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# RELATIVE CLAUSES IN SECOND LANGUAGE ACQUISITION

#### Abstract

Despite English and Danish being similar languages, even Danes who are proficient in English (university students of English) seem to have difficulties with relative clauses in English. This paper explores this issue by first making a detailed contrastive analysis of English and Danish, and then comparing the hypotheses drawn from this analysis to a corpus of texts, consisting of essays and summaries in English, and translations from Danish into English, written by Danish university students. The corpus study is supplemented by questionnaires testing the students' abilities to form relative clauses in English. It is found that the types of errors predicted from the contrastive analysis do occur to a large extent in the students' texts and in the questionnaire responses.

Keywords: relativization, second language acquisition, syntax

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### **1.** Introduction

The main purpose of the author's PhD project is to document and analyse the challenges that Danish university students (primarily freshmen) face in their acquisition of written English and in their learning of descriptive/ theoretical grammar. The project has its point of departure in the interlanguage and contrastive hypotheses (Selinker 1972; Lado 1957, Corder 1981, Ellis 2009, 2012, Jarvis 2011), and instances of the influence of the L1 (Danish) on the L2 (English) in the students' writings are indeed ubiquitous (Madsen 2014, 2015, forthcoming). In this paper, the focus is on the acquisition of English relative clauses.

The impetus to this study was the informal observation that Danish university students of English seemed to have trouble with the use of *whose* as a relative pronoun. It was surprising since Danish has a cognate (*hvis*), which is used in the exact same way syntactically as *whose*. This phenomenon was investigated in Madsen (2015). During that project, further problem areas with the use of relative pronouns by Danes were identified, and the present paper focuses on these areas, expounded in the next section.

## 2. Theory and hypotheses

As mentioned in the introduction, the theoretical approach of this paper is the contrastive hypothesis, i.e. a learner's L1 influences the learner's acquisition of the L2 (Lado 1957). Since Lado's seminal work it has been recognised (Pavlenko et al. 2002, Jarvis et al. 2008, Jarvis 2011, Odlin 1989) that not only the learner's mother tongue can influence the language being learnt, but also other languages that the learner has acquired previously. Such a possible non-Danish-language influence has been ignored in the present study although some of the informants are descendants of immigrants and have thus been raised bilingually. One reason for ignoring this possible influence is that there are only a few early-childhood bilinguals among the informants, and consequently, it is not possible to make a reliable statistical analysis of this group compared to the monolingually raised informants, especially since the former group is heterogeneous representing very different parallel L1s, such as Arabic, Turkish, Vietnamese, etc. Another reason is that all these informants have grown up in Denmark and attended Danish schools, and their Danish is on a par with that of their monolingually raised peers. By not excluding the bilingually raised informants, this study describes the "average" student *citizen* of Denmark, and not an idealised group of students raised monolingually in Danish. On the other hand, an exchange student was excluded from the study even though her written Danish compared favourably with that of native Danes, because she did not grow up in and was never a resident of Denmark.

The hypotheses that were tested in this work were based on a contrastive comparison, which is explicated below (Huddleston and Pullum 2002, Togeby 2003). Both being Germanic languages, Danish and English are expectably similar with respect to the formation of relative clauses. The most frequent type of relative clause in Danish is the finite postmodifying relative clause introduced by a relativizer. Just as in English, the relativizer can be omitted when it is the direct or indirect object or is part of a prepositional construction. When the relativizer is part of a prepositional construction, the preposition is stranded most frequently<sup>1</sup>. Danish allows non-finite postmodifying clauses too in the same way as English does; however, these are used much less frequently than in English (Hjulmand and Schwarz 2012). On the other hand, Danish allows non-finite premodifying clauses too, much like German, although such constructions are restricted to legal language or legalese.<sup>2</sup> The focus of this study is - as mentioned in the introduction – on the use of relativizers; consequently, it concerns itself with the use of finite postmodifying relative clauses.

Table 1 lists the relativizers of Danish. It is disputed whether all or in fact any of them can be called relative *pronouns* (Lehmann 1984, Togeby 2003); however, that discussion is beside the point of this study. Relativizers that correspond to *where, why* and *when* were ignored in this study because they are limited to antecedents with special features, such as place, reason and time. However, a study is planned to investigate the use of *where* by Danes because its Danish cognate *hvor* has a much wider

<sup>&</sup>lt;sup>1</sup> In the case of the relativizer *som*, the preposition is invariably stranded. In the case of *hvem* and *hvilken*, it is typically preposed, and when the relativizer would be *hvad*, the cognate of *what*, it and the relativizer are fused. E.g., *om hvad* becomes *hvorom* 'whereabout'.

<sup>&</sup>lt;sup>2</sup> There is some evidence that non-finite premodifying clauses are difficult for people not trained in legal language to comprehend. A survey that was supposed to test the informants' ability to translate Danish sentences containing non-finite premodifying clauses into English failed because many informants apparently did not even understand the Danish originals even though these were rather simple clauses in which one of the NPs merely contained a non-finite premodifying clause.

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application than *where*, and it seems for this reason that Danes sometimes misuse *where* when writing English.

Relativizer	Antecedent	Syntactic function in relative clause
som	any except a clause	any except possessor
der	any except a clause	only subject
hvilket	a clause	any except possessor
hvad	a clause	any except possessor and subject
hvad der	a clause	only subject
hvilken	inanimate except a clause	any except possessor
hvem	animate	any except possessor
hvis	any	only possessor

Table 1: Relativizers in modern Danish

Hvilken and hvem are the cognates of which and whom, respectively, and are almost exclusively used as interrogative pronouns, only seldom as relativizers in modern Danish. If hvilken is indeed used, it agrees with its antecedent in grammatical gender and number. Hvilket is the neuter singular of *hvilken*; however, in modern Danish it is almost only used with a clausal antecedent. In any case, hvilken and its declensions can only refer to inanimate antecedents. *Hvem* is originally the dative form of the animate interrogative/relative pronoun; however, it has completely replaced the original nominative form hvo. Hvo appears only in a couple of proverbs in modern Danish. Hvem can only refer to animate antecedents. Hvis is the genitive of *hvo/hvem*; however, it can – just as the English *whose* – also be used with inanimate antecedents. Som and der are the relativizers that are used by far the most frequently in modern Danish. It must be noted, however, that som and der are also the translation equivalents of as and there, respectively. Der is of course not only the translation equivalent of there, but also its cognate. Both som and der are indifferent to animacy and can refer to any antecedents except clauses.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> In apparently careless writing, *som* is sometimes found referring to a clausal antecedent. *Der* has not been attested in this function regardless of writing style.

Danish does not distinguish between restrictive and non-restrictive relative clauses as far as the relativizer itself is concerned. In other words, there is no difference in the choice of relativizer similar to the distinction in English between that on the one hand and who/which on the other hand. Nor is the distinction between parenthetical and restrictive relative clauses reflected consistently in punctuation, i.e. comma usage. The Danish Language Council does not recommend the use of comma before restrictive relative clauses, similarly to the standard orthographic rule in English, which precludes the use of comma before restrictive relative clauses. However, this recommendation has existed only since 1996, and the comma is still allowed before any subordinate clause regardless of its nature. Before 1996, it was obligatory to place a comma before every subordinate clause, as in German. In the experience of the author of this paper, who has educated teachers of Danish since 2000 and has given countless public lectures on the use of punctuation in Danish since 2009, the abovementioned recommendation has gone unnoticed by both the general public and teachers of Danish. Consequently, most Danes are completely unaware that there is at all a difference between parenthetical and restrictive relative clauses, and the teaching of this distinction in English is a perpetual challenge.

Based on the contrastive analysis above, it is expected that negative transfer from Danish to English occurs in the following cases, which constitute the hypotheses for this study:

- 1. *Which* and *who* may be confused with respect to the animacy of the antecedent because the most frequently used relativizers in Danish (*som* and *der*) do not make this distinction;
- 2. *Who* and *whom* may be confused in the way that *whom* is used erroneously as the subject of the relative clause since *whom* has an obvious cognate in Danish (*hvem*), which can readily be used as the subject in modern Danish, whereas *who* does not have a widely known cognate at all anymore;
- 3. Entirely wrong words may be used, i.e. *as* and *there* in place of a proper relativizer because *as* and *there* are also translation equivalents of the Danish words most frequently used as relativizers, namely *som* and *der*. Naturally, the correct use of *as* as relativizer is not considered a mistake;

4. Parenthetical and restrictive relative clauses may be confused with respect to both the choice of relativizer (*that* vs. *who/which*) and the use of comma.

Even though it is formulated above, the present paper does not concern itself with hypothesis 4 because it is planned to dedicate a separate study to the use of punctuation in English by Danes. The reason for devoting a separate paper to that issue is that as much as about 20% of all mistakes detected in the writings of Danish students have to do with punctuation, especially with the use of comma (Madsen 2014).

## 3. Method

For the testing of the hypotheses outlined above, a group of freshmen of English Business Communication at Aalborg University, Denmark served as informants. Two types of data were gathered: results of a questionnaire specifically developed for this study and error analysis of texts that the students had written independently of this study (Corder 1981, Oppenheim 1992). The questionnaire contained a set of gap-filling and a set of multiplechoice questions, in both of which the students had to insert the appropriate relativizer into matrix clauses, together with an appropriate preposition if needed. The two sets of questions will be henceforth referred to as the gapfilling and multiple-choice test, respectively. The tests were administered electronically with the help of the quiz functionality of the Moodle software package, which is used for all study-related administrative and educational purposes in Aalborg University. The questions were presented to the informants in a random order, so no two informants received the questions in the same order. The set of answers to the multiple-choice questions was also randomised and contained besides the correct answer both wrong, but sensible answers (i.e. answers with wrong relativizers or wrong prepositions) and nonsensical answers (i.e. answers that did not even contain a relativizer, including of course the words as and there). Neither the relativizer that nor the zero relativizer was part of the set of answers to the multiple-choice questions in order to force the informants to choose between *who* and *which* (Table 2). With one exception, the zero relativizer was never a viable choice to the gap-filling questions; thus empty responses automatically counted as mistakes. Because of the rigidity of the quiz function of Moodle, prepositions always had to be preposed the relativizer, never stranded. Table 2 lists the questions of both the multiplechoice and gap-filling tests, and Table 3 shows the answers to the multiplechoice questions. The tests actually contained four more questions each that concerned topics outside the scope of this study; they are thus not reported here.

Relativizer sought	Multiple-choice questions	Gap-filling questions	
Who	She misses her grandma, { } died a couple of weeks ago, very much.	I watch videos featuring a chemist, { } is now my new hero, on YouTube.	
Whom	Jackie Chan, { } I admire, is a famous actor.	Prof. Poliakoff, { } I watch on YouTube, is an excellent chemist.	
Which as direct object	I sold the sofa { } no one liked very much.	I like the videos { } Prof. Poliakoff and his team make.	
Which as subject	I bought a new sofa, { } was on sale in IKEA.	I like to watch videos { } feature science.	
to whom	My students, { } I give many exercises, are getting better and better.	Peter, { } Julie has told a sad story, is a good listener.	
from whom Prof. Poliakoff is someone { } you can learn a lot.		She misses her grandma, { } she has inherited a sofa.	
about which The sofa { } you may have read elsewhere doesn't exist.		The elements and molecules, { } Prof. Poliakoff lectures in his videos, are very exciting.	
of which	Nordrhein-Westfalen, the English name { } is North Rhine-Westphalia, is my favourite federal state of Germany.	Vatican City, the major "industry" { } is religion, is the smallest state in the world.	

Table 2: The qu	estions of the tests
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as	there	which	who	whom	whose	where
why	What	from whom	because	to whom	of which	about which

Table 3: The set of answers to the multiple-choice questions

In order also to have a textual base for the study, a body of texts written by freshmen in the five academic years from the autumn of 2010 to the spring of 2015 was analysed for errors in the use of relative clauses. The informants participating in the test described above, and the informants providing the texts are two different groups since the tests were conducted in the autumn of 2015. The texts were composed in the course Production of Written Texts within three genres: short composition (e.g. business letters, ads) in English, summarising in English of an English original, and translation from Danish into English.

#### 4. Analysis

In the first two subsections, the results of the two tests are presented. The responses were assigned the following six labels: correct, wrong form but correct animacy, Danism, wrong animacy, whom instead of who, and empty or nonsensical. A response was classified correct when it was the correct relativizer, spelled correctly, and if necessary, accompanied with the correct preposition. The label wrong form but correct animacy covers cases in which the relativizer was misspelled, accompanied with an incorrect preposition or did not have a preposition when one was called for. A response was classified as Danism when it was as or there (see hypothesis 3). The label wrong animacy covers cases in which a relativizer with the wrong animacy was used regardless whether it was spelled correctly or had the correct preposition (see hypothesis 1). The label whom instead of who covers cases in which whom had been used erroneously as subject. This label is only relevant for one question in either test (see hypothesis 2). The label empty or nonsensical covers cases in which the response did not contain a relativizer at all. Since only 81 informants participated in the tests, the percentages are rounded to the nearest whole number. That is why the sum of the numbers in one row may not equal 100; nevertheless, all responses are accounted for.

## 4.1. Results of the gap-filling test

The gap-filling test was used to see if the informants were able to insert the right (form of the) relativizer together with a preposition if needed. Table 4 shows the test results in percentage of the total number of responses.

n=81		Response categories					
Target relativizers and prepositions	correct	wrong form but correct animacy	Danism	wrong animacy	whom instead of who	empty or nonsensical	
Who	79	1	0	7	10	2	
who(m)	89 <sup>4</sup>	2	0	5	n.a.	2	
<i>which</i> as direct object	865	0	0	6	n.a.	7	
which as subject	776	1	0	1	n.a.	20	
to whom	15	72	0	5	n.a.	9	
from whom	1	83	0	10	n.a.	6	
about which	10	74	0	1	n.a.	15	
of which	9	59	2	2	n.a.	27	

Table 4: The results of the gap-filling test

The low number of correct answers in the case of *to whom* can be explained by interference from Danish since Danish does not require the use of a preposition when the relativizer is to function as indirect object in its relative clause. The use of the preposition *til*, the counterpart of *to*, is allowed, but seemingly disfavoured. However, the other cases of a

<sup>&</sup>lt;sup>4</sup> 65% of the informants responded with who, and 23% with whom. Both answers were accepted as correct.

<sup>&</sup>lt;sup>5</sup> 53% of the informants responded with that, and 33% with which. Both answers were accepted as correct. No informants used the zero relativizer.

<sup>&</sup>lt;sup>6</sup> 42% of the informants responded with which, and 36% with that. Both answers were accepted as correct.

relativizer combined with a preposition, which also had a low number of correct responses, cannot be explained in such a straightforward manner because Danish also requires the use of a preposition in these cases. Nevertheless, no preposition was provided at all in the vast majority of the responses. The only possible explanation with reference to Danish may be that modern Danish strongly dejects prepositions combined directly with a relativizer; a stranded preposition is clearly the favoured choice.

#### 4.2. Results of the multiple-choice test

The multiple-choice test was taken by 81 informants. Table 5 shows the test results in percentage of the total number of responses.

n=81		Response categories				
Target relativizers and prepositions	correct	wrong form but correct animacy	Danism	wrong animacy	whom instead of who	empty or nonsensical
who	88	0	1	2	7	1
who(m)	96 <sup>7</sup>	0	1	1	n.a.	1
which as direct object	70	7	2	9	n.a.	11
which as subject	91	1	7	0	n.a	0
to whom	49	42	0	9	n.a.	0
from whom	69	20	0	9	n.a.	2
about which	30	35	25	7	n.a.	4
of which	31	65	2	1	n.a.	0

Table 5: The results of the multiple-choice test

<sup>&</sup>lt;sup>7</sup> 57% of the informants responded with *who*, and 40% with *whom*. Both responses were accepted as correct.

As in the case of the gap-filling test, the items that required a relativizer with a preposition proved to be the most challenging ones although to a lesser degree. Also in the multiple-choice test, the prevalent problem was the omission of the preposition – even though required in Danish as well – not the use of a wrong preposition. On the other hand, the multiple-choice test elicited considerably fewer empty or nonsensical responses than the gap-filling test did. Contrary to this, the multiple-choice test resulted in many more Danisms in the responses than the gap-filling test did. The results of the two tests are similar to each other as for the wrong choice of relativizer with respect to the antecedent's animacy, and the erroneous use of *whom* as subject.

#### 4.3. Results of the error analysis

The error analysis of the corpus was used to see to what extent in actual practice the students made mistakes with relativizers with regard to the hypotheses posited in this study. 1421 texts in English containing more than 370 000 words were analysed. Of all the mistakes that were detected, roughly 1.09% have to do with relativization. This error type is therefore not the most critical one by and large. Table 6 shows the summary of the error analysis.

Text type	Relativizer used	Number of instances	Wrong animacy	Wrong case
	who	441	26 (5.86%)	n.a.
Translation from Danish	whom	16	0	15 (94%)
into English 539 texts, 174 000 words	which	996	1 (0.10%)	n.a.
	Danism	15	n.a.	0
Summary 408 texts, 97 000 words	who	361	4 (1.11%)	n.a.
	whom	7	0	3 (43%)
	which	368	3 (0.82%)	n.a.
	Danism	0	n.a.	0

Table 6: Results of the error analysis

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	who	80	5 (63%)	n.a.
Free composition	whom	8	1 (13%)	5 (63%)
474 texts, 107 000 words	which	402	0	n.a.
	Danism	2	n.a.	0
Altogether 1421 texts, 370 000 words		2696 (0.56% Danism)	40 (1.49%)	23 (74%)

Instances of *that, why, where, when* and *whose* used as relativizer were ignored in this study since they are not covered by the hypotheses. Instances of wrong or non-use of a preposition with a relativizer were also ignored because those errors had been classified as preposition errors and thus fell outside the scope of this study.

The sum of all the instances of the relativizers also includes Danisms (the erroneous use of *as* and *there*), which constitute 0.56% of all the instances of the relativizers used by the students and investigated in this study. Danisms were ignored in the calculation of the percentages of the instances of wrong choice of animacy since the underlying Danish words do not distinguish between animate and inanimate antecedents. The possibility of wrong case usage, on the other hand, does exist with Danisms. As can be seen in Table 1, *der* can only be used as the subject of the relative clause. Thus, if *there* were used in a function other than the subject, it could be construed as an error in case even though *der* and *som* can hardly be considered declensional forms. In any case, no such errors were detected, and thus, the percentage of the sum of the instances of wrong choice of case reflects only the erroneous use of *whom* as subject in proportion to all instances of *whom* as relativizer.

It seems that *who* is more often used erroneously with inanimate antecedents than *which* is used with animate antecedents. One partial explanation is that the students often use *who* with reference to a firm or company, but with the verb in the singular. These mistakes were classified as mistakes with the relativizer for this study; however, in principle, they could also be categorised as mistakes with subject-verb agreement. If so, *who* may not be significantly more misused than *which*.

#### 4.4. Summary of the analyses

Table 7 summarises the main results of the tests and the error analysis.

		wrong animacy	wrong case	Danism
Error analysis		1.49%	74%	0.56%
Test	multiple-choice	4.8%	7%	3.8%
	gap-filling	4.8%	11%	0.3%

Table 7: Summary of the tests and the error analysis

The confusion of the relativizer with respect to the antecedent's animacy is more pronounced in the tests than in actual writing, and it does not seem to matter how the students are tested. Whether this difference is significant or not, is impossible estimate. In any case, it is somewhat consoling that the students do better in the actual use of English than in artificial tests.

The erroneous use of *whom* as subject is, unfortunately, much more pronounced in actual writing than in either of the tests, which seem to yield similar results. Since *whom* is not used very often, as shown in Table 6, one might argue that it does not cause so many mistakes in practice, either. Nevertheless, it is somewhat worrying that whenever the students do attempt to use it, they do so almost invariably erroneously. Thus, it may warrant the introduction of some extra exercises in class.

The erroneous use of *as* and *there*, here called Danism, has similarly low prevalence both in actual writing and in the gap-filling test. The relatively high occurrence of this error type in the multiple-choice test might be due to the fact that the students are explicitly presented with *as* and *there* as possible answers, and this might elevate the students' inclination to use them. In any case, since the prevalence of this error type is so low in practice, it does not seem to be the biggest cause for concern.

## 5. Conclusion

Generally, all the three hypotheses that were posited in this study were verified, to differing degrees. The most significant of the hypotheses is number 2, the erroneous use of *whom* as subject. Although *whom* is not a

word that is used frequently by the students, also not when it could and ought to be used in an academic text, it is almost always used erroneously when it is used. Thus, it seems to deserve increased attention in the teaching of academic and scientific English to Danish students.

It is debatable how much one should worry because of the fact that about 1.5% of the relativizers used by Danish students show a mismatch with respect to the animacy of the antecedent. In an informal interview, some of the informants acknowledged that this distinction is so basic that one ought not to make a mistake with it. On the other hand, the interviewees contended that the mistakes were not due to lack of knowledge, but to lack of proper attention when doing their assignments. If this claim is warranted, it may not be necessary to focus on the technicalities of *who* and *which* in class, but rather on training for paying closer attention when writing and editing written work.

The erroneous use of *as* and *there*, here called Danism, merits the least concern since it has a rather low occurrence in the actual writing of the students. Its relatively frequent occurrence in the multiple-choice test is likely attributable to the artificial and biased nature of the test.

A result that was not anticipated has also emerged from the tests used in this study. Using relativizers with preposed, not stranded prepositions seems to be rather challenging for the students. The error analysis can neither corroborate nor falsify this finding because this issue was not known when the error analysis was performed. Nevertheless, based on the tests, practising the use of relativizers with prepositions would to be a very good idea.

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