXTON *The Recuyell Of The Historyes Of Troy*, ed. O. Sommer 540)

- (44) I am delighted that there has been so a good response to the park and ride scheme in its first week.
(<http://www.carmarthenshire.gov.uk/English/news>)

- (45) And that's why Hulu has been so a huge success.
(http://blog.brandexperiencelab.org/experience_manifesto/2009/01/)

4.3 Deriving pre-article *so* from an attributive

A possible way to derive pre-article *so* could be for it to move from the canonical attributive adjective position in a similar way to pre-article *such* (in 3.3). In (46) below, the adjective phrase *so big* could have moved into spec-NumP (Matushansky 2002; Wood 2002, 2003):



This would capture the fact that it is possible for certain determiners (though not *the* or *no*) to precede the degree phrase:

(47) D'Cey feared he would not cut half so good a figure. (CCAЕ)

(48) I can at any rate promise you that I will not be the medium of any so absurd a requisition. (Anthony Tollope, *Barchester Towers*)

This also would capture the fact that both (50) and (51) are possible:

(49) *so big the hotel

(50) so big a hotel

(51) the so big hotel

(52) An example based on the so impressive work of José Roca
(www.powerbasic.com/support/forums)

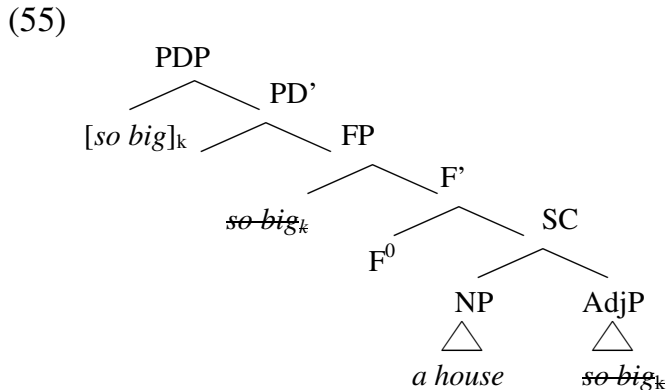
(53) Day at leisure to explore the so impressive city.
(www.aegeantours.com.au/south-america-highlights-tour)

4.4 Deriving pre-article *so* from a predicate

As with *such* the pre-article *so* could also be derived through predicate raising from the small clause:

(54) [sc [DP a house] [AdjP so big]]

(e.g. Zamparelli 1995; Bennis, Corver and den Dikken 1998; Corver 1998; Wood 2002:106). Here, adapting from Zamparelli (1995), we would have a nominal structure as follows:



Support for this derivation comes from the existence of constructions with the surface word order of (54):

(56) She told me she never saw a man so pleased by a glass of wine.
(BNC: F9R 64)

(57) It is rare to see a house so little altered.
(BNC: AB4 474)

4.4.1 Evidence for predicate raising in English: the optional preposition *of*

Evidence for predicate raising, i.e. in support of the derivation in (55) comes from English. As seen in (58) below from Zamparelli (1995: 132-33) and the corpus example (59) many dialects of English have an optional *of* in constructions like these.

(58) so tall (of) a man (that he had to lean on the basket)

(59) I was so cold of a person at one time in my life; closed off all my own feelings
(COCA: panel discussion (19960724))

This *of* is not a case assigning preposition, nor a possessive *of* or a partitive *of*. It is similar to the meaningless element, Dutch *van*, argued by Bennis, Corver and den Dikken (1998:86) to be a functional head parallel to the clausal copula as in the Dutch examples below:

- (60) De grootste beer is die kerel
The biggest bear is that guy
- (61) een beer van een kerel
a bear of a guy

Similar constructions are possible in English:

- (62) The island is a jewel
 (63) A jewel of an island

And similar constructions are possible in Danish

- (64) Den taxachaufføren var et rigtigt fjols
That taxi-driver was a real fool
- (65) et fjols af en taxachauffør
a fool of a taxi-driver

(<http://fyrstelin.nationenblog.dk/2009/01/11/>)

The head of the extended phrase (F⁰) in (55) is spelled out by the preposition *van* in Dutch and in English by the nominal copula, *of*.

4.4.2 English predicative adjectives:

Adjectives that are usually only predicative (e.g. *alike, awake, ashamed, upset, afloat, alike, alone*) appear to be better in these constructions than when they occur in the canonical attributive position. (compare b and c):

- (66) a. The shoplifter is ashamed.
 b. So ashamed a shoplifter have I never seen.
 c. *the ashamed shoplifter
 d. the so ashamed shoplifter
- (67) a. The twins are alike.
 b. *the alike twins
 c. the so alike twins

4.4.3 German adjectives:

According to Lenerz and Lohnstein (2004:83), although (68)b is ungrammatical, native speakers nevertheless have clear intuitions of what the form should be, not only uninflected (as predicate adjectives are in German, see e.g. Vikner 2001) but also in the predicate form, *hoch*. Therefore, although both are ungrammatical, (68)b is better than (68)a.

- (68) a. *so **hoh*- ein Haus (so high-ATTR a house)
 b. *so *hoch* ein Haus (so high-PRED a house)

5. Conclusion: Can morphology help with the derivations?

Here again are the possibilities:

(69)

	pre-article	post-article
kind	a	b
degree	c	d

(70)

		pre-article	post-article
kind	English	such	-
	degree	such	-

		pre-article	post-article
kind	English	-	-
	degree	so	%so

(71)

		pre-article	post-article
kind	Danish	sådan(t)	sådan _t
	degree	sådan(t)	-

		pre-article	post-article
kind	Danish	-	-
	degree	så	så

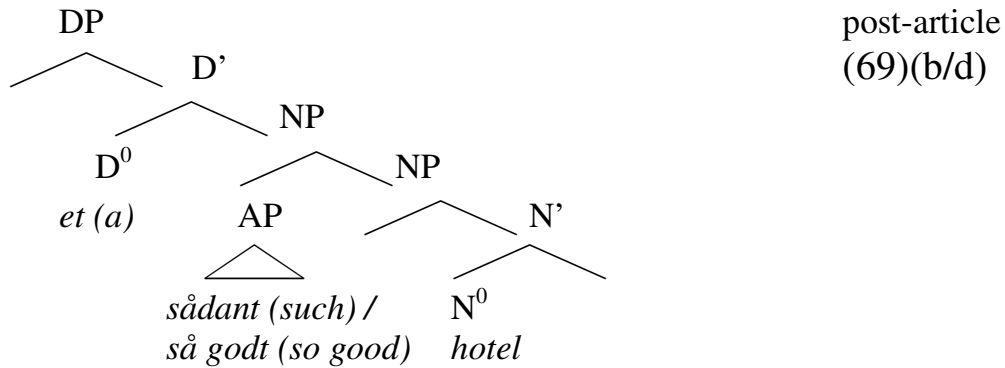
(72)

		pre-article	post-article
kind	German	solch	solches
	degree	solch	solch

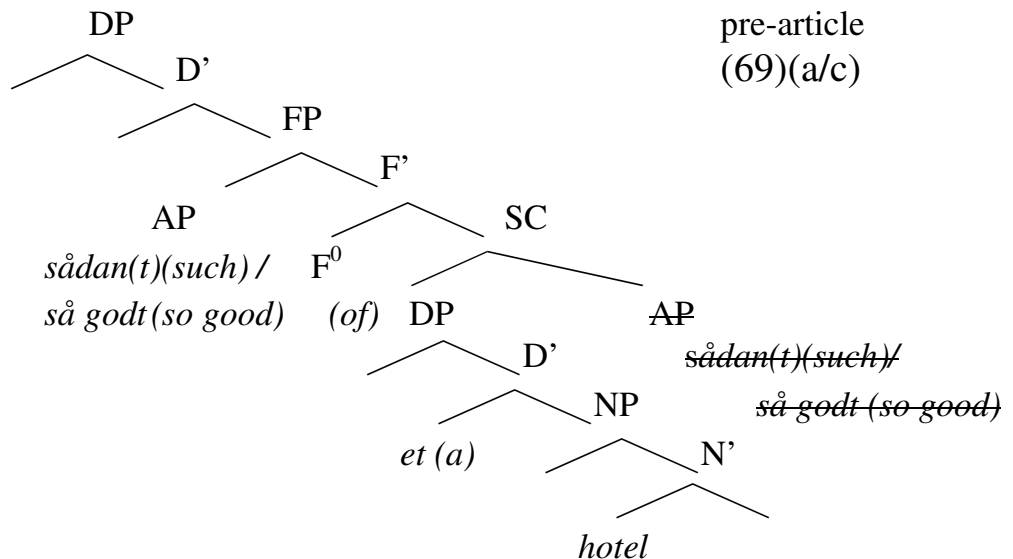
		pre-article	post-article
kind	German	so	-
	degree	so	so

Although one might expect to be able to choose one of the two derivations, we suggest that both are possible:

(73)



(74)



As may be seen from (74), pre-article *so* and *such* are “pre-article” because they precede the small clause subject.

As (73) shows, (69)b/d are base-generated in situ, and inflected as all attributive adjectives in Germanic are. (69) (b/d cannot give rise to (69)a/c as such a movement would be a left branch constraint violation.)

As (74) shows, (69)a/c move from a postnominal predicate position, which is why they are inflected only in languages where predicative adjectives are inflected (in Germanic, these are only the VO-languages).

Thus, the reason why German pre-article *solch* (i.e. (69)a/c) is never inflected is that it is derived from a predicative. The reason why post-article degree *solch* (i.e. (69)d) is never inflected is that it is an adverb, not an adjective.

In Danish, there is no post-article degree *sådan* (i.e. (69)d). Pre-article *sådan* (i.e. (69)a/c) is peculiar in that it may, but most often doesn't, show agreement with the NP. This is completely in line with it being derived from a predicative, because also with predicative *sådan* agreement is only a rarely used option, not a must (cf. (36)).

There is a potential problem with pre-article degree *such*, (69)c, i.e. the degree reading of *such a nice hotel* / *sådan(t) et godt hotel* / *solch ein gutes Hotel* / *so ein gutes Hotel*. It would have to be derived much like (69)a/(74), *such a hotel*, but with *good* inside the DP subject of the small clause, even though one might expect such a derivation only to have a kind reading.

It cannot be parallel to (69)a/(73) with *such good* instead of *so good*, as the movement would presumably be impossible, and as this would also mean that at some level we have an AdjP [*such good*], which is otherwise not possible in any of the languages, **the such good hotel*.

The structure in (74) is fully compatible with examples such as (32) (repeated as (75)) as well as double article constructions (in section 6 below)

(75) on the basis of any such a proposal or application form

6 Article doubling

Article doubling has been noted in several languages:

- (76) ***(a)** so **a** große Bua (Bavarian: Kallulli and Rothmayr 2008:96)
 a so/such a big boy ‘
 ‘*such a big boy*’ or ‘*so big a boy*’
- (77) **ä** ganz **ä** schönä Baum (Swiss German, Leu 2008)
 a totally a beautiful tree
 ‘*a totally beautiful tree*’
- (78) **ein** so **ein** großer Bub
 a such a big boy (Standard German: Kallulli and Rothmayr 2008:97)
- (79) **een** zo **een** lieve oma
 a such a sweet grandmother (Dutch, Corver & van Koppen, 2006:12)

6.1 Doubling occurs in (Standard) English and Danish with *such* and *sådan*

English (examples from BNC):

- (80) My rules are to cut down drinking, control my temper if I am drinking, not to drink in a such a large group and not to waste much money.
- (81) At present, however, many people are absolutely riveted by what is happening, or could happen, in this country at a such a crucial moment in world history.
- (82) If he was in a such a desperate hurry he could have gone down and gone over there.

US English (examples from COCA):

- (83) I mean, what's the evidence that it's a such a threat? (NPR, *Talk of the Nation*)
- (84) He was a such a vibrant proselytizer for classical music. (NPR, *Saturday*)
- (85) And I know that there is a such a thing as a post-partum psychosis.

Danish

- (86) Og det gør han med en sådan en flid, at hans medarbejdere ikke mener, han overhovedet kan afse tid til andet (http://ordnet.dk/korpusdk)
And he does that with a such a diligence that his colleagues do not think he can at all afford time for anything else.
- (87) Det modsatte er, at du er en sådan en smart fyr, der er meget ude om natten (http://ordnet.dk/korpusdk)
The opposite is that you are a such a smart guy who is out a lot at night
- (88) Hvis de kan slå fast, hvem der har gjort det, så skal der i en sådan en sag falde en bøde på nogle tusinde kroner.
if they can establish who has done it, then shall there in a such a case fall a fine of some thousand kroner
(www.sondagsavisen.dk/Site/Arkiv/legArc-gb-hb/Artikler/Indland/1eefa3fa-0ce7-11d7-936f-0010b555f137.htm)

Although most examples have a degree reading, (85) and (88) have a kind reading.

6.2 Doubling English and Danish with *so* or *så* + adjective:

- (89) However, in a so long a process, the genetic variability, knowledge and know-how determine the vital capacity for genetic improvement in the future. (www.actahort.org/books)
- (90) Det var første gang, at den kommunistiske ledelse på så markant en plads tillod kritik af et så kontroversielt et projekt. (http://ordnet.dk/korpusdk)
That was the first time that the communist leadership in so prominent a place permitted criticism of a so controversial a project
- (91) Men et så stort et projekt i byens hjerte kræver selvsagt en langt højere informationsgrad (http://ordnet.dk/korpusdk)
But a so big a project in the heart of the town of course demands a much higher amount of information
- (92) Men detektivarbejdet har været en så stor en succes (http://ordnet.dk/korpusdk)
But the detective work has been a so big a success

As may be seen above, in Danish both articles agree with the noun in gender and the adjective has agreement morphology as would be expected.

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