Coordination, discourse relations, and information packaging – cross-linguistic differences

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Abstract: Taking non-correspondences regarding coordinated constructions in translation as a starting point, we discuss the interpretation of coordinated structures as compared to non-coordinated alternatives. We show that Norwegian tends to exploit coordination somewhat differently than English or German, and point at some interesting theoretical implications with respect to discourse structure and discourse relations.

1. Introduction

Coordinated constructions are common in virtually every language of the world. However, there is no guarantee that in translation coordination in the source language (SL) always corresponds to coordination in the target language (TL), or that TL coordination always has coordination as its SL counterpart. Viewing coordination as a specific means of information packaging which, in spite of its apparent syntactic symmetry (the conjuncts belonging to the same syntactic category), may often be understood as encoding or ‘ explicating’ an asymmetrical relation at the semantic-pragmatic level, we are going to investigate examples of translation mismatches involving coordinated constructions in Norwegian (both as SL and TL). Using corpus data from different translation constellations between Norwegian, German and English, we will be concerned with two types of translation discrepancy, namely (i) SL coordinated clauses translated as a sequence of sentences in the TL (section 2.1.), and (ii) SL syntactic subordination (adjunction) rendered as (VP or clausal) coordination in the TL (sections 2.2. and 2.3.). The data are taken from three different parallel corpora, the Oslo Multilingual Corpus (OMC)\(^2\), as well as two smaller corpora of non-fictional texts.

We shall argue that the Norwegian conjunction og, while being semantically equivalent to English and and German und, is exploited somewhat differently in discourse. Thus, coordination seems to be possible in Norwegian in cases where it would be problematic in German; and it may be used without further discourse markers in cases where an explicit discourse marker is strongly preferred in German (2.3.). Coordination may also be used to compensate for syntactic subordination in German and English (2.2. and 2.3.), licensing the inference of certain discourse relations to hold between the conjuncts while blocking possible interpretations arising from non-coordinated sentence alternatives (cf. discussion of coordinated vs. ‘full stop sentences’ in Blakemore (1987, 2002). Our hypothesis is that such

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\(^2\) See http://www.hf.uio.no/forskningsprosjekter/sprik/english/corpus/index.html
differences reflect language-specific strategies of information packaging, supporting the claim that Norwegian has a preference for paratactic structures in discourse organisation where English and German tend to prefer hierarchical/hypotactic ones (Fabricius-Hansen, 1999).

From a theoretical viewpoint our observations raise interesting questions as regards the distinction between subordinating vs. coordinating discourse relations as described in Segmented Discourse Representation Theory (SDRT) (Asher & Vieu, 2005) or nucleus-satellite vs. multinuclear discourse relations in Rhetorical Structure Theory (RST) (Mann & Thompson, 1988) and their relation to syntactic distinctions (coordination vs. subordination) in a cross-linguistic perspective. Our data suggest that either the use of coordinating/subordinating (or multinuclear/nucleus-satellite) discourse relations in Norwegian differs from their use in German and English, or that syntactic coordination signalled by a coordination marker (og/und/and) does not necessarily imply a coordinating discourse relation between the conjuncts, contrary to general assumptions as suggested in Asher & Vieu (2005).

A further – both theoretically and empirically interesting – implication of our contrastive analyses is that they shed light on the backgrounding function of (certain types of) adjuncts. This point, however, will not be addressed here.

2. Coordination: three contrastive perspectives

2.1. From coordinated clauses to sentence sequences (Norwegian > German)

Which kinds of sentences can be coordinated, what is the difference in interpretation between coordinated clauses and non-coordinated sequences of sentences, and how may this become relevant for translation? Research within the framework of Relevance Theory (Blakemore, 1987, 2002; Blakemore & Carston, 2005) has shown that by using coordination instead of a sequence of non-coordinated (‘full stop’) sentences two types of signal are sent to the reader, namely, (i) to process the two conjuncts as a unit – both conjuncts function together as premises in the derivation of a joint cognitive effect – and (ii) to licence certain inferences regarding possible relations holding between them. In narrative examples, for instance, a temporal-causal relation (of ‘consequentiality’, cf. Sandström, 1993) is often inferred without any explicit mention of such a relation. One possible non-narrative use of coordination is seen in argumentative examples, where the conjuncts make a joint contribution as steps in an argumentation (Blakemore & Carston, 2005).

(1a) Legene hadde sitt eget reisemønster, som er analysert\textsuperscript{[i]}. Studiereiser til utlandet var viktige for profesjonell anseelse og autoritet\textsuperscript{[ii]}, og totalbildet av reisemønsteret er entydig\textsuperscript{[iii]}. Tyskspråklige universiteter var de viktigste reismål for norske leger som ønsket videreutdannelse eller specialisering\textsuperscript{[iv]}.

‘The doctors had their own travel pattern, which is analysed\textsuperscript{[i]}. Educational trips abroad were important for professional reputation and authority\textsuperscript{[ii]}, and the overall picture of the travel pattern is clear\textsuperscript{[iii]}: German-speaking universities were the most important destinations for Norwegian doctors who wanted further education or specialisation\textsuperscript{[iv]}.’

(1b) Die Ärzte hatten ihr eigenes, heute analysiertes, Reisemuster\textsuperscript{[i]}. Studienreisen ins Ausland wurden als wichtig für berufliches Ansehen und Autorität angesehen\textsuperscript{[ii]}, Das Gesamtbild der Reisen ist eindeutig\textsuperscript{[iii]}: Deutschsprachige Universitäten waren die wichtigsten Reiseziele norwegischer Ärzte, die eine Weiterbildung oder Spezialisierung wünschten\textsuperscript{[iv]}.

‘The doctors had their own, today analysed, travel pattern\textsuperscript{[i]}. Educational trips abroad were viewed as being important for professional reputation and authority\textsuperscript{[ii]} The overall picture of the travels is clear\textsuperscript{[iii]}: German-speaking universities were the most important destinations for Norwegian doctors who wanted further education or specialisation\textsuperscript{[iv]}.’
Blakemore and Carston’s observations seem to hold for German as well as English. However, our corpus contains several non-narrative examples of clause coordination in the Norwegian original where coordination would sound odd in German, viz. (1) above. In (1a) the lack of a relevant common topic between the two conjuncts seems to block the use of coordination in the German translation (1b). A further problem is the fact that the second conjunct alone is elaborated by the sentence following the colon. In the translation the coordinated clauses are split into two separate sentences which leads to a change of the discourse structure assigned to the text: In the RST model, the German translation can be analysed as a Background relation – with (1b[iii]) as satellite, its nucleus covering (1b[iii]) and (1b[iv]) –, and the span (1b[iii])-(1b[vi]) functioning as Elaboration to (1b[v]). The analysis of the Norwegian original, however, would possibly have to assign a (multinuclear) Conjunction (or Joint) relation to (1a[iii]) and (1a[iii]), but where does this span attach to its discourse context? To the left (as Elaboration or Background of (1a[i]) – which does not fit very well), or to the right (as Background)? But then – at least as a non-native speaker of Norwegian – one runs into problems with how to coherently interpret the sentence following the colon, since (1a[iv]) certainly elaborates the second conjunct (1a[iii]), but not the first (1a[ii]). Thus, the grouping of (1a[iii]) and (1a[iii]) as a joint, non-hierarchical span leads to attachment problems with the following discourse segment.

Using the SDRT approach one runs into similar problems: In the Norwegian version the reader probably first tries to interpret (1a[iii]) as an elaboration of the preceding sentence (1a[i]). But which relation holds between (1a[i]) and (1a[iii])? In English or German the use of the coordination marker would presuppose the existence of some kind of common topic between the linked elements, but obviously Norwegian is not that strict in this respect. For the German version, an SDRT-style analysis is less problematic: a relation of Background, may be assigned between the independent sentence corresponding to the first ST conjunct (1b[iii]) and the sentence preceding it (1b[i]), whereas the counterpart of the second conjunct (1b[iii]) can be interpreted as elaborating sentence (1b[i]).

The corpus also contains narrative examples of sentential coordination which are split into separate sentences in the German translation, induced e.g. by lexical translation problems as in (2) below. A direct translation of the Norwegian og det tok slutt med at ... dro (‘and it took (an) end with that ... travelled/went’) by German und es nahm (ein Ende (da)mit, dass ... reisten/gingen would have been possible, but stylistically marked. Instead, the finite verb reisten – the counterpart of dro (‘travelled/went’) in the subordinate clause in the Norwegian version – has been chosen as the main verb of a separate sentence corresponding to the second conjunct of the Norwegian original text, a choice which also leads to other syntactic changes in the German version (2b). A translation of the second conjunct in the Norwegian text by und es reisten keine norwegischen Studenten mehr ... (‘and it travelled no Norwegian students more/longer ...’) would have been an option, licensing the same (consequential) interpretation as the Norwegian version. However, the translator has chosen to render the sentential coordination as a sentence sequence and to explicitly signal the discourse relation by a discourse marker (damit ‘with this’, lit. ‘there-with’) in (2b) in order to trigger the same interpretation as in the SL. Interestingly, the discourse marker is indispensable in a translation by a sentence sequence. This is in accordance with Blakemore’s (1987; 2002) observation that in coordinated sentences causal-temporal relations can be inferred through the propositional content of the coordinated utterances, whereas this is not possible in separate (‘full stop’) sentences, since in this latter case it is not guaranteed that the Gricean maxim ‘Be orderly’ is followed (e.g., the order of cause and effect may be reversed which is not possible in coordinated sentences).
Thus, what these two examples indicate is that Norwegian seems to be less restrictive than German as regards which discourse relations may hold between sentences linked by the coordination marker og (‘and’) (1), and that sentential coordination is chosen in Norwegian in cases where in German a more explicit discourse segmentation and signalling of a discourse relation is preferred (2).

(2a) Reformasjonen bragte etterhvert denne direkte norsk-tyanske forbindelse til opphør. Den dansk-norske konge ønsket å sentralisere presteudannelsen til universitetet i København (grunlagt 1479), og det tok slutt med at norske studenter dro til tyske universiteter for å få sin utdannelse.


‘The reformation gradually brought this direct Norwegian-German connection to a standstill. The Danish-Norwegian king wanted to centralise the priest education to the university of Copenhagen (founded 1479), and it took (an) end that Norwegian students went to German universities’

2.2. From VP/NP adjunction to coordination (German > Norwegian)

(3) and (4) below are typical examples of what Fabricius-Hansen (1999) has termed backward information extraction, which occurs quite frequently in translations from German into Norwegian (Solfjeld, 2004): Information encoded in an adjunct at VP level (3) or NP level (4) in the source sentence is rendered in a conjunct/sentence to the left of the conjunct/sentence corresponding most closely to the main predicate of the source sentence, the latter having wide focus.

By choosing a coordinated structure in (3) the Norwegian translator exploits the inference mechanisms triggered by the structure (cf. 2.1.), ‘reducing’ the first conjunct to the discourse function of ‘leading up to’ the second, i.e. entering into a consequentiality relation with the second conjunct. This, in turn, establishes the second conjunct as the (main) focus – equivalent to the source text. Coordinated structures are thus chosen to block possible interpretations arising from independent sentence alternatives – options that would not preserve the main focus of the source version. The extent to which independent sentences allow interpretations that blur the discourse structure (or trigger so-called garden-path-effects), has to do with the propositional content of the constituents. In (4), the consequentiality relation between the two independent sentences is fairly clear from the content whereas in (3), independent sentences (3b’) would suggest that each sentence conveys separate measures taken, i.e each sentence elaborates on medical care. In this case coordination seems to be necessary or preferable to preserve a discourse structure equivalent to that of the source text. These findings are in line with relevance theoretical approaches, as argued in sect. 2.1.: By choosing coordination the translator blocks the possibility that the first conjunct relates to the context separately.
(3a) Für die Trennung des Kindes von der Mutter wurden medizinische und pädagogische Begründungen angeführt und anhand einiger aus dem gesamten Zusammenhang des Wohlbefinden des Kindes herausgerissenen statistischen Daten, wie etwa die Verringerung der Säuglingssterbquote, beglubigt. Eine perfekte medizinisch-technische Versorgung bekam die größte Bedeutung. Im Interesse der Infektionsverhütung [...] wurde die Sterilität groß geschrieben. 

‘For the separation of the child from its mother medical and pedagogical reasons were given and supported by statistical data, taken out of the context of the child’s well-being, like e.g. the decline of baby mortality. A perfect medical-technical care got vital importance. In the interest of infection avoidance [...] sterility was emphasized.’

(3b) Det blev anført medisinske og pedagogiske grunner til at mor og barn skulle skilles ad, og dette blev forklart ved henvisning til statistiske data angående spedbornas velbefinnende, som var revet ut av sin sammenheng, såsom nedgangen i spedbornas dødsfaldighed. En perfekt medisinsk-teknisk omsorg ble av største betydning. Infeksjoner skulle unngås [...], og steriliteten ble skjøvet i forgrunnen.

‘Medical and pedagogical reasons were given for separating mother and child, and this was explained by referring to statistical data regarding the well-being of the child, taken out of its context, like e.g. the decline of infant mortality rates. A perfect medical-technical care became of vital importance. Infections were to be avoided [...], and sterility was moved into the foreground.’

(3b’) … Infeksjoner skulle unngås [...]. Steriliteten ble skjøvet i forgrunnen.

‘Infections were to be avoided [...]. Sterility was moved into the foreground.’

(4a) Antje W. war bis zur Geburt ihres ersten Kindes Gerichtsdolmetscherin. Dann überredete ihr Mann sie dazu, ihren Beruf aufzugeben und sich ganz der Familie zu widmen. Der Traum zeigt deutlich, in welchem Zwangslage sie sich befindet. Ohne ihre befriedigenden Berufserlebnisse fühlt sich die von Natur aus dynamische, ehrgeizige Frau einsam und isoliert.

‘Antje W. was a court interpreter until the birth of her first child. Then her husband persuaded her to give up her work and devote herself to the family. The dream clearly shows what a dilemma she is in. Without her satisfying professional experiences the by [her] nature dynamic, ambitious woman feels lonely and isolated’


‘Anne was court interpreter until she had her first child. Then her husband persuaded her to give up her work and devote herself to the family. The dream clearly shows what a dilemma she is in. By nature she is a dynamic, ambitious woman. Without satisfying professional experiences she feels lonely and isolated.’

Typically, backward information extraction finds its sources in structures in the so-called ‘Vorfeld’ in the German original, i.e. in the initial position to the left of the finite verb in declarative sentences (3a above). The fact that a conjoined structure in such cases is very often preferred to secure a consequentiality reading, and also the fact that a conjoined structure – with its associated consequentiality reading – is in many cases at least a possible option, seems to give some support to traditional claims that sentence openings are the preferred sites for elements linking the sentence information to the preceding context, giving or reactivating necessary background information (see e.g. Dietrich 1994 and the discussion in Lambrecht 1994:199ff). The recurring translation patterns in our data suggest that the inferences of temporal sequencing or (at least weak) causal or enablement relations, associated with ‘consequentiality’, must – somehow – be part of the role played by the initial constituents in the SL text, giving rise to the sentence extraction. This, in turn, suggests that the initial constituents in the SL text play much of the same role as the conjoined structure in the target version, conveying a relevant background of enabling or causing circumstances, and
thus enhancing the reader’s understanding of the main informational contribution, given later in the sentence. At the same time, the translation strategies applied in examples (3) and (4) illustrate that German and Norwegian seem to have different preferences regarding a hierarchical vs. non-hierarchical structuring of discourse, as pointed out by Fabricius-Hansen (1999). Where German tends to exploit hierarchical means of information organisation, e.g. clausal subordination and non-clausal adjunction, including (pre)nominal modification, Norwegian prefers paratactic structures and an incremental construction of discourse.

Many sentences or conjuncts extracted to the left contain so-called state predicates, giving information about the participating persons, objects or situations (3b and 4b above). The consequentiality claimed to hold between conjuncts in conjoined structures have primarily been related to event predicates. The role of state predicates in conjoined structures is less discussed (cf., however, the example in Blakemore, 1987, 113f and 117). Our data suggest that state predicates – at least in narratives – also often require some (at least weak) causal or enablement relations link as a precondition for being conjoined, although the temporal conditions are (of course) different. It is claimed that state predicates in narratives are evaluated for their relevance in relation to events making up the ‘episodic structure’ – and typically in relation to subsequent events (Sandström, 1993). This seems to fit in with the observation that state predicates are often extracted to the left, being relevant for – leading up to – what comes next. This, in turn, suggests that the translation process often involves a rather linear mapping of the monosentential discourse structure onto the conjoined structure.

2.3. From *ing*-adjuncts to coordination (English > German/Norwegian)
Free *ing*-adjuncts are adjuncts of some sort but more ‘sentential’ and less integrated (Lehmann, 1988) than the German adjectival/adverbial adjuncts giving rise to sentence splitting in (3)-(4) above. Quite often, such adjunct constructions are rendered as VP coordination in German and Norwegian (cf. Behrens, 1998; Behrens & Fabricius-Hansen, 2005). In other cases, translation by a sentence sequence is preferred. The choice opted for depends, among other things, on the inferred discourse relation between the *ing*-adjunct and its matrix clause. Coordination seems inadequate in both TLs when the *ing*-adjunct is interpreted as a non-causative elaboration – in accordance with the subordinating status of elaboration (cf. Asher & Vieu, 2005). The relation of accompanying circumstance, on the other hand, quite often is translated by coordination although it classifies as a subordinating relation according to the Right Frontier Constraint by allowing the subsequent sentence to attach to the penultimate clause in discourse structure; see example (5).³

(5a) The others followed her, *waving* their weapons. Then they stopped. They stared around the room. (RD1)
(5b) Die anderen folgten ih*r und schwangen* ihre Waffen. Dann hielten sie inne. Sie starrten in alle Ecken.
‘The others followed her and *waved* their weapons. …’
(5c) De andre kom etter *og viftet med våpnene sine*. Så stoppet de. De stirret rundt i rommet.
‘The others came after *and waved* with their weapons. …’

In such cases, the discourse marker Dabei ‘there + by’ (meaning ‘at the same time / on the same occasion’) may occur in the second conjunct of the German translation (6b); it makes explicit the relation of temporal overlap inherent in the SL construction, thus blocking a (con)sequential interpretation which might otherwise be preferred. Corresponding markers are

³ The relation of Accompanying Circumstance and its place among rhetorical relations are discussed more in detail by Behrens and Fabricius-Hansen (2005).
normally not found in the Norwegian coordinate translations, indicating that Norwegian
coordinated structures are less biased towards interpretations of temporal sequence than
coordination in German.

(6a) He smiled slyly, nodding.
(6b) Er lächelte verstohlen und nickte dabei.
   ‘He smiled furtively and nodded thereby.’
(6c) Han smilete litt lurt og nikket.
   ‘He smiled somewhat slyly and nodded.’

The constituents of the SL structure may also be mapped onto VP-coordination in the
reversed order, as shown in (7b), which can be seen as another strategy of preserving the
backgrounding or ‘downgrading’ effect of the ing-adjunct in the German translation. A
translation by VP-coordination without this change in linearisation might cause interpretation
problems for the German reader, because the sentence-final position is where German as an
OV language strongly prefers focused/foregrounded information (Doherty, 2002). Norwegian
as a VO language, in contrast, is much more apt to allow a relatively rich structure in post-
focal position which might explain why it was not necessary to reorder the conjuncts in the
Norwegian translation (7c).

(7a) Tony went home, taking his toolbox with him. It had been a crap day all round.
(7b) Tony griff nach6 seinem Werkzeugkasten und ging nach Hause. …
    ‘Tony grabbed after his toolbox and went home.’
(7c) Tony gikk hjem og tok med seg verktøykassen sin. …
    ‘Tony went home and took with him his tool box.’

3. Summary and conclusions
Coordination is used as a means of clause combining and information packaging at discourse
level and differs from a sentence sequence by explicitly instructing the reader to ‘keep the two
propositions together’ in discourse processing, i.e. in establishing a discourse structure,
licensing the inference of certain discourse relations to hold between the conjuncts, while
blocking others. As a means of constructing (more) complex (clause/VP) constituents from
simpler ones of the same syntactic category, coordination can be compared to certain kinds of
adjunction, i.e. syntactic subordination.

In this paper we have discussed examples of translation mismatch between Norwegian,
German and English which are related to these discourse structuring functions of
coordination, and have argued that Norwegian tends to exploit coordination somewhat
differently than English or German in building discourse structure. Norwegian seems to use
(sentence and VP) coordination as a preferred means to link discourse units. In translations
from English or German coordination is used as a kind of compensation strategy when
grammatical devices corresponding to those in the SL text, e.g. complex pre-nominal
modification (2.2.) or ing-adjuncts (2.3.), are not available. The inference processes licensed
by the propositional meaning of the conjuncts and the conjunction operation itself compensate
for the interpretation processes triggered by syntactic subordination/downgrading in the
source languages (German and English). Some of the examples we have discussed also

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4 See Ramm & Fabricius-Hansen (2005) for a closer discussion of the notions of foregrounding/backgrounding.
5 See also Krujff-Korabayová & Steedman (2003) on how the VO/OV-parameter and the internal information
   structure of sentences, including complex sentence structures, interact with discourse structure.
6 Note that griff nach (‘reaching for’) is not a particular good translation of taking with (him). Nahm (‘took’)
   which is semantically more neutral would possibly have been a better option here.
suggest that coordination is less constrained in Norwegian than in English or German as regards the discourse relations allowed between conjuncts (2.1.) and the relative order of backgrounded vs. foregrounded conjuncts (2.3). Finally, our observations indicate that if backgrounding correlates with a subordinating (nucleus-satellite) discourse relation and translation by coordination does not change the discourse relations, then the claim that syntactic coordination signals discourse coordinating (a multinuclear relation) cannot be universally true (see Ramm & Fabricius-Hansen, 2005 for a more thorough discussion of this question).

References