Elaboration and related discourse relations viewed from an interlingual perspective

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1. Introduction

The present paper is part of a study intended to (i) explore the semantic ‘space’ of Elaboration and related discourse relations on the basis of contrastive and, in particular, translational data; and (ii) investigate the means of expressing such relations in the three languages German, English, and Norwegian, thereby contributing to the description of relevant connectives such as INDEM ‘in-that’, DADURCH DASS ‘there-through that’, WOBEI ‘whereby’, DABEI ‘thereby’ in German and IDET ‘in-that’, VED Å ‘by’ + infinitive, VED AT ‘by that’ in Norwegian. 1

The study invites reflections on the ways in which we conceive events across the three languages. What types of event referents may be conceived as referring to the same event, to parallel events and to different events? To what extent and in what ways are event structures involved in permitting event referents to refer to the same event?

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1 The study is part of a larger project SPRIK (“Languages in Contrast”) conducted at the University of Oslo, in which we aim at reaching new insight into the ways discourse is structured in the three languages, on the basis of data collected from the Oslo Multilingual Corpus (OMC). The consists of sentence-aligned samples of authentic texts and translations. For more information see [http://www.hf.uio.no/german/sprik/english](http://www.hf.uio.no/german/sprik/english). The SPRIK project is funded by the Norwegian Research Council and the University of Oslo.
The inventory of connectives and structures used to express Elaboration and similar discourse semantic relations across the three languages do not correspond 1:1, and we are ultimately interested in establishing the relation between the systems by which such discourse semantic concepts are expressed.

Although etymologically equivalent to English IN THAT and Norwegian IDET, the German subordinative conjunction (subjunction) INDEM has no exact translational equivalent in these two languages. In its typical use, it seems to express a relation of Elaboration between matrix and subordinate clause. So a study of INDEM-clauses and their translations in English and Norwegian may contribute to a better understanding of Elaboration as a relation between independent sentences in a discourse. This point is demonstrated on a preliminary basis in section 2.

In section 3, we elicit ‘translational images’ of INDEM from the Oslo Multilingual Corpus by applying the method that Dyvik (1998) has developed as a general translational basis for (lexical) semantics. This method yields a more detailed picture of the various ways in which Elaboration may be expressed – or not expressed – in the three languages. But our data also suggest that it may not be possible to draw a sharp borderline between Elaboration and, e.g., ‘Accompanying Circumstance’. Like the meaning of INDEM itself these discourse theoretical concepts should probably rather be conceived or defined as vague, having distinct prototypical centers and partly overlapping peripheries. This impression is confirmed in section 4, which is concerned with the German adverbial connective DABEI ‘thereby’. – Section 5 contains a brief summary.

Our topic should be seen as part of the larger topic of information packaging in texts across languages. German INDEM is primarily a non-temporal subjunction introducing a proposition which quite often translates into an independent sentence without a relevant connective in Norwegian. Such translation decreases the informational density of the text. This shift of coherence can be observed in many pairs of non-fictional German source texts and their Norwegian translations (see Fabricius-Hansen 1996, 1998, 1999; Solfjeld 2000) Studying pairs of complex sentences containing INDEM and translational sentence-sequence equivalents in natural fictional and non-fictional contexts
will illuminate the function of connectives cross-linguistically and broaden our understanding of the semantic space of Elaboration in various text types.

It should, finally, be stressed that we are presenting ‘work in progress’ – methodological speculations and preliminary suggestions rather than definite results.

2. Elaboration and German INDEM

2.1 Halliday (1994)

The relevant literature offers various more or less overlapping definitions of Elaboration, Specification and the like, understood as discourse relations. According to Halliday (1994), for instance, Elaboration is as kind of ‘expansion’ that may be encoded paratactically (as exposition, exemplification, or clarification) or hypotactically:

“[…] one clause expands another by elaborating on it (or some portion of it): restating in other words, specifying in greater detail, commenting, or exemplifying” (Halliday 1994: 220).

“In Elaboration, one clause elaborates on the meaning of another by further specifying or describing it. The secondary clause does not introduce a new element into the picture but rather provides a further characterization on one that is already there, restating it, clarifying it, refining it, or adding a descriptive attribute or comment. The thing that is elaborated may be the primary clause as a whole, or it may be just some part of it – one or more of its constituents.” (ib., 225)

This is a very broad and rather vague definition: it includes expressions that others would probably not include in expressions of Elaboration, like e.g. non-restrictive relative clauses. It blurs a main distinction – the distinction between what one might call e[ventuality]-Elaboration, i.e. elaboration on descriptions of discourse referents established by verb projections (eventualities, propositions etc.), on the one hand, and i[individual]-Elaboration, expanding on descriptions on participants in eventualities, on the other hand.
2.2 Asher (1993)
A narrower and more precise definition of (e-)Elaboration is presented by Asher (1993):

Elaboration (α, β) holds iff β is more complex than α and
(i) α discourse-dominates β or
(ii) every ‘main event’ e in β is a part of some ‘main event’ e’ in α (Asher 1993: 267).

The definition of d-domination – cf clause (i) above – in its turn

“assumes a sort hierarchy in which there is a subsort relation that is a partial ordering on
the set of sorts. The sort hierarchy will cover both event types and object types. The sort
hierarchy is part of a fixed knowledge base, in which is to be encoded common sense
world knowledge”.(ib., 300)

“α d-dominates β iff α subsumes β [relative to a background knowledge base with a sort
structure] or (β entails α and not α entails β)” (ib.)

“α is a semantic label for β; it holds just in case α acts as a summary or topic statement
of β” (ib., 267).

The term main event introduced in clause (ii) above is defined as follows:

“There is an eventuality discourse referent e in a DRS K iff there is a predicate ϕ such that e-ϕ ∈ ConK and for no predicate ψ it is the case that e'-ψ(x,…, e) ∈ ConK.”

(ib., 330)

That is, an event e is not a main event in K if it is introduced as part of a condition on
some other event referent in K.

Finally,

β is more complex than α iff either the set of main events established in β is bigger than
the set of main events established in α or the set of constituents of β is bigger than the set
of constituents of α [where α and α are SDRSes] (ib., 300).

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2 One closing bracket is missing so it is unclear whether the complexity condition is part of condition (ii) or
not.
In other words, the definition of Elaboration has a structural part based on a complexity feature on conditions and constituents in addition to a subsumption relation based on a common sense ordering of the set of sorts. The clearly semantic part is based on the part-of or subevent relation between eventualities. Asher’s definition is primarily designed to account for the interpretation of (independent) sentences in discourse. But in principle, it should be applicable to clausal constituents of complex sentences, too.

Because of its complexity and heavy ‘recursive load’, it is hard to visualize Asher’s definition and understand all its implications. In particular, it is not very clear to us how the two disjunct clauses of the definition hang together.

2.3 Behrens (1998)

In her dissertation on free ING-adjuncts in English and their translational equivalents in Norwegian, Behrens (1998) suggests a refinement of Asher’s definition, based on event inclusion or entailment between conditions on eventualities alone. According to her,

“Elaboration (K1, K2) is licensed iff for every e2 introduced in K2 there is an e1 introduced in K1 such that the conditions on e2 can be made [by accommodation] to entail the conditions on e1.” (Behrens 1998: 161)

“Elaboration (K1, K2) is true iff the condition e2 ⊆ e1 is true for every e2 in K2 and some e1 in K1.” (ib., 162)

If the conditions on e2 in the given context can be made to entail the conditions on e1, the eventuality e2 and e1 may be identified with each other and their conditions consequently merged:

“Let E1 be the set of events in K1 and E2 be the set of events in K2. For every e2 and every e1, if the condition on e2 can be made to entail the condition on e1, we may state that e2 = e1.” (ib., 173)

That is, we have to do with one and the same eventuality receiving overtly different descriptions in K1 and K2.
This is not a very transparent definition, either. At first sight, it seems to be less heterogeneous and more narrow than Asher’s proposal. But since it does not make explicit under which circumstances we are allowed to “make” the conditions on e2 entail the conditions on e1, the two approaches may not be that different after all.

2.4 German INDEM: subordinative Elaboration?

Behrens’ definition and the second part of Asher’s definition of Elaboration cover a typical use of German INDEM: cases where it corresponds to a BY V-ING phrase in Engl. and VED Å (‘by’ combined with an infinitival VP), VED AT (‘by’ combined with a complementizer clause) in Norwegian as exemplified in (1); cf. also BY V-ING in (2) which might be translated as an INDEM-clause.

(1) a Daß Leni selbst eine "Partikularistin" ist, beweist sie täglich, indem sie sämtliche Brötchenkrümel vom Teller aufliest und in den Mund steckt (HEB1)

b That Leni herself is a "Particlist" is something she proves daily by gathering up all the bread crumbs from her plate and putting them into her mouth.

c At Leni selv er "partikularist" beviser hun daglig ved å samle opp alle brodsmulene fra tallerkenene og putte dem i munnen. (Hans og Grete.)

(2) The big dyeing job was done twice a year at the hairdresser’s, but every month or so in between, Mrs Wormwood used to freshen it up by giving it a rinse in the washbasin with something called PLATINUM BLONDE HAIR-DYE EXTRA STRONG. (RD1)

The matrix verb, e.g. and BEWEISEN/PROVE in (1) and FRESHEN UP in (2), denotes a so-called causative event complex (Kamp/Roßdeutscher 1994; 125ff) – a causally structured event complex with a specific result. It may be represented in DRT as shown in fig. 1.

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3 Unless otherwise said, the examples are taken from the Oslo Multilingual Corpus (see fn. 1). In each case, the source-text sentence (sequence) is followed by an abbreviated text identification in brackets. The two other versions in each group are authorized translations. German and Norwegian examples are glossed when relevant for the line of reasoning.
In addition to the event complex ec, i.e. the event described by BEWEIS-/PROVE- in the matrix clause of (1), the representation introduces two ‘schematic’ or implicit subevents (represented as the boldface variables e and e’) of ec and two individuals/objects (x and y) involved in the event complex. The variable y represents the proposition which functions as the object and ‘Patient’ (or ‘Theme’) of the verb, e is the change which y undergoes, i.e. the change from not having the property of being proved to having that property; and e’ represents the event causing that change. Notably, the Agent is the same with respect to the event complex ec and the implicit causing event e’; and the Patient of ec is identical to the Patient of the implicit change-of-state event e. In order for the elaborating clause to contribute with an event that ‘matches’ the underspecified subevent in the matrix, Agent Identity is required.

We note that the causing subevent e’ is not only implicit but also underspecified: the only thing we know about it is that its Agent is identical to the Agent of the whole event complex. The nature of the caused subevent e, on the other hand, is given with the
description of the event complex itself. – In what follows, we represent the matrix clause and subordinate clause eventualities as e1 and e2, respectively.

Obviously, the INDEM-clause in (1a) specifies the causing subevent of the matrix clause event (complex); thus, INDEM relates the two clauses by way of Elaboration as understood by Behrens (1998) and Asher (1993), omitting the complexity condition: The INDEM-clause (S2) introduces an event referent e2 to be identified with the causing event referent e’ that is presupposed by the main clause (S1). This means, among other things, that there must be an Agent of e2 to be identified with x – the Agent of the matrix clause event (complex) e1. Likewise, the time and location of e2 must be identical to or part of the time and location of e1.

Since INDEM-clauses are finite, the conditions Agent(e2) = Agent(e1) and Time(e2) ⊆ Time(e1) manifest themselves overtly in the subject NPs and tenses of the two (active) clauses: Subject(S2) is anaphorically anchored in Subject(S1) (cf. Leni – sie ‘she’); and the tenses agree with each other. In the case of the non-finite BY V-ING constructions and their non-finite VED-Å counterparts in Norwegian, Agent identity is induced structurally, the implicit (PRO-)subject of the subordinate clause being bound by the subject of the matrix VP (Behrens 1998, 1999).

The subevent relation exemplified in (1) and (2) is probably what we find in the majority of BY V-ING clauses in English and, in particular, VED-Å clauses in Norw. as well as in a substantial part of INDEM clauses in German. It corresponds to what has sometimes been called a (causal-) instrumental relation between propositions.

But we also encounter constructions with INDEM – or BY V-ING, VED-Å – that intuitively seem to fall under the notion of (causal-instrumental) Elaboration without exactly fitting into the causative pattern of (1) and (2). That holds for (3), for instance, provided that SICH WEHREN ‘to defend oneself, prevent smth.’ is understood as an

5 We will not go into details with respect to syntactic properties of INDEM constructions and their translations. But it should be mentioned that INDEM-clauses may follow or precede their matrix clause, or occur in the so-called middlefield, in the medial position of a free adverbial. Final position is most frequent.
activity not necessarily crowned by success rather than as a telic eventuality (accomplishment or achievement).

(3) a In den weitläufigen Räumen stehen gustavianische Fauteuils neben spartanischen Möbeln aus den fünfziger Jahren.
   Das feudale Gepräge dieser Umgebung stört den alten Metaller.
   Er wehrt sich, *indem er sich weigert, seine alten Schuhe und seine geflickten Hosen wegzuwerfen*. (HME3)

   b In the spacious rooms eighteenth-century Gustavian fauteuils stand next to spartan fifties furniture.
   The feudal character of the surroundings irritates the old metalworker.
   He resists it by refusing to throw away his old shoes and his patched trousers.

   c [...] Han tar igjen ved å nekte å kassere de gamle skoene og den lappete buksa.

The act(ivity) described in S2 of (3a) is taken to instantiate the more abstract activity type described as SICH WEHREN: Refusing to throw away shoes and trousers counts as an act of defense. The subsumption relation (‘entailment between conditions’) is established through the connective. The two clauses are interpreted as describing the same event in different words, so to speak.

(4) is a similar case but here English BY V-ING, Norw. VED Å seem less adequate. In both target sentences, INDEM is rendered by a temporal subjunction expressing simultaneity or immediate predence between e1 and e2.

(4) a [...] damals auch machte sie die einzige nachweisbare hurenhafte Bemerkung, *indem sie zu Leni sagte* (es war im Jahr 1940): "Ich hab mir nen reichen Knopp geangelt, der unbedingt mir vor den Traualtar will." (HEB1)

   b [...] it was then, too, that she made the only verifiable whorelike comment, *when she said to Leni* (it was in 1940): "I’ve hooked myself a rich guy who insists on going to the altar with me." → ? … by saying to Leni …

   c Den gangen lot hun sin eneste påviselige horebemerkning falle, *da hun sa til Leni* (det var i 1910): "Jeg har fått kloa i en riking som absolutt vil ha meg til alleret".

In (5a), too, a subsumption relation (entailment between conditions) is established. The English and Norwegian translation have a free ING-adjunct and an indedendent sentence,
respectively; in both cases, the instrumental connective used in (1) and (3) would be considerably less felicitous.

(5) a Schwellen ausfindig zu machen und zu beschreiben, ist meine Leidenschaft geworden. Ich beschäftige mich damit auch oft an den Nachmittagen während des Schuljahrs, indem ich bei Ausgrabungen in der näheren Umgebung mithelfe, wie auf dem keltischen Dürrnberg bei Hallein, oder eben, wie vor kurzem, am "Römerweg" in Loig. (PH1) ‘… I also often occupy myself with that in the afternoons, during the school year, indem I help at the excavations in the immediate vicinity, such as …’

b Discovering and describing thresholds became a passion with me. During the school year I often devoted an afternoon to it, helping on digs in the immediate vicinity, such as the Celtic Dürrnberg near Hallein or, only recently, the "Roman Road" in Loig. → ??… to it by helping …

c Det er min lidenskap å finne og beskrive døherskler. Ofte holder jeg på med det om eftermiddagen, selv midt i skoleåret; jeg hjelper til ved utgravningsarbeider her i egnen, for eksempel på det "keltiske" stedet Dürrnbeirg ved Hallein, eller -- som nu sist -- på "Romerveien" i Loig. → ?? … ved å hjelpe til …

Let us take stock:

- INDEM apparently has a wider range of application than its instrumental equivalents in English and Norwegian.

- INDEM typically establishes a relation of Elaboration between matrix and subordinate clause (S1, S2) or the corresponding DRSes: Roughly speaking, it demands that we understand S2 as describing the same eventuality as S1, or part of that event, in a more specific or less abstract manner. The eventuality referent e1 established in S1 may represent a causally structured event complex with S2 specifying the causing subevent; or e1 may be of some other, unstructured type instantiated by events having the properties assigned to e2 in S2. In any case, it seems that INDEM is restricted to or preferrably occurs with clauses that describe eventualities (activities or accomplishments) involving an Agent.

- The Elaboration condition can be broken down into features inherent to the identity or subevent relation between eventuality referents: e1 and e2 must belong to the same situation type (accomplishment/achievement, activity …; see Smith 1991) and

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have compatible argument structures, their Agent referents must be identical, or more generally: referents having corresponding roles with respect to e1 and e2 must be identical, the temporal and spatial location of e2 must be the same as or a subpart of the location of e1, etc. Somewhat sloppily, we can summarize these conditions as follows:

(a) Situation-type(e1) \approx \text{Situationtype(e2)}
(b) Agent(e1) \approx \text{Agent(e2)}
(c) Time(e1) \approx \text{Time(e2)}
(d) Loc(e1) \approx \text{Loc(e2)}

\ldots \ldots

- These restrictions are reflected syntactically in various ways depending, among other things, on whether the elaborating clause is finite or not. In particular, Agent identity tends to surface as an anaphor-antecedent relation between the subjects of S2 and S1 if both clauses are active – which seems to be the normal case with INDEM-constructions.

2.5 Exploring the borders

INDEM also occurs in contexts that do not fulfill all of the conditions stated above; and even if they do, the relation holding between S1 and S2 is not necessarily Elaboration. (6) – (8) are examples of INDEM-constructions that are not or not so undisputably elaborative.

(6), for instance, apparently violates conditions (a) and (b):

(6) a Der gewohnheitsmäßige Umweg zum Fenster hin wurde immer kürzer, aus der 180-Grad-Wendung wurde ein spitzer Winkel, und als ein Jahr vergangen war, blieb von der ganzen Weggewohnheit nur mehr ein nahezu rechter Winkel übrig, \textbf{indem die Gans, anstatt von der Tür her kommend die unterste Stufe der Treppe an ihrer rechten Seite zu besteigen, an der Stufe entlang bis zu ihrem linken Ende wanderte und sie dort in scharfer Rechtswendung erstieg.} (KOL1)

[...] and when a year had passed there remained of the whole path habit only a right-angled turn \textbf{INDEM} the goose, instead of mounting the bottom stair at its right-hand, coming from the door, ran along the [bottom] stair to its left end and mounted it there, turning sharply to the right.

b The habitual detour to the window became shorter and shorter, the 180° turn became an acute angle, and after a year there remained of the whole path habit only a right-angled
The fact that conditions (a) and (b) are violated, however, does not prevent the INDEM-clause from being understood as causal-instrumental to the matrix eventuality in a way that parallels the standard cases described above: UMWEG ‘detour’ and WEGGEWOHNHEIT ‘path habit’ – and the whole preceding context – both involve an Agent, a particular goose, which the goose Agent of the INDEM-clause is identified with, triggering the identification of the path habit established in S2 and the reduced path habit mentioned in S1. In this case, then, it is the syntactic rather than the semantic properties of the complex sentence that deviates from the canonical elaborative INDEM-construction. But that again is probably the reason why at first sight, one might want to call the relation between the two clauses Explanation rather than Elaboration.

The English translation in (6b), using a relative clause, does not capture the elaborative relation between main and subordinative clause of the source sentence. The Norwegian version (6c) renders the INDEM-clause as a sequence of two independent sentences, the second elaborating or explaining the eventuality/state of affairs expressed in the first sentence.

(7), where the INDEM-clause occurs in medial position directly after the finite verb, fulfils conditions (a) – (d). But it is obviously not possible to understand e2 as identical to e1 or a subevent of e1, so the relation between them cannot be Elaboration. Rather, (7) exemplifies the relation of ‘Accompanying Circumstance’, which demands that the two eventualities co-occur in time and space.
(7)  a Ist der Erpel geneigt, diesen Antrag anzunehmen, so hebt er das Kinn und sagt, *indem er den Kopf etwas von der Ente wegwendet*, sehr schnell “räbräb, räbräb!” (KOL1)
If the drake is inclined to accept the proposal, he lifts his chin and says, *indem* he turns his head slightly away from the duck, very quickly […].

b If the drake is inclined to accept the proposal he lifts his chin, *turns his head slightly away from the duck* and says very quickly, “Rabrab, rabrab”

c Hvis andriken er tilbøyelig til å godta tilbudet, løfter han haken *og vender hodet litt bort fra humen*, mens han i meget raskt tempo sier ”reebreb, reebreb!”
…, he lifts his chin and turns his head slightly away from the duck while he very quickly says …

The English target text, using VP coordination, is not quite adequate since it demands temporal precedence rather than cooccurrence between the two relevant events (head-turning < “rabrab”). The Norwegian version, on the other hand, gets the temporal relation between these two events right but blurs the ‘consequentiality’ relation (Sandström 1993) between lifting the chin and saying “rabrab” which is induced by coordination in the source text.

The initial *indem*-clause in (8) apparently comes close to a ‘purely’ temporal subordinate clause and is translated correspondingly in both target texts (Norwegian DA corresponds to English WHEN). But still, the co-spatiality condition (d) is fulfilled; and we infer a causal connection between the *indem*-clause (‘causer’) and the matrix clause (‘causee’): the act of beginning the story is what triggers the loss of trail.

(8)  a […] *Indem die Erzählung anfing*, ging meine Fährte verloren: Spurenverwischung (PH1)

b With the light of that moment, silence fell. The warming emptiness that I need so badly spread. It was a brightening, a primordial rising, so to speak. […] It was n't exactly a warmth, but a radiance; it welled up rather than spread; not an emptiness, but a being-empty; not so much my being-empty as an empty form. And the empty form meant: story. But it also meant that nothing happened.  
*When the story began*, my trail was lost. Blurred.

c […] *Da jeg begynte à fortelle*, mistet jeg tråden: alle spor forsvant

The context preceding sentence (7a) in the German source text suggests that the speaker/narrator is the one who tells the story in question; this is made explicit in the Norwegian version. At a deeper level, then, the pair of referents having the highest roles
with respect to the two eventualities – the storyteller and the person losing his trail (the narrator) – obeys condition (b) with the proviso that the latter (an ‘Experiencer’) has fewer typical Agent properties (Dowty 1991) than the former.

In fact, an initial INDEM-clause (S”) may contract the clusal-instrumental relation with the matrix clause (S’) that characterizes the canonical elaborative INDEM-construction discussed in section 2.4; cf. (9a) (after having mentioned the necessity of dialogue in psychotherapy).}

(9) a  **Indem** wir unseren Erwachsenenstandpunkt in den Dialog einbringen, die ehemaligen Fehlmeinungen und Ansichten der Erwachsenen durch kritische Auseinandersetzungen korrigieren, befreien wir das Kind in uns von unzutreffenden, unbewussten Schuldgefühlen. (JKS1)

**Indem** we bring our grown-up perspective into the dialog, correct the earlier wrong-opinions and views of the grown-ups by way of critical discussions, we free the child in us from unwarrantedm unconscious feelings-of-guilt.

In that case, of course, <K’, K”> falls under Elaboration understood as a semantic relation (s-Elaboration). But since the s-elaborating clause precedes the clause s-elaborated on, we wouldn’t say that the discourse relation of Elaboration (d-Elaboration) holds between the two clauses (or their DRSes). As a relation between two sequentially ordered segments in a text – SDRSes as defined by Asher (1993) –, d-Elaboration demands that the second segment s-elaborates on the first. In other words, only in final position, if at all, can an INDEM-clause be taken to d-elaborate on its matrix clause; only then can it be compared to an independent sentence as an alternative, overt expression of Elaboration at the discourse level.

The examples discussed in this section deviate in some respect or other from the canonical elaborative pattern observed in examples (1), (3). But they all obey a substantial part of the identity constraints defining Elaboration as a semantic relation.

Conversely, there are other subjunctive connectives in German that seem to express Elaboration or elaboration-like relations between matrix and subordinate clause and, consequently, can be used ‘instead of’ INDEM under certain conditions. Furthermore, we have seen that there are different translations of German INDEM-clauses which yield
the Elaboration interpretation. The participial "free" adjunct in English seems to have a wider interpretation potential than the causal-instrumental by V-ING, cf. (5) above. It is therefore of interest for our study to explore the semantic domains of the connectives and their structural correlates cross-linguistically. Using translational data more systematically and on a larger scale than exemplified thus far, in the way outlined by Dyvik (1998), may be useful to explore the conditions constraining such connectives (including INDEM) and, by the same token, gain more insight into the semantic field covered by metalinguistic or discourse theoretic concepts like Elaboration, Specification etc.

3. Translational images of INDEM

3.1 Dyvik (1998)
In his paper “A translational basis for semantics”, Dyvik (1998) designs a rigorous procedure by which we may define semantic features of lexical items, using bilingual corpora such as the ENPC (English-Norwegian Parallel Corpus), or its multilingual successor OMC (Oslo Multilingual Corpus) mentioned in footnote 1 (s. Johansson 1997, 1998). The semantic features we are after, he suggests, are those which are needed to distinguish the meaning of signs. Such distinctions may be elicited on the basis of contrasts between languages. The general idea is that signs in one language which have different translational properties may have their meaning broken down into specific features on the basis of their translational properties. Genuine ambiguity is in some sense "accidental" – it is a contingent property of a word in a language that it happens to be associated with one or more different meanings. Therefore we do not expect to find the same ambiguity duplicated by signs in a number of different languages. The multiple possibilities arising from ambiguity are an accidental property pertaining to the way a

7 At present, there is no English version of JKS1 in the OMC; the Norwegian translation has an initial IDET-clause.
given language happens to be. The multiple possibilities of vagueness or indeterminacy, on the other hand, seem to have more to do with what is being denoted. Vague words denote a family of things that have something in common irrespective of language.

To see the way translational properties denote semantic properties, consider the English noun TRUNK. Our intuition tells us that this word expression is ambiguous, and we expect the different readings (‘senses’) to have different expressions in other not too closely related languages. The Oslo Multilingual Corpus yields four occurrences of this item in English source texts, two of which are translated into German as STAMM, one as STUMPF and one as KOFFER. The first translational image of TRUNK with respect to German is illustrated in Fig. 2.

*Fig. 2: 1st translational image (t-image) of TRUNK with respect to German (as restricted to the OMC)*

![Diagram of translational image]

In order for translational correspondences to operate as semantic mirrors, we need to check that they are all within the same semantic space. If we reverse the translation, i.e. check the English translation set for each of the German expressions respectively, we will be suspicious of true ambiguity if there is no overlap between them beyond the source word (here: TRUNK). Our searches gave the results in Fig. 3.
A third round is in called for. The English translations of the German expressions in the first t-image of TRUNK, excluding TRUNK itself, are checked for their t-images with respect to German. As it turns out (see Fig. 4) the German translation set for SUITCASE ({KOFFER}) does not overlap with any of the other sets in the restricted second t-image of TRUNK. This indicates that the SUITCASE-meaning of TRUNK is semantically unrelated to the other ‘senses’ of TRUNK (with respect to German). Thus, TRUNK can be considered ambiguous between an SUITCASE- and a STEM-sense (leaving the relationship between the latter STEM and the STUMP-sense aside). As demonstrated by Dyvik (1998), we get a different picture when we turn to signs that we would consider polysemous or vague rather than genuinely ambiguous. Thus, our mechanical expression-oriented and translation-based procedure yields results that are in accordance with our linguistic intuition.

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8 STUMP from fig. 3 does not occur in the the relevant subset of authentic English texts in the OMC, i.e. texts having German translations in the corpus.
Now let us try if we can get more hold on the concept of Elaboration by applying the Dyvik method to what we take to be a prototypical expression of Elaboration, viz. German INDEM. We restrict ourselves to cases where the INDEM-clause corresponds to a sentential, clausal or VP-type constituent in the target texts, leaving aside prepositional phrases in the translations. Searching our parallel corpora, we found the English and Norwegian equivalents shown in fig. 5.\footnote{The translation set for STEM contains two elements, STIEL and STAMM. Since STIEL is not represented in the 1st t-image of TRUNK (see fig. 2), it is of no interest here. The intersection of the 1st t-images of STEM and TRUNK is the singleton set \{STAMM\} and identical to the 1st t-image of TRIBE. -- It should, however, be kept in mind that the size of the translation corpus (OMC) underlying our study is not very impressive. Our conclusions should be relativized correspondingly. The discussion is meant to illustrate a promising research methodology rather than present serious hypothesis or generalizations concerning the translational semantics of TRUNK.}

\textbf{3.2 Dyvik (1998) applied to INDEM}

Now let us try if we can get more hold on the concept of Elaboration by applying the Dyvik method to what we take to be a prototypical expression of Elaboration, viz. German INDEM. We restrict ourselves to cases where the INDEM-clause corresponds to a sentential, clausal or VP-type constituent in the target texts, leaving aside prepositional phrases in the translations. Searching our parallel corpora, we found the English and Norwegian equivalents shown in fig. 5.\footnote{We disregard clearly marginal translations, which do not belong to what Dyvik (1998) terms the “set of linguistically predictable translations” (LPT). And again, the modest size of the multilingual corpus we have used should be kept in mind.}
English BY V-ING, V-ING, WHEN and WHERE and Norwegian VED Å, VED AT, IDET and DA as translating INDEM were discussed in section 2. The translation types VP and S registered in the Norwegian t-image are paratactic alternatives, where matrix VP and INDEM-clause are rendered as overtly coordinated or simply juxtaposed VPs (ConjVP and ,VP in table 1 below), or coordinated clauses (ConjS), or the subordinate INDEM-clause corresponds to an independent sentence following comma (,S), semicolon or colon (;S), or full stop (.S). The different translation alternatives can be ordered on a scale of ‘clause integration’

\[ \text{INDEM} \]

BY V-ING
V-ING
WHEN
AS
WHERE
VED Å
VED AT
IDET
MENS
VP
S

as shown in table 1 below, with free, ‘adjoined’ ING-adjuncts somewhere between the overtly subordinating structures and the paratactic alternatives.

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Tab. 1: Distribution of English-Norwegian translation alternatives for INDEM

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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>.S</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>(3)</td>
</tr>
<tr>
<td>.S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ConjS</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ConjVP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VED Å</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
<td>1</td>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>VED AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DET</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Temp. subj.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>÷ Norw.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>8</td>
<td>(3)</td>
<td></td>
</tr>
</tbody>
</table>

In Table 1, the INDEM-occurrences in our corpus are cross-classified according to their translations in the two target languages. Each cell in the coordinate system represents a pair of English-Norwegian translation options and specifies the number of INDEM-occurrences translated that way. The second row (.S-row), for example, should be read as follows: Altogether 7 (of 34) INDEM-clauses are rendered as independent sentences (following full stop) in Norwegian. For all of them, a hypotactic – or at least non-paratactic – translation has been chosen in English: ING-adjunct in two cases, BY V-ING in three and some other hypotactic solution in two cases.

We note that paratactic translations are infrequent in the English (1/32 occurrences) but make up more than one third (12/34) of the Norwegian translations, and that the paratactic solution in Norwegian predominantly (8/12) pairs with BY V-ING (5) or V-ING (3) in English. Conversely, almost 50% (15/32) of the English translations fall under the BY V-ING category whereas clausal-instrumental (VED Å/ VED AT) translations in Norwegian make up only approximately 20% (9/34).

The fact that the translation of INDEM-clauses varies considerably in both target languages indicates that INDEM is semantically imprecise or indeterminate (“unbestimmt”), as understood by Pinkal (1991), i.e. ambiguous, polysemous or vague.
To decide whether the expressions used as translations of INDEM are within the same semantic field and are not the result of a true ambiguity of INDEM, we need to find the translation sets for each member of its first image. This gives us the inverse translation images shown in fig. 6 for English (disregarding WHERE in the first t-image) and fig. 7 for Norwegian. For the sake of readability we give the sets in list form below each figure. (10) and (11) below exemplify English BY V-ING and V-ING translated by INDEM; paratactic translations of ING-adjuncts are illustrated in section 4.

Fig. 6: Inverse t-image of INDEM with respect to English

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12 Except for DA (primarily causal), the members of the translation sets for WHEN and AS – and SOLANGE ‘as long as’ in fig. 7 – are normally classified (primarily) as temporal subjunctions, and DADURCH DASS ‘there-through that’ as causal-instrumental. For WOBEI ‘thereby’ see below.
\{ INDEM, ALS, S, VP, DAMIT DASS, DADURCH DASS, ZU-INFINITIV \} \hspace{1cm} (\leftarrow \text{BY V-ING})

\{ INDEM, ALS, S, VP, WENN, DA, NACHDEM, WIE, WÄHREND, WOBEI \} \hspace{1cm} (\leftarrow \text{V-ING})

\{ INDEM, ALS, S, VP, WENN, DA, WIE, WÄHREND \} \hspace{1cm} (\leftarrow \text{AS})

\{ INDEM, ALS, WENN, DA, NACHDEM, SOBALD, WANN \} \hspace{1cm} (\leftarrow \text{WHEN})

(10) a He tries to sublimate the urge (as he diagnoses it) by getting married. (ABR1)

b Er versucht den Drang (wie er ihn diagnostiziert) zu sublimieren, indem er heiratet.

(11) a They hated to go, fought against going, enlisting me and their father against Rose, but she labeled their clothes, packed their trunks, and drove them down to the Quaker school in West Branch. (JSM1)

b Sie wollten absolut nicht weg, kämpften dagegen an, indem sie mich und ihren Vater gegen Rose zu ihren Verbündeten machten, aber sie nähte Namensschilder in ihre Kleider, packte ihre Koffer und fuhr sie runter in die Quäkerschule von West Branch.

Fig. 7: Inverse t-image of INDEM with respect to Norwegian (incomplete)
Elaboration and Related Discourse Relations

{ INDEM, DADURCH DASS, DARÜBER DASS, ZU-INFINITIV }  (← VED Å)
{ INDEM, DADURCH DASS }  (← VED AT)
{ INDEM, ALS, WENN, WÄHREND, INSOavern, PRES.PART. }  (← IDET)
{ ALS, WENN, WÄHREND, SOLANGE, WOBEI, VP }  (← MENS)

The inverse t-image with respect to Norwegian remains incomplete because the translation options VP and S in the first image of INDEM are not lexically identifiable and therefore cannot be searched for automatically.

The overlap patterns in the inverse t-images of INDEM seem to indicate a division of into different senses; but they also suggest that the different senses are related, i.e. that they belong to the same semantic field as defined by Dyvik (1998: 74ff). In order to prove or disprove that by Dyvik’s method we would have to check the translational properties of each expression found in the inverse t-image, including only those which appear with one of the expressions in the first t-image. Such a procedure, i.e. computing the restricted second t-image, would yield a grouping of the first t-image of INDEM into its senses with respect to each target language. We have not undertaken that final step yet. Besides, the second t-image cannot be completed for the same reason that prevented the inverse t-image to be completed for Norwegian: We cannot search for VP, S or other structurally defined translation options found in the inverse t-images. But the translational data we have come up with can nevertheless prove useful for the exploration of INDEM and the concept of Elaboration.

4. Elaboration and ‘Accompanying Circumstance’

4.1 INDEM, ING-adjuncts, and parataactical Elaboration

We know from monolingual studies that the English participial adjunct structure (ING-adjunct, among other things, may encode Elaboration in some sense of the word (Behrens 1998, 1999), and that Elaboration can hold between independent sentences but
(allegedly) not between VPs. And we have seen above that INDEM, as a hypotatic expression of Elaboration, is a translation alternative for V-ING, and vice versa. But the translational method demonstrated in section 3 has also given us a set of translation pairs where ING-adjuncts are in their turn rendered as independent sentences in German (and often in Norwegian as well). Table 2 shows that out of 600 examples of ING-participial adverbial adjuncts in English, about half of them have been translated by a paratactic verb phrase in German and about 7% appear as full sentences:

Table 2: German translations of English ING-participial adverbial adjuncts

<table>
<thead>
<tr>
<th></th>
<th>English ING-participial adverbial adjuncts: 600 occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>.S</td>
</tr>
<tr>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>Sum: 42 occurrences: 7.1%</td>
<td>Sum: 303 occurrences: 50%</td>
</tr>
</tbody>
</table>

In many cases the ING-adjunct clearly does not elaborate on the matrix clause; so, as would be expected, the paratactic structure chosen in the target text could not be replaced by an INDEM-clause. This is the case in (12) – (13), for instance, where the ING-adjunct is interpreted as presenting the result of the matrix eventuality.

(12) a The affair had festered and suppurated through the summer of 1963, hurting Britain at home and abroad, for all the world as if it had been scripted in Moscow. (FF1)

b Während des ganzen Sommers 1963 hatte die Affäre geschwelt und geschwärzt und England im In- und Ausland Schaden zugefügt, ganz als hätte Moskau das Drehbuch geschrieben During the whole summer the affair had festered and suppurated and hurt Britain at home and abroad . . .

(13) a His voice was mild, sleepy, robbing this remark of any sting. (JSM1)

b Der Ton seiner Stimme klang milde, schlafig, er nahm dieser Bemerkung jede Schärfe. The tone of his voice sounded mild, sleepy, it took every sting out of this remark

But looking at pairs where the ING-adjunt is rendered as a full independent sentence, we also find several examples that we would include under the heading ‘Elaboration’ – at least in the Hallidayan sense – but where INDEM apparently is no alternative (or a less
felicitous alternative) to the paratactical construction. So we ask ourselves: What are the relevant properties of $S_1$ and $S_2$ here? In what respect does the relationship between the two sentences in such a sequence differ from the relationship between matrix and subordinate clause in an elaborative INDEM-construction? On the one hand, there must be conditions on INDEM which disallow this subjunction here, conditions which we expect to be at least partly semantic. When we have established these, we are closer to determining the semantics of INDEM. On the other hand, there must be conditions here which should be included in the semantic space of Elaboration in a broad sense.

As suggested in section 2, the situation type and the semantic role of the subject arguments in the two clauses/sentences may be relevant. In (14), for instance, the ING-clause/$S_2$ describes the characteristic activities of being the class milk monitor; but the eventuality described by ‘$x$ is the class milk monitor’ probably does not count as an activity itself. The semantic roles assigned to the subjects of the matrix clause and the subclauses differ correspondingly. Similar discrepancies can be observed in (15) and (16), in which $S_1$ – in the German translation, at least – describes a mental attitude, taking an Experiencer subject, whereas $S_2$ has an Agent involved in an intentional or at least controlled activity.\(^\text{13}\)

(14) a At infant school he had been the class milk monitor, **placing a bottle of milk before each pupil, then making them wait for a straw, then collecting the silver foil tops and pressing them into the large ball they were intending to give to the blind.** (ST1)

b In der ersten Grundschulklasse war er für die Verteilung der Schulmilch zuständig gewesen. **Jedem Schüler hatte er eine Flasche Milch vor die Nase gestellt, die Kinder auf die Strohhalme warten lassen und danach die Silberschlüsse der Flaschen eingespämmelt. Die hatte er dann zu einer großen Kugel geformt, die den Blinden zugute kommen sollte.**

In the first school class he had been responsible for the distribution of school milk. He had placed a bottle of milk before each pupil, let the children wait for the straws and after that collected the silver foil tops of the bottles. These he had then formed into a large ball that was meant for the blind.

(15) a Rain they take as a personal affront, **shaking their heads and commiserating with each other in the cafes, looking with profound suspicion at the sky as though a plague of**

\(^{13}\) In all three cases the Norwegian translation has a paratactic structure corresponding to the German version.
locusts is about to descend and picking their way with distaste through the puddles on the pavement. (PM1)

b Regen empfinden sie als persönliche Beleidigung. Sie schütteln die Köpfe und .... Rain they feel as a personal affront. They shake their heads and …

(16) a Now it was the old man who wanted to stick with Vic and Roger and it was the kid (by this time forty years old) who wanted to jettison them, arguing with some logic that it would be madness to hand their account over to a two-bit ad agency six hundred miles mnorth of the New York pulsebeat. (ID 617)

b Jetzt war es der Alte, der an ihnen festhalten wollte, und der Junge (inzwischen vierzig Jahre alt) wollte sie zum Teufel jagen. Er argumentierte nicht ohne Logik, dass es heller Wahnsinn sei, den Etat einer Zweimann-Agentur sechshundert Meilen nördlich vom Zentrum New Yorks überlassen.

… and the boy … wanted to send them to the devil [get rid of them]. He argued not without logic that …

In (14) – (16), e2 (the event introduced in the subclause) may be said to verify e1; in this sense, these examples resemble the canonical elaborative constructions discussed in section 2. But e2 and e1 in (14) – (16) belong to different ‘domains’, so to speak: e2 is presented as an observable symptom of an inner state or a mental activity, as an activity that defines an occupation or a cultural role (e1). We would not want to say that the two are identical or that e2 is a subevent of e1. That is, they are not related by Elaboration in the strictest sense; and that, apparently, excludes INDEM in the German translation. On the other hand, they seem to depend on each other in a way that prevents us from calling e2 an ‘Accompanying Circumstance’ of e1.

‘Accompanying Circumstance’, however, is what we might take (17) to instantiate; here, too, INDEM is excluded.

(17) a Our father walks into the forest, carrying his axe, a pack sack, and a large wooden box with a leather shoulder strap. (MA1)

14 But once wollte ‘wanted to’ is replaced by the versuchte ‘tried to’ in S1 of (16b), we have a canonical case of Elaboration, licensing the use of INDEM: (16b’) … der Junge … versuchte sie zum Teufel zu jagen. indem er nicht ohne Logik argumentierte, dass … ‘the boy tried to send them to the devil by arguing not without logic that …’.
b Unser Vater geht in den Wald, _er trägt eine Axt, einen Rucksack und eine große Holzkiste mit einem lederernen Schulterriemen_.

Our father walks into the forest, he carries an axe, a packsack, and a large wooden box with leather shoulder strap.

But then again, in order to carry something, one has to be in an upright position if not necessarily moving; that is, the conditions on e2 entail part of the set of conditions assigned to e1 by the predicate WALK/GEHEN.

### 4.2 German DABEI, WOBEL, and ‘Accompanying Circumstance’

Quite often (perhaps predominantly when the adjunct is rendered by a coordinated VP), paratactical German translations of ING-adjuncts contain the connective adverb DABEI ‘thereby’ – an abstract prepositional anaphor that localizes the eventuality it modifies in the same (spatio-temporal) domain as its antecedent. This is seen in (18) – (19).

(18) a Harris yawned, **displaying** his sharp teeth and liver-coloured tongue.

   b Harris gähnte **und** stellte **dabei** seine scharfen Zähne und die leberfarbene Zunge zur Schau.
   
   Harris yawned and displayed **Dabei** his sharp teeth and liver-coloured tongue.

(19) a She clomped down the steps in her ankle boots and blue woollen dress, and stood shyly beside Willie, **twisting the hem of her dress in her hand till her knickers came into view.**

   (MM1)

   b Das Mädchen stapfte in ihren Schnürtiefeln und dem blauen Wollkleid die Treppe hinunter und stellte sich schüchtern neben Willie. **Dabei drehte sie an ihrem Rocksaum, bis man die langen Unterhosen sah.**
   
   The girl clomped down … and stood shyly beside Willie. **Dabei** twisted she the hem of her dress till …

Under the right conditions, then, **Dabei** may be interpreted as an INDEM-clause, merging the antecedent eventuality referent with the eventuality of the sentence it occurs in, as described above; cf (18b’).

(18) b’ **INDEM** Harris gähnte, _stellte er seine scharfen Zähne und die leberfarbene Zunge zur Schau._
DABEI, however, has a considerably wider distribution, covering among other things the relation of ‘Accompanying Circumstance’ which (19) and perhaps (17) may be taken to illustrate. In such contexts, DABEI has a subordinating counterpart in the relative anaphor WOBEI ‘whereby’ seen in (20). But what exactly do we understand by ‘Accompanying Circumstance’ as compared to ‘Elaboration’?

(20) a Die Kolbenente wechselt rhythmisch zwischen Vorstoß en des Kopfes über die Schulter weg nach hinten und einem betonten Hinwenden des Kopfes zu ihrem Gatten, *wobei sie jedesmal den Kopf mit erhobenem Kinn auf- und wieder abwärts bewegt, was einer mimisch übertriebenen Flucht-Bewegung entspricht.* (KOL1)

b The female crested pochard alternates rhythmically between a backward thrusting of her head over her shoulder and a pronounced turning of the head towards her drake, *each time moving her chin up and down, a set of movements corresponding to a mimically exaggerated fleeing movement.*

In order for e2 to count as an Accompanying Circumstance of e1, e1 and e2 will have to be different eventualities; that is, e2 cannot be identical to or a subevent of e1 as in the canonical instantiation of Elaboration. We would also like to distinguish the relation of Accompanying Circumstance from less canonical cases of Elaboration like (14) – (16) above. But as with Elaboration, e1 and e2 will be linked together by sharing participants to some extent and by having the same spatio-temporal location. This can be seen in the examples above. In other words, these two relations resemble each other in important ways; we may expect them to behave like overlapping rather than distinct categories.

Interestingly, neither Norwegian nor English seem to possess a connective corresponding exactly to German DABEI (or anything corresponding to WOBEI, for that matter). In fact, DABEI tends to ‘disappear’ without a connective t-image in translations from German; cf. table 3 and (21) vs. (22). Conversely, it often occurs without any lexical or phrasal ‘source’ in German translations from English (or Norwegian); cf. (18) – (19), and (23).
Table 3: Translations of anaphoric DABEI

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<tbody>
<tr>
<td>zero</td>
<td>19</td>
<td></td>
<td>12 (2)</td>
<td></td>
<td>33 (49%)</td>
<td>67</td>
</tr>
<tr>
<td>Connective</td>
<td>8</td>
<td></td>
<td>22 (1)</td>
<td></td>
<td>31 (46%)</td>
<td></td>
</tr>
<tr>
<td>V-ING</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>÷ Eng.</td>
<td>(5)</td>
<td></td>
<td>(9)</td>
<td>(14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norw.</td>
<td>33 (42%)</td>
<td></td>
<td>45 (58%)</td>
<td>(3)</td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
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</tbody>
</table>

(21) a In eine Art von Selbstversuch mündet früher oder später auch die bloße Rede vom Bürgerkrieg. **Dabei werden keine Knochen gebrochen;** und doch bildet jede Auseinandersetzung über den Bürgerkrieg den Bürgerkrieg ab. (HME1)

b Just the mention of civil war sooner or later turns into a kind of self-experimentation. **No bones are broken;** and yet every disagreement about the civil war fuels the war itself.

c **Alt snakk om borgerkrigen munner før eller senere ut i et slags forsøk på egen person.** *Her knuses ikke noe ben;* og likevel avbilder enhver utredning om borgerkrigen selve borgerkrigen.

(22) a Die schweren Kanadagänse gehen dem Fuchs sogar zu Lande in geschlossener Phalanx nach, und nie habe ich gesehen, **daß er dabei versucht hätte, einen seiner Qualgeister zu fangen.** (KOL1)

b The great Canada geese will even follow a fox over land in a close phalanx, and I have never known a fox **in this situation** **try to catch one of his tormentors.**

c **De tunge kanadagjessene (Branta canadensis) forfølger til og med reven på landjorden i sluttet tropp, og aldri har jeg sett **at den ved slike anledninger har forsøkt å få tak i noen av sine plageänder.**

(23) a Digital technologies cover a range of disciplines generally associated with the computer and telecommunications industries -- digital micro-electronics, software and digital transmission. Applied piecemeal within each of the relevant sectors, these technologies have already demonstrated their greater efficiency, flexibility and cost-effectiveness, **and have shown** how they can enhance creative potential and promote innovation. (EU1T)

b Digitale Technologien umfassen zahlreiche Bereiche, die im allgemeinen den Computern und der Telekommunikation zugerechnet werden -- digitale Mikroelektronik, Software und digitale Übertragung. Schon bei bruchstückhafter Anwendung haben diese
Technologien ihre größere Effizienz, Flexibilität und Wirtschaftlichkeit in den betroffenen Branchen gezeigt und dabei bewiesen; daß sie kreatives Potential vergrößern und Innovation fördern können.

These translational properties, of course, make DABEI a very interesting candidate for further study. And at any rate, searching for DABEI in German source and target texts of the OMC (including at least one precedent sentence) will give us automatic access to paratactical structures that are relevant to the study of Elaboration and related discourse relations but cannot be searched for directly.

5. Summing up

Summing up is not easy in view of the inconclusive observations we have presented here. However, the following conclusions should be warranted:

We set out from the hypothesis that studying the translational properties of the German subordinate connective INDEM would help us understand not only the semantics of INDEM and related connectives in the three languages involved but also the nature of the relation of Elaboration and similar so-called discourse relations. As far as the methodological aspects of our study is concerned, we can conclude that the translational approach to semantic analysis, as outlined by Dyvik (1998), has proven useful with respect to connectives, at least as for diagnostic purposes. But it has its limits in this context due to the fact that a relation beween eventualities or propositions (DRS-es) expressed by connectives in one language may be not be encoded lexically in the other language. Rather, it may correlate with a specific hypotactical construction (as part of the ‘construction meaning’), or it may be inferred without specific linguistic encoding.

We have argued that the German subordinate connective INDEM in its typical use combines with clauses describing (preferably) intentional actions or activities such that the subordinate clause is understood as elaborating on the matrix clause, in the strictest, semantic sense of Elaboration: The subclause identifies the implicit causal-instrumental subevent of a structured causative event complex established in the matrix clause, or it
establishes an event – or an event sum – to be identified with an eventuality that is introduced by the matrix-clause predicate under a more abstract description. When the INDEM-clause follows its matrix clause, which is normally the case, the INDEM-construction is equivalent to a sequence of independent sentences related by Elaboration in the discourse theoretic sense discussed by Asher (1993)\textsuperscript{15} and it will often be translated like that in Norwegian. Elaboration between independent sentences that are not linked by relevant anaphoric connectives like German DABEI is inferred from semantic and structural properties of the sequentially ordered sentences <S1, S2>, alone. It is the inherent semantic contribution of INDEM, however, to trigger unification of the DRSes <e', {Con(e')}> and <e'', {Con(e'')}> – where e' and e'' represent the matrix eventuality and the subclause eventuality, respectively – independently of the relative order of matrix clause and subordinate clause. On the other hand, merging will not be possible unless the two clauses obey a set of identity or ‘mapping’ constraints on the participants and the spatio-temporal location of e’ and e'' (see section 2.4). Thus, in fact, INDEM seems to trigger the presupposition that e'' is a possible causal-instrumental subevent of e’ or a possible instantiation of an eventuality having the properties assigned to e’ – i.e. the presupposition that the INDEM-clause is a possible s-Elaboration of the matrix clause.

In natural discourse, this presupposition is not always satisfied. Often, apparent violations can be ‘made to’ obey the relevant constraints by accommodation and related interpretative strategies; cf. (6). But genuine deviations from the canonical elaborative pattern do occur, too. In such cases, then, INDEM is used outside its central domain, e.g. as a ‘purely’ temporal subjunction expressing simultaneity, or introducing e2 as an Accompanying Circumstance like WOBEI; cf. (8) and (7), respectively. Such varieties of INDEM do not differ radically from prototypical elaborative INDEM, however. Rather, they deviate from it by licensing a less complete integration of e1 and e2; i.e. they represent a weaker but related interpretation.

\textsuperscript{15} Provided that the INDEM-construction does not occur in an intensional context.
English ING-participial adjuncts invite or licence a merge between the events in the matrix and subordinate clause, but there are clearly differences in the constraints operating on this structure compared with the constraints on \textsc{inden}-clauses. Often, elaborative or elaborative-like ING-adjuncts do not correspond to \textsc{inden}-clauses but have to be rendered paratactically in German. Further study is necessary to define the criteria that differentiates between ING adjuncts and \textsc{inden}-clauses – and between one and the other type of Elaboration. The difference could be related to the complexity condition stated in Asher's definition (see section 2.1). At this point, however, it is somewhat unclear to us whether this is a purely structural condition or there are discourse functional factors involved in the constraints. Clearly, the semantic space of the English participial adjunct is broader as compared with the semantic space of \textsc{inden}-clauses. It may be that the difference between them goes beyond the purely semantic features. On the other hand, our discussion concerning examples (14) – (16) indicate that there may be relevant semantic differences, too: only \textsc{inden} seems to demand that \(e_1\) and \(e_2\) belong to the same ‘domain’ or ‘type’ of situations.

As far as the concept of Elaboration is concerned, we find it important to distinguish between Elaboration as a semantic relation holding between clauses (DRSes) independently of their sequential order in discourse (s-Elaboration) and Elaboration as a discourse relation depending on the order of its arguments in discourse (d-Elaboration). A sentence-initial \textsc{inden}-clause may s-elaborate its matrix clause, cf. (9); but d-Elaboration will not hold between the correspondent sequence of independent sentences. A sentence-final s-elaborative \textsc{inden}-clause or ING-adjunct, however, is also elaborative at the discourse level; Elaboration will be inferred for the correspondent pair of independent sentences, as well.

Our interlingual approach has made us recognize various types of semantic linkage between sentences or clauses which share some but not all characteristics of Elaboration in the strictest sense, to the effect that the distinction between Elaboration and, for instance, Accompanying Circumstance is blurred. In the long run, the important task will be to specify conditions on pairs of DRSes that allow us to define a relevant semantic ‘space’ which the connectives of different languages ‘carve ’ up in different ways. Where
exactly we draw the borderline between Elaboration and other relevant concepts like Accompanying Circumstance is probably a matter of minor importance.

References


