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## Abbreviations and symbols

- IQ Indirect question
- L1 A person's first language
- I2(s) A person's second language. One could refer to a person's L3, L4, and so on – however, the general term L2 is often used to refer to any language acquired after the first language has been learned, and is the term that will be applied in this thesis.
- \* Ungrammaticality



# 1 INTRODUCTION

## 1.1 Background and research question

### 1.1.1 Background

The role of the first language in second language acquisition has inspired research for many decades, and is highly relevant also in modern language research. As there is still no single, universally accepted approach to how a second language is acquired and developed, there are still various issues to be explored within the field of research. One of these issues is the role of the native language, and to what extent the first language characterizes second language development and output. In this discussion, transfer is a central term, describing influence from the native language on a learner's second language performance.

The English competence of Norwegian L1 speakers is an interesting area to explore when investigating transfer in the L2, because Norwegians arguably are generally quite proficient in English. English is taught as a separate subject already in elementary school, and a high input of English through television, music, internet, and the like means that especially young Norwegians possess relatively high levels of language knowledge. Thus, it is interesting to investigate how Norwegians handle differences in the L1 and L2, and how transfer works in highly proficient L2 speakers. Are (young) Norwegians' proficiency levels developed to the extent where they can distinguish between English and Norwegian grammatical structures, or do Norwegians still apply L1 structures in their L2 English? Through acceptability judgements, translations and a background information questionnaire, I will attempt to examine whether there is in fact evidence of transfer in specific structures in the L2 English of Norwegian speakers.

### 1.1.2 Research question

As will be described in the theory chapter, indirect wh-questions with wh-movement from the subject position provide contrasting procedures in Norwegian and English; in Norwegian, *som* is required as the overtly pronounced complementizer, while in English, *that/which/who* would be ungrammatical in the same construction. What I wish to discover is whether there is evidence of transfer of Norwegian structures into the L2 English of Norwegian speakers. With this being the aim of this thesis, my research question is: In the case of indirect questions, is there evidence of transfer in Norwegians' L2 English?

## 1.2 Thesis structure

Chapter 1 presents relevant background theory, such as question formation in English and Norwegian; the X'-theory and structure in indirect questions; second language acquisition

theory; and L1 influence on the L2. This theory is a necessary establishing framework when exploring the differences between specific syntactic structures in English and Norwegian, and when investigating if the L1 really influences the L2 English of Norwegian speakers.

Next, chapter 2 describes the research methodology, presenting the participants, material, and procedures, together with methodological considerations. The composition of both the Norwegian group and the control group of English speakers is included, and the structure of the tests applied for collecting data are presented in detail.

Chapter 3 presents the results from acceptability judgements, translations and reported background information – these results are then discussed in chapter 4. Here, the scores on different sentence types in the acceptability judgements are analysed, before discussing the translations from Norwegian into English. Then, the acceptability judgements and translations made by Norwegian participants are compared to see if there is any relationship between scores. Concerning the Norwegian group, all results are compared with the background information provided by each participant. Other issues, such as complexity of the structures and L2 proficiency, are seen in connection with the theory presented in chapter 2.

The final chapter includes the main findings of the thesis, together with limitations and suggestions for further research.



## 2 THEORY

### 2.1 Question formation and structure

Exploring question formation and structure, there are certain distinctions that need to be made clear; firstly, the distinction between direct and indirect interrogatives. Direct questions function as main clause interrogatives, and are naturally followed by an answer. Indirect questions function as interrogative embedded clauses, in main clause declarative sentences which do not require an answer. Rather, indirect questions express a reported, underlying question (Haegeman and Guéron, 1999). The difference is shown in examples 1-4, where 1-2 are direct questions, and 3-4 contain indirect questions (underlined):

1. Where is John?
2. Has Elsa been doing the dishes?
3. I wonder where John is.
4. She tried to figure out if Elsa had been doing the dishes.

Secondly, interrogatives can be distinguished into wh-questions and yes/no questions. In direct questions, wh-questions are introduced by a wh-word (*who, which, where, when, what, why, how*), while yes/no questions are introduced by an auxiliary verb or *do*. Just as with direct questions, indirect questions are distinguished into wh-questions and yes/no questions based on the introducing pronoun/adverb or conjunction; indirect wh-questions are introduced by a wh-word, while indirect yes/no questions are introduced by the conjunction *if* or *whether* (Hasselgård et. al., 1998, p. 350). This applies for both Norwegian and English questions, where the Norwegian equivalents of wh-words and *if/whether* would be hv-words (*hvem, hvilken, hvor, når, hva, hvorfor, hvordan*) and *om* (Faarlund et. al., 1997).

Examining the formation of interrogatives further, Haegeman (1994) explains that all syntactic structures can be explained on the basis of the X'-format proposed by Noam Chomsky (e.g. Chomsky, 1957; Chomsky, 1965). This means that X'-theory allows us to describe both the structure of and the processes in creating questions. Explanations and analyses of indirect questions will be based on X'-theory throughout this thesis.

According to the X'-format, all phrases are headed by one head, X, which complements (YP) combine with to form X' projections (Haegeman, 1994). The whole phrase, XP, may also contain a specifier, Spec. This general schema is shown in figure 1.

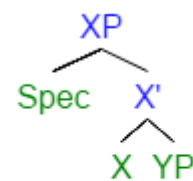


Figure 1: The X'-format (Haegeman, 1994, p. 105)

All phrasal categories can be structured following this format. Still, as deviating patterns are generated by movement of constituents, a more complex schema is needed to allow ‘room’ for movement. As argued by Haegeman (1994), the X’-format can be expanded to a CP-IP-VP structure, which accords with the X’-format, but which also opens for movement of constituents and thus, variations in sentence patterns. Here, the IP (inflection) projection contains i.e. verbal inflections such as person and number properties, while the CP (complementizer) projection is a functional projection of the complementizer C (ibid.). The full projection of the structure is shown in figure 2:

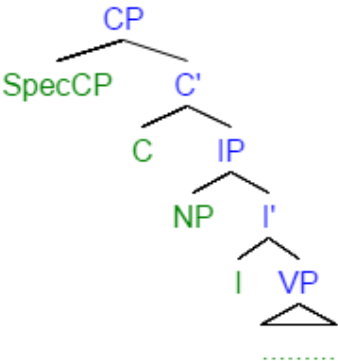


Figure 2: CP-IP-VP structure

Following the CP-IP-VP structure, briefly explained, direct yes/no questions are formed by the auxiliary verb rising from its base-position to a vacant position dominated by C (Haegeman, 1994). In indirect questions, there is no movement of the auxiliary verb – rather, the equivalent of yes/no questions is formed by inserting if/whether in the vacant position under C (ibid.). The auxiliary verb thus remains in its base position. These theoretical claims are reflected in the word order of questions, and explains why “will” is pronounced before “John” in figure 3, but after “John” in figure 4. This process of forming direct and indirect yes/no questions is the same in Norwegian and English.

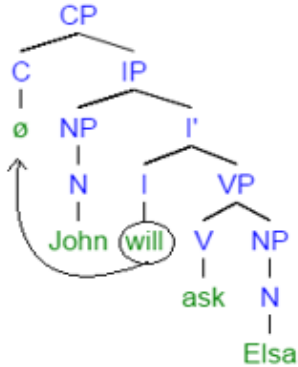


Figure 3: Direct yes/no questions

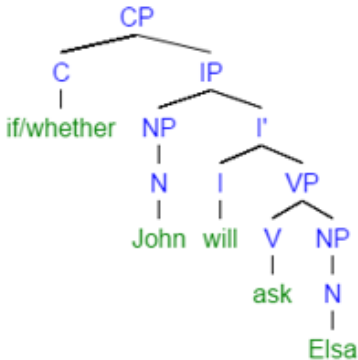


Figure 4: Indirect yes/no questions

In cases where the deep structure does not contain an auxiliary verb, in English ‘do’ would be inserted in I, and moved to C in direct questions (Haegeman, 1994). In indirect questions without an auxiliary verb, the lexical verb would move to I. In Norwegian, the lexical verb would also have moved from V to I in indirect questions, and then to C in direct questions (Faarlund et. al., 1997).

Similarly, direct wh-questions are formed by movement of the wh-constituent, to the specifier position dominated by CP. Indirect wh-questions are formed in the same way, with the wh-constituent rising to Spec, CP. One crucial difference between direct and indirect questions is that in direct questions, the finite verb is also moved (to the position dominated by C), while in indirect questions there is no such movement – the verb is left in its original position. The complementizer C in indirect wh-questions thus remains empty, or unpronounced, and the word order in the two structures turns out different.

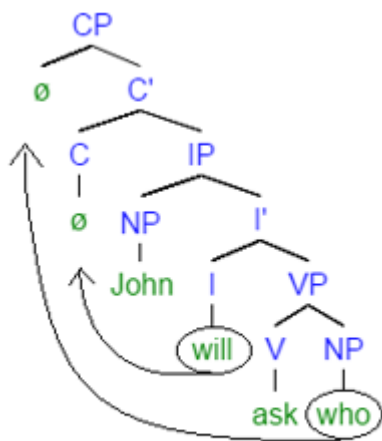


Figure 5: Direct wh-questions

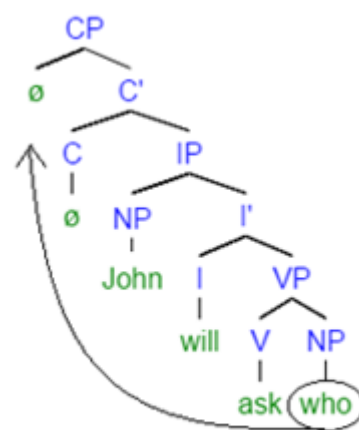


Figure 6: Indirect wh-questions

The processes for forming wh-questions described so far are also the same for Norwegian and English. Still, further investigation of English and Norwegian interrogatives proves that indirect wh-questions contain some interesting variances in the two languages. Indirect wh-questions will for that reason be most relevant in this thesis.

### 2.1.1 English indirect wh-questions

Indirect questions are subordinate clauses, and occur as an argument of the main clause predicate. As described, X'-theory can be used to explain the derivation of interrogative clauses, and looking further into wh-questions the position – and movement – of the wh-phrase proves important. In this thesis, indirect questions with wh-phrases in the subject position stand out as specifically relevant; why this is the case will be explained in the following sections.

As explained, English indirect *wh*-questions are formed by movement of the *wh*-phrase to the specifier position under CP. This movement leaves a so-called ‘trace’ in the structure, which leads to the assumption that some positions in the structure can be (phonetically) empty, or unpronounced. In other words, a position can be present in the structure but with nothing pronounced in that position. Another example of a possibly empty position is the C position, head of the CP, which is sometimes pronounced (i.e. as “if” in indirect yes/no questions), but in other cases unpronounced (as in figure 6).

At this point, it is useful to distinguish between three types of subordinate CPs; declarative clauses (CP<sub>DECL</sub>), interrogative clauses (CP<sub>Q</sub>), and relative clauses (CP<sub>REL</sub>). As argued in X'-theory, it is the type of head that determines the type of phrase, and each type of CP is assumed to have a different sub-type of complementizer C. These can all be unpronounced – marked under as C<sub>DECL</sub>, C<sub>Q</sub>, and C<sub>REL</sub>. Where these complementizers are spelled out, they are pronounced as follows:

	English	Norwegian
- C <sub>DECL</sub>	<i>that</i>	<i>at</i>
- C <sub>Q</sub>	<i>that</i>	<i>som</i>
- C <sub>REL</sub>	<i>that</i>	<i>som</i>

Continuing the discussion on unpronounced positions in interrogative structures, a key point is the constraint of the doubly filled COMP filter (DCF): “When an overt *wh*-phrase occupies the Spec of some CP the head of that CP must not dominate an overt complementizer” (Haegeman, 1994, p. 383). In other words, if a *wh*-phrase occupies the SpecCP, then the C of that clause is unpronounced. The complementizer involved in DCF is a C<sub>Q</sub> – a complementizer which is head of an interrogative clause – but because of the restrictions of the DCF it is never pronounced. Note that this filter does not restrict the sequence *wh*- + *that* in all languages; as Haegeman (1994) stresses, examples of this structure can be found in for example Dutch, German, and even in early English. Still, in modern Standard English, this constraint means that in general, *wh*- + *that* is unacceptable in English sentences – as in example 5:

- \*I wonder [<sub>CP</sub> who<sub>i</sub> that [<sub>IP</sub> Lord Emsworth will invite t<sub>i</sub> ]]

Looking more closely at the movement of the *wh*-phrase, a *wh*-phrase can undergo movement within the clause from which it originated – so-called “short-distance movement”, as shown in example 6:

6. I wonder [<sub>CP</sub> who<sub>i</sub> [<sub>IP</sub> t<sub>i</sub> will arrive first]]

Also, a wh-phrase can move out of a subordinate clause into the Spec,CP position of a main clause – known as “long-distance movement” (Haegeman, 1994, p. 398). In indirect questions, long-distance movement happens in complex sentence types, where the indirect question contains another subordinate clause. An example of such long-distance movement, displaying the main and subordinate clauses as well as movement of the wh-phrase, is shown in example 7:

7. I wonder [<sub>CP</sub> [which book]<sub>i</sub> she believes [<sub>CP</sub> that he must read t<sub>i</sub> ]]  
(Wilder, 2014, p. 23)

Further, the wh-phrase may move from different positions in the deep structure – for example, it may originate from the subject- or the object position in a sentence – and this turns out to have significance for the rest of the structure of the clause. The following examples, all displaying long distance movement, are taken from Haegeman (1994, p. 398):

8a Whom<sub>i</sub> do you think [<sub>CP</sub> that [<sub>IP</sub> Lord Emsworth will invite t<sub>i</sub> ] ]?

8b Whom<sub>i</sub> do you think [<sub>CP</sub> [<sub>IP</sub> Lord Emsworth will invite t<sub>i</sub> ] ]?

9a \*Who<sub>i</sub> do you think [<sub>CP</sub> that [<sub>IP</sub> t<sub>i</sub> will arrive first]]?

9b Who<sub>i</sub> do you think [<sub>CP</sub> [<sub>IP</sub> t<sub>i</sub> will arrive first]]?

As the examples show, the extraction site of the wh-element has deciding consequences for the realization of an overt complementizer such as *that*; in (8), the wh-phrase moves from the position of the direct object; as in contrast with (9), where the wh-phrase is extracted from the subject position of the lower clause. It is apparent that subjects cannot be extracted across the complementizer *that* (Haegeman, 2006). This coincides with what Haegeman refers to as the *That-trace* filter: “The sequence of an overt complementizer followed by a trace is ungrammatical” (Haegeman, 1994, p. 399). As shown in the examples above, this filter certainly affects the structure of English direct questions, and it is evident that the consequences for indirect questions are the same when extracting the wh-phrase from the subject site directly under *that*:

10. \*I wonder [<sub>CP</sub> who<sub>i</sub> she thinks [<sub>CP</sub> that [<sub>IP</sub> t<sub>i</sub> will arrive first]]].

11. I wonder [<sub>CP</sub> who<sub>i</sub> she thinks [<sub>CP</sub> [<sub>IP</sub> t<sub>i</sub> will arrive first]]].

This filter applies to both short- and long distance movement of wh-phrases, and ultimately means that wh-movement from the subject site is incompatible with pronunciation of the overt

complementizer *that*. The complementizer here is a C<sub>DECL</sub>, distinguishing the that-trace filter from the DCF; the forbidden ‘that’ in structures like (10) is the C of the most deeply embedded clause – a declarative clause. The larger embedded clause is interrogative, containing a head C<sub>Q</sub>, which is unpronounced because of the DCF effect – regardless of the original position of the wh-phrase.

Additional implications of the DCF and that-trace effect will be explored further in connection with relative sentences in section 2.2.2, where the third type of complementizer C<sub>REL</sub> will also be discussed.

### 2.1.2 Norwegian indirect wh-questions

When comparing movement of wh-phrases in English and Norwegian indirect questions, there is a crucial difference in the realization of the overt complementizer *that//som*. In contrast with English, when the wh-phrase relates to the subject position under *that*, the complementizer cannot be left out in Norwegian sentences (Taraldsen, 1986, p. 150). Taraldsen demonstrates this in the following examples:

12. Vi vet **hvem som** snakker med Marit.  
*we know who that talks with Mary*  
\*We know who that is talking with Mary.

13. \*Vi vet **hvem** snakker med Marit.  
*we know who talks with Mary*  
We know who is talking with Mary.

(Taraldsen, 1986, p. 150)

However, this is not the case when the wh-phrase moves from other positions in the deep structure – for example, wh-phrases moving from the object position do not require the realization of *som*:

14. Jeg vet hvilket hus hun bor i.  
*I know which house she lives in.*

Furthermore, the pronunciation of an overt complementizer would in such structures lead to ungrammaticality:

15. \*Jeg vet hvilket hus som hun bor i.  
*\*I know which house that she lives in.*

Consequently, *som* is omissible when the wh-phrase is associated with a non-subject – furthermore, it is actually impossible in such contexts (Taraldsen, 1986).

### 2.1.3 Deciding differences

Exploring the formation of English and Norwegian *wh*-interrogatives, there are certainly similarities in how questions are formed in both languages. Independently of whether the structure is a direct- or an indirect question, the process of *wh*-movement can be summarized in the general *wh*-movement hypothesis:

- a. Every *wh*-phrase is located in IP at the D-structure [deep structure] level.
- b. The Specifier of CP position is always empty at the D-structure level.
- c. Every *wh*-phrase that is located in a Specifier of CP position at the S-structure [surface structure] level has been moved there by the *wh*-movement rule.

Wilder, 2004, p. 21

Still, the movement of *wh*-phrases in indirect questions highlights one crucial difference in English and Norwegian; when the *wh*-phrase is moved from the subject position in the embedded clause, we can conclude the following rules:

- I. In English, we can only extract a subject from inside a lower clause provided there is no overt complementizer.
- II. In Norwegian, the overt complementizer *som* is obligatory when extracting the local subject from inside a lower clause.

This *som* preceding the trace of an extracted subject has no pronounced counterpart in English (Hasselgård et. al., 1998). In contrast, pronouncing the overt complementizer when the *wh*-phrase is moved from other positions in the embedded clause leads to ungrammaticality in *both* English and Norwegian.

## 2.2 “In-between” structures

### 2.2.1 *Wh-* + *that* structures in modern English

As explained in the previous sections, *wh-* + *that* structures in English are generally viewed as ungrammatical. Still, examples of *wh-* + *that* do in fact occur in the English language of some speakers (e.g. Seppänen and Trotta, 2000; Zwicky, 2002).

The *wh-* + *that* pattern is regularly noted in historical accounts of English, but its status in modern English is far less clear (Seppänen and Trotta, 2000). What creates this vagueness is the fact that, as discussed in the previous chapters, the structure is no longer part of the Standard English grammar – still, Seppänen and Trotta’s observations reveal distributions of the pattern in various levels of language use. *Wh-* + *that* patterns are found in both formal and informal spoken data and in written material, which makes it clear that the structure is not limited to any

particular area of language use. For example, in a study on Belfast English by Henry, the following examples of spoken English were registered (1995, p. 107):

16. I wonder *which dish* **that** they picked.
17. They didn't know *which model* **that** we had discussed.

Another study providing similar examples was made by Seppänen (1994), who recorded the pattern in fully standard written English:

18. [...] and definitions vary as to *which of these types of criteria* **that** are used.
19. *What little hostility* **that** remained against him and his men among the villagers disappeared.

Interestingly, examination of the composition of the *wh*-phrase revealed that the modern use of the *wh*- + *that* pattern apparently relies on the complexity of the *wh*-phrase;

From the data given, it is clear that the single word *wh*-phrase followed by *that* is overwhelmingly a feature of clearly colloquial speech which is only occasionally found in other registers. What is more, this form of the structure is normally rejected by informants as altogether deviant.

Seppänen and Trotta, 2000, p. 171

This is supported by Zwicky, who finds that “[t]he unacceptability of single *wh*-word XP [...WH]’s in WH + *that* clauses means that several WH constructions cannot have variants with *that* – because these constructions require the fronted XPs in them to be single words” (2002, p. 228). Furthermore, Zwicky argues that the condition on *wh*- + *that* clauses is not really a matter of the number of words in the *wh*-phrase – rather, the type of the modified head word is decisive (2002). In short, a *wh*- + *that* clause is subject to what Zwicky refers to as the Lexical Head Restriction (LHR):

**LHR:** In the XP [...WH], the WH word is (part of) a modifier of a lexical (not grammatical) word from the category N (or A).

Zwicky, 2002, p. 230

From this, it is clear that the *wh*- + *that* structure is subject to several restrictions, which might shed light on how certain speakers of English judge different versions of the structure. For example, Seppänen and Trotta’s work emphasizes the complexity of the *wh*-phrase, while Zwicky puts focus on the type of the modified head word.

While the dominant use of *wh*- + *that* is found in informal, spoken English, Seppänen and Trotta (2000) stress the fact that there are occurrences also in fully standard and formal written language. This makes the research relevant for this MA project, and is also the reason I included



a control group of English speakers in my collections of language data, to test my hypothesis that most English speakers will judge such structures as not acceptable, or at least less acceptable than the more common structure without *that*.

### 2.2.2 Relative clauses

Another structure relevant to include in this thesis is relative clauses. As explained by Hasselgård et. al. (1998), relative clauses and indirect questions may formally be practically identical. Still, there are differences distinguishing the two types; while indirect questions imply an underlying question, relative clauses do not – rather, their most common function is to modify nouns (ibid.).

- |   |                          |
|---|--------------------------|
| 20. I wonder which dog that chased the cat. | <i>Indirect question</i> |
| 21. The dog that chased the cat was brown.  | <i>Relative clause</i>   |

All relative clauses involve wh-movement of a phrase containing a relative pronoun to Spec,CP (Wilder, 2014). In English, the wh-phrase and the C can be pronounced or unpronounced – leading to three types of relative clauses:

- |   |                      |
|---|----------------------|
| 22a The book [which <sub>i</sub> C <sub>REL</sub> [I gave t <sub>i</sub> to you]...             | <i>Wh-relative</i>   |
| 22b The book [ <del>which</del> <sub>i</sub> C <sub>REL</sub> [I gave t <sub>i</sub> to you]... | <i>Zero-relative</i> |
| 22c The book [ <del>which</del> <sub>i</sub> that [I gave t <sub>i</sub> to you]...             | <i>That-relative</i> |

Like in indirect questions, the DCF does apply also in relative clauses. In contrast, the that-trace filter does *not* apply in relative clauses. The DCF is shown in wh-relatives, while that/zero-relatives show a pattern opposite of the that-trace effect.

*DCF:*

- 23a\*The person [who<sub>i</sub> that [Lord Emsworth will invite t<sub>i</sub> ...]]
- 23b The person [who C<sub>REL</sub> [Lord Emsworth will invite t<sub>i</sub> ...]]
- 23c \*The person [who<sub>i</sub> that [ t<sub>i</sub> will will arrive first...]]
- 23d The person [who<sub>i</sub> C<sub>REL</sub> [ t<sub>i</sub> will will arrive first...]]

*That + trace:*

- 24a The person [~~who~~<sub>i</sub> that [ Lord Emsworth will invite t<sub>i</sub> ...]]
- 24b The person [~~who~~<sub>i</sub> C<sub>REL</sub> [ Lord Emsworth will invite t<sub>i</sub> ...]]
- 24c The person [~~who~~<sub>i</sub> that [t<sub>i</sub> will arrive first...]]
- 24d \*The person [~~who~~<sub>i</sub> C<sub>REL</sub> [t<sub>i</sub> will arrive first...]]

In other words, the DCF inflicts the same restrictions on indirect questions and relative clauses; that the complementizer in C cannot be pronounced if the SpecCP is occupied by a wh-phrase. Contrastively, while in English indirect questions the structure *that* + trace is ungrammatical,

English relative clauses require the complementizer *that* to be pronounced when the local subject is relativized.

The main difference between English and Norwegian relative sentences is that in Norwegian, the moved phrase generally cannot be pronounced; meaning Norwegian only has zero-relatives or *som*-relatives (equivalent to *that*-relatives in English) (Faarlund, et. al., 1997).

25a \*Boken [hvilken<sub>i</sub> C<sub>REL</sub> [jeg ga t<sub>i</sub> til deg]...]

*The book [which<sub>i</sub> C<sub>REL</sub> [I gave t<sub>i</sub> to you] ...]*

25b Boken [hvilken<sub>i</sub> C<sub>REL</sub> [jeg ga t<sub>i</sub> til deg]...]

*The book [which<sub>i</sub> C<sub>REL</sub> [I gave t<sub>i</sub> to you] ...]*

25c Boken [hvilken<sub>i</sub> som [jeg ga t<sub>i</sub> til deg]...]

*The book [which<sub>i</sub> that [I gave t<sub>i</sub> to you] ...]*

Norwegian has the same restrictions as English when the subject of the relative clause is relativized; the complementizer *som* must be pronounced in such structures (Lohndal, p. 50).

26a Personen [hvem<sub>i</sub> som [t<sub>i</sub> vil ankomme først ...]]

*The person [who<sub>i</sub> that [t<sub>i</sub> will arrive first...]]*

26b \*Personen [hvem<sub>i</sub> C<sub>REL</sub> [t<sub>i</sub> vil ankomme først ...]]

*\*The person [who<sub>i</sub> C<sub>REL</sub> [t<sub>i</sub> will arrive first...]]*

In sum, this establishes the relevance of relative clauses in connection with indirect questions. As discussed, the pattern in indirect wh-questions is different in Norwegian and English; when the wh-phrase is moved from the subject position, Norwegian requires *som*, while in English *that* would be ungrammatical in the same structure. In relative clauses, Norwegian has the same pattern as English; when the subject is relativized, the pronounced complementizer *som//that* is required. Thus, despite the similarities of the structures, Norwegian might handle them differently in their L2 English.

### 2.3 Second language acquisition theory

As explained by Ritchie and Bhatia, there is no single, universally accepted approach to the study of second language acquisition (SLA) (2009, p. 45). Several theories have developed through the years, attempting in various ways to explain how second languages are acquired and developed. It is not my attempt in this study to prove or support one of these numerous directions within language research – still, a brief look into some main issues prove useful when trying to understand second language acquisition and the role of the L1.

In the discussion on SLA, a necessary starting point is language acquisition in general, entailing the question of how a first language is acquired. Further, some of the main perspectives in the history of language research highlights some general views on language acquisition. In the

1950s and 1960s, the leading branch of research was behaviorism, which explained language acquisition as based on environmental influences (Gass and Selinker, 2001). Imitation and mimicking, reinforcement, and language input are key terms associated with behaviorism, and language production was the main source for analysis (Ingram, 1989). As behaviorist theories were challenged in the 1960s and 1970s, another leading branch within language research emerged, entailing a paradigmatic change in the field (ibid.). Focusing on innate properties of language – as opposed to the environmental focus in behaviorism – these theories are often referred to as nativist, and the most influential of these approaches was Noam Chomsky’s theory of Universal Grammar (ibid.).

Universal Grammar (UG) provided a model of unconscious knowledge of language, opposing theories viewing language as learned solely through input. UG represents an innate, abstract linguistic system with a number of components, which underlies our use of language. Chomsky stated already in his early works that the acquisition of language cannot be explained on the basis of linguistic input alone – in the words of White; “there is a mismatch between the primary linguistic data children are exposed to and their ultimate attainment” (Chomsky, 1959; White, 2009, p. 49). This *logical problem of language acquisition* is one of the main arguments in favor of UG; that certain aspects of language do not have to be learned – rather, they are part of an innate linguistic system that affects the acquisition of language. This claim is supported by i.e. language creativity; for example, learners can produce language structures they have never been exposed to earlier.

Even though Chomsky’s research has been given great significance also in recent research on language acquisition, there is still no universal approach to how language is acquired – Ingram describes the field as “one without a discipline”, stressing how the area of research is comprised of different “language acquisition subfields” (1989, p. 1). Despite the many perspectives on language acquisition, one can still make some general definitions and conclusions concerning the term. For example, language acquisition can be defined as a fundamentally psycholinguistic process, concerning how language is learned – contrastingly, language production is the product of a system in place (Gass and Selinker, 2001). Concerning SLA, when learners acquire a second language, their language output is often referred to as “interlanguage”; a system composed of various elements, such as influences from the L1 or the target language (ibid.). The acquisition process is the actual learning of the L2, while the production expresses rules and individual hypotheses applied in the interlanguage system. L2 learners will often reach a stage of fossilization, where the interlanguage stabilizes and language acquisition plateaus on a

level below native proficiency levels (ibid.). Aspects characterizing the interlanguage, such as influences from the L1, seem to be very difficult to set aside once stabilization is reached, despite any efforts to enhance the L2 proficiency.

Exploring these issues, it is worth commenting on the notion of what it means to be proficient in a second language. A common perception is that proficiency is multicomponential in nature, and that it may thus be hard to measure adequately (Housen et. al., 2012). As Gass and Selinker (2001) point out, there are many factors to consider when evaluating the acquisition process; for example, do two or three correct utterances mean a structure has been acquired, or is a certain percentage of correct outputs required? And, at what point in the acquisition process can a learner be characterized as ‘highly proficient’? This is certainly a relevant point to consider when exploring Norwegians’ L2 English – English is part of the syllabus from early in primary school, so already when completing lower secondary school all Norwegian students will have studied the language for several years. Still, individual factors in the acquisition process, and views on how to adequately measure language proficiency, means that a general characterization of Norwegians as ‘highly proficient’ English speakers proves problematic.

As an additional point on proficiency, several studies find that the extent to which L2 learners are able to comprehend various issues in the target language depends on proficiency level (e.g. Dussias and Pilar, 2009; Frenck-Mestre, 2002; Hopp, 2006). As pointed out by Dussias and Pilar (2009), lower proficiency levels require increased efforts to process lower-level information, while higher proficiency levels free up cognitive resources to carry out higher-level comprehension. Thus, near-native levels of proficiency are required to be able to converge on native-like processes (ibid.).

### **2.3.1 The native language in SLA**

The role of the native language has always been an area of interest within SLA, and the assumption that L2 learners rely on their L1 in learning situations has been a debated issue (Gass and Selinker, 2001). As discussed, a main theory in early language research was behaviorism, which assumed that knowledge was acquired through mimicking and establishing habits, and that old knowledge got transferred to new situations (ibid.) In SLA theory, this meant that the already acquired knowledge of the L1 was applied when learning a L2, meaning the L1 grammar constituted the initial state of the L2 as well as restricting L2 development. As challenging views emerged in the 1960s and 1970s, theories viewing language as a set of rules rather than a set of habits led to new perspectives also in SLA research. Accepting the idea that certain principles of language are innately present in first language acquirers, a natural

assumption might be that UG also constitutes the initial state in L2 acquisition – or at least, that it constrains some aspects of how a second language is acquired. Viewing innateness as core in first language acquisition, the L2 could be constructed in similar ways as the L1, regardless of the native language. The debate on whether or not L2ers have access to UG was the focus of generative SLA research in the 1980s and 1990s, and continues to be a debate to consider also in recent research on language acquisition (White, 2009). Today, a fairly accepted view is that L2ers demonstrate knowledge implicating the involvement of UG principles, either directly or indirectly (via the L1) (White, 2015). This further leads to the issue of transfer – how the role of the first language affects the L2.

### **2.3.2 Transfer**

As discussed, the role the native language plays in second language acquisition has inspired research for many decades, and the significance of the L1 has been – and is still today – a well-debated issue. Siegel (2009) describes that learners of a second language use several linguistic features of their L1 when acquiring a second language. Further, he defines such processes, “in which the linguistic features of one language are used in learning or using another language”, as transfer (2009, p. 577). Transfer has always been a relevant term to consider in SLA research, and many researchers share the view that transfer plays an important role in L2 acquisition. Still, this is not an entirely straightforward allegation, and transfer has been subject to much discussion throughout the history of SLA research.

In the 1940s and 1950s, similarities and differences between L1 and L2 were the main focus of SLA research (Foley and Flynn, 2013, p. 98). One of the dominant theories of the time – the Contrastive Analysis approach – was introduced by Lado (1957), who claimed that learning a new language ultimately involves identifying and learning differences between the L1 and the L2. Thus, L2s with more differences from the L1 would be more difficult to learn, while L2s with more similarities with the L1 would be more easily acquired. In the 1960s, contrastive approaches were influenced by developing perspectives such as Chomsky’s (1959; 1965), introducing the view of language as a complex system with innate capacities. Applying this theory in SLA research, it was suggested in the early 1970s that the L1 was not as influential in L2 acquisition as claimed in earlier approaches (Foley and Flynn, 2013). In the later 1970s and 1980s, the focus of whether or not the L1 had an effect on L2 development shifted to a focus of *how* and *when* learners applied their L1 in L2 acquisition (ibid.). By the 1990s, research investigating the influence of UG increased, reaching an acknowledgement that both UG and knowledge of the L1 might influence SLA. Views on the role of the L1 led to discussion on the

initial state of the L2, which became a defining issue for further research in the 1990s and 2000s (ibid.). For example, the ‘No Access’ hypothesis claims that access to UG disappears with age, arguing for a ‘critical period’; a period after which successful language learning cannot take place (e.g. Bley Vroman 1989; Clahsen and Muysken, 1989). In contrast, the ‘Full Access’ hypothesis emphasizes access to UG as crucial in SLA, reducing the role of transfer. Furthermore, the ‘Full Transfer/Full Access’ hypothesis views the L2 initial state as composed of L1 grammar entirely, along with full access to UG constraining L2 development (e.g. Schwartz and Sprouse, 1996). Between these viewpoints there are of course various hypotheses emphasizing the value of transfer and UG differently. Later research on transfer and SLA build on these previous approaches, seeking further insight into the role of the L1. One particular issue in present day research is the possibility that the role of the L1 may vary within different areas of language knowledge (Foley and Flynn, 2013, p. 107).

Looking at transfer without lingering on its role and extent in second language acquisition, there are some key issues to define to further understanding the term. Transfer may be positive or negative; features of the L1 may match or mismatch those of the L2. When positive transfer occurs, learners might be able to acquire the relevant structures more quickly; when negative transfer occurs, learners directly apply rules of the L1 in the L2 even though this might lead to ungrammaticality. Negative transfer might also manifest in other ways than direct application of L1 rules in the L2; for example, avoidance might occur when something in the L2 is incompatible with the L1 (e.g. Odlin, 2015; Schachter, 1974). Odlin (2015) mentions speakers avoiding certain words because they represent other meanings in the source language; another issue might be that learners avoid specific structures because they do not occur in their L1. The L1-L2 difference variable is, according to Gass and Selinker (2001), the most consistent factor when predicting avoidance. Such strategies, entailing negative transfer, may be particularly relevant when concerned with language use, pointing to the distinction between L2 acquisition and L2 production.

### **2.3.3 L1 Norwegian transfer into L2 English – previous studies**

Investigating L1 Norwegian transfer into L2 English, a number of previous studies have been carried out. For example, Westergaard (2002) found that even after years of English instruction in school, Norwegian children display massive transfer of L1 features into their L2 English, such as the Norwegian V2 (verb second) word order. Further, a study by Dahl (2004) also implies evidence of negative transfer in Norwegians’ L2 English, examining how Norwegians handle certain ungrammatical English passive structures grammatical in their L1. Yet another

study, initially focusing on production of metaphors in Norwegians' L2 English, found that certain prepositions prove challenging to Norwegian learners, and ultimately lead to negative transfer (Nancy, 2013). Evidently, there exists various previous research on transfer of different features from Norwegian to English – still, detailed investigations of transfer in indirect questions specifically seem to be missing.

#### **2.3.4 Transfer in English and Norwegian indirect questions**

Referring back to the theory presented on Norwegian and English question formation, there are two main points illustrating potential positive and negative transfer. First, in English we can only extract a subject from inside a lower clause provided there is no overt complementizer, while in Norwegian, the overt complementizer *som* is obligatory when extracting the subject from inside a lower clause. The difference is illustrated in (27). This distinction might potentially lead to negative transfer, omitting or adding the complementizer in the target language.

27. \*He asked who<sub>i</sub> that t<sub>i</sub> ate the cake.  
Han spurte hvem<sub>i</sub> som t<sub>i</sub> spiste kaken.

Second, pronouncing the overt complementizer when the *wh*-phrase is moved from other positions in the embedded clause leads to ungrammaticality in *both* English and Norwegian, as illustrated in (28). Here, positive transfer might occur, applying similar structures in source and target language.

28. \*She wondered when<sub>i</sub> that I left work t<sub>i</sub>  
\*Hun lurte på når<sub>i</sub> som jeg dro fra jobb t<sub>i</sub>.

There exist several studies showing evidence of both positive and negative transfer, supporting hypotheses emphasizing the role of transfer in SLA (Odlin, 2015, p. 152).

Transfer proves to be one crucial aspect in second language learning – still, L2 learning is complex and multifaceted, and a single approach is too simplistic to provide a clear picture of how language is acquired. Nevertheless, a discussion on the role of the native language in L2 acquisition proves relevant when seeking an understanding of how language is learnt, and is central when exploring if traces of the L1 can be found in L2 judgements and productions.





## 3 RESEARCH METHODOLOGY

### 3.1 Participants

The Norwegian group consisted of 54 participants, all university or college students in their first or second year of education. Participants were recruited from three different universities/colleges: the Norwegian University of Science and Technology (NTNU), Kristiania University College, and BI Norwegian Business School. Thus, a variety of educational backgrounds were represented. All participants listed Norwegian as their native language.

The control group consisted of 12 participants between the ages 22-24, all university students or recently graduated students. There were seven participants from Australia; three participants from England; and two from the United States of America. All participants were native speakers of English – two participants also listed Spanish as their additional native language. All control group participants were recruited through personal networks.

### 3.2 Material

The acceptability judgement test included 40 English sentences, covering different sentence structures. Participants were asked to rate all sentences on a scale of 1-6, where 1 signified “completely unacceptable” and 6 signified “completely acceptable”. The structure in focus – indirect questions (IQ) with wh-movement from the subject position – constituted 25 sentences, divided into two categories; 10 sentences with correct Standard English structure (IQ; subject – *that*), and 15 sentences with Norwegian structure (IQ; subject + *that*). In addition, there were 15 sentences used as fillers: 10 indirect questions categorized as “IQ; object (etc.) ± *that*”; and five relative sentences. The filler sentences were used to camouflage the target structure by including similar, non-relevant sentences. This was necessary to ensure that participants did not realise what linguistic conditions were tested. In all sentences containing wh-constituents, there was an even distribution of complex and simple wh-phrases, to see if participants handled these differently. The acceptability judgement test was given to both the Norwegian participants and the control group, with the exact same order and layout for both groups.

The translation test consisted of 15 Norwegian sentences which participants were asked to translate into English. The target structure amounted to seven sentences, while eight sentences with other structures were used as fillers. This test was only given to the Norwegian participants.

The background questionnaire involved 12 questions asking for information about language background and exposure to English in education and everyday life. For the control group, the background questionnaire was adapted and involved only five questions, focusing on language background – this to ensure that the respondents were in fact native English speakers without knowledge/influence of Norwegian language structures. All answers were given by clicking radio buttons or checkboxes, with some questions requiring further specification in text boxes.

### **3.3 Procedures**

Data was collected through an electronic survey, consisting of an information sheet; an acceptability judgement test; a translation test; and a background questionnaire (see appendix I-IV). The survey was distributed through educational and personal networks, by sending it as a link by email or distributing it on online forums only available to the target groups – for example in private Facebook groups under the auspices of the university. The control group participants were recruited exclusively through personal networks, and got access to the survey through a link shared with them personally. Instructions were given in Norwegian for the Norwegian participants, and in English for the control group. All questions were given in English. Participation was voluntary, and participants could take the survey at any time or place. The survey had no time limit, and all responses were anonymous – the only background information stored was the information given in the questionnaire, involving no personally identifiable data.

### **3.4 Coding the results**

The acceptability judgement scores were coded by calculating the overall score for each sentence, then finding the average score of 1-6 in each category.

Translation test responses were coded based on the correct/incorrect use of the pronounced complementizer (based on Standard English). Issues such as orthography, word order, and ability to translate all Norwegian words into English were ignored, focusing only on how Norwegian L1 speakers translated the targeted structures. Thus, the filler sentences were not coded – only the sentences involving indirect questions with wh-movement from the subject position were given a score. Incorrect use of the pronounced complementizer was coded as zero points; correct use was coded as one point – meaning correct translations of all seven target sentences resulted in seven points.

The Norwegian background questionnaire responses were coded on a scale of 0-4, based on the number of sub questions in all main questions. Evaluating the effect and importance of all questions, not all responses were coded; for example, “More than one native language” and

“Study programme” were not given any value, as these were mainly used to get an overview of linguistic and educational backgrounds. This decision was made to control which variables impacted the overall score, giving a balanced measure of English use/exposure. By coding the background variables, each participant was given a score reflecting their use of English – the ones who reported high English use/exposure were given a high background score, while those who reported less English use/exposure received a lower background score.

The Norwegians’ background scores were also checked for correlation with target sentence judgements using Kendall’s Tau analysis. In addition, the differences in means between the sentence types were tested for significance using an independent samples t-test as well as a non-parametric Mann-Whitney U test.

### **3.5 Methodological considerations**

#### **3.5.1 Participants**

Avoiding (to a certain degree) variables such as big age differences, various educational levels, and the like, a relatively homogenous sampling was desired. Having decided to conduct an electronic survey, students were selected as an appropriate target group; knowing they could easily be contacted through university channels, as well as being easily targeted – and hypothetically, categorized – based on their field of study. To ensure that participants were not experienced within the field of linguistics, students in their first or second year of education were targeted. As participants with different levels of English proficiency were sought, the survey was made available to students in various educations, meaning both students in English and non-English study programmes were included.

In some way, approaching specific university professors and contacts for distributing the survey to certain groups of students, is a selective process – only the students contacted were able to provide responses. Moreover, basing the collection of data on students’ willingness to access and complete an electronic survey in some ways leads to selectivity. Still, as students in so many different educations were approached, I feel confident that the degree of random sampling – within the targeted groups of participants – was maintained. This assumption is ascertained by the results, which show a variety of educational backgrounds and levels of English proficiency.

#### **3.5.2 Material**

Because language comprehension and production might not always reflect the same knowledge, both acceptability judgements – a frequently used method in SLA research – and translations were included as methods for collecting data (Mackey and Gass, 2005). Translation tests require

language production, and may be a good way of accessing learners' competence because they have to directly compare their L1 and L2 – finding either correspondence or disagreement (Ayoum, 2000). Also, by asking participants to translate the target structures, the possibility of avoiding structures they feel unsure of is reduced. Avoidance is a common strategy in SLA, but in a translation test the participants are encouraged to make an active choice (Schachter, 1974). Nevertheless, because production of structures which are not part of a learners L1 might be subject to avoidance, acceptability judgements function as an additional way of mapping learners competence – as this method does not rule out possible knowledge of the L2 (Ayoum, 2000).

The methods applied meets the criteria of a quantitative study – because there is a relatively big number of participants, the study provides quantitative data, which can be analysed and presented statistically (Mackey and Gass, 2005). This also conforms to the research question, which seeks to acquire some general view on how Norwegians handle differences in L1 and L2 indirect questions.

### **3.5.3 Execution**

Making the survey electronic opened for several possibilities; firstly, the survey could be made available to a large number of possible respondents, who were not bound to respond at a specific time or place. Thus, I could reach out to a large group of people, and the fact that respondents could take the survey at any time or place might have helped 'lowering the bar' for participating. This assumption is supported by the fact that over 200 Norwegian participants completed parts of the survey – still, only 54 participants completed the full survey. As participation was voluntary, and participants could withdraw at any stage without giving any reason, the explanation why so many participants did not complete the full survey is based on guessing – the survey might have appeared too challenging for some participants, or it simply took too much time to complete. The fact that not all participants finished the complete survey is also the reason for the order of the participant IDs, ranging between 23-207 (see appendix V) – these are simply the participants who completed the whole survey.

Secondly, as responses were submitted and saved electronically, the relatively large amount of data could be more easily accessed and handled. Lastly, the survey could be distributed without being restricted by for example geographic location. This way, possible respondents could be easily targeted and reached, but more importantly, it made it possible to exchange data with native English speakers in other countries. Hence, I was able to include a control group, planned

to consist of 10-15 native English speakers. This group functioned as an assurance, or rather a control, that the theoretical framework is relevant and accurately describes native English.



## 4 RESULTS

### 4.1 Acceptability judgements

As a reminder, the different sentence types and their grammaticality (✓) or ungrammaticality (✗) are shown in the table below;

Table 1: Acceptability sentence types; indirect questions (IQ) and relative sentences.

Sentence type:	Norwegian:	English:
1. IQ; subject – <i>that</i>	✗	✓
2. IQ; subject + <i>that</i>	✓	✗
3. IQ; object – <i>that</i>	✓	✓
4. IQ; object + <i>that</i>	✗	✗
5. Relatives	✓	✓

The acceptability judgement scores showed no big variations – overall, the Norwegian group (No) and the control group (En) gave similar scores to all categories. Still, in categories 1, 3, 4, and 5, the Norwegian group gave slightly lower average scores than the control group. The target structure (category 2, highlighted in table 2), was the only category receiving higher average scores from the Norwegian group. The higher score given to category 2 shows no considerably greater deviation than the scores given to the other categories; still, this was the only category where the Norwegian group showed higher acceptance than the control group. The acceptability judgement scores are shown below in table 2.

Table 2: Means and standard deviations for all sentence types in both test groups.

Sentence type	No		En	
	Mean	SD	Mean	SD
1. IQ; subject – <i>that</i>	4.4	1	4.8	1.1
<b>2. IQ; subject + <i>that</i></b>	<b>3.4</b>	<b>0.7</b>	<b>2.9</b>	<b>0.8</b>
3. IQ; Object (ect.) – <i>that</i>	4.9	0.6	5	0.3
4. IQ; Object (etc.) + <i>that</i>	3.1	0.6	3.8	0.5
5. Relative sentences	5.1	0.6	5.5	0.3

The differences in means were tested for significance using an independent samples t-test as well as a non-parametric Mann-Whitney U test. Both tests came out non-significant for all sentence types except for category 1 (t-test ( $t(64) = 1.88$ ,  $p(\text{one-tailed}) = .033$ ), Mann Whitney U ( $U = 211.5$ ,  $Z = -1.873$ ,  $p(\text{one-tailed}) = .031$ )) and for relative clauses, where both the t-test

( $t(64) = 2.4$ ,  $p$  (two-tailed) = .018) and Mann-Whitney U ( $U = 174$ ,  $Z = -2.5$ ,  $p$  (two-tailed) = .012) came out significant.

Correlation analysis with Kendall's Tau was used to check whether there was a relationship between background score and judgement on sentence types. A weak positive correlation was found between background score and scores on sentence type 1 (Kendall's Tau = .182,  $p = .029$ ), meaning that those with a high background score more readily accepted this sentence type. No other relationships were found between background score and consistency in acceptability judgements. Dividing the Norwegian group into subgroups based on data from the background information given, there were still no considerable variations between groups. For example, participants with high scores in categories such as 'English in education' or 'English abroad' did not produce more correct acceptability judgements than other participants; for instance, they gave high scores to both grammatical and ungrammatical structures.

Looking at the different sentence types individually, the English ungrammatical types (2. IQ; subject + *that*; 4. IQ; object + *that*) received the lowest average scores in both the Norwegian group and the control group. As shown in table 1, category 2 is grammatical in Norwegian, while category 4 is ungrammatical in both Norwegian and English. Out of these two, category 4 received the lowest score in the Norwegian group; in the control group, the lowest score was given to category 2. In other words, the Norwegian group accepted structure 2 to a slightly higher degree than the English group, and – as mentioned – this was the only category where Norwegians showed greater acceptance.

Further decomposition of the target structure (2. IQ; subject + *that*) revealed that structures with less complex wh-phrases generally received lower scores from the Norwegian group. For example, the lowest scores were given to sentences 15, 20, and 30; "John asked his dad *whose motorbike* **which** stood in the garage"; "I wonder *who* **that** took the dog out this morning"; and "Who **that** actually ate the cake [...]" (numbers as order in acceptability judgement test; see appendix I). In contrast, structures with more complex wh-phrases generally received higher scores. The five highest average scores are shown in table 3 (next page), with the wh-elements in italics, the complementizers in bold, and the sentences' number in the survey indicated in brackets.

Structures with less complex wh-phrases were judged as less acceptable also in the control group. As in the Norwegian group, sentences 15, 20, and 30 received the lowest scores in category 2, while target sentences with complex wh-phrases were generally scored higher.



Table 3: Norwegians' acceptability judgements; highest scores category 2 (IQ; subject + *that*)

Average score:	Sentence:
4.6	(24) I hadn't realized just <i>how many people</i> <b>that</b> were there.
4.2	(7) She did not know <i>how much of her time</i> <b>that</b> would be required to finish the project.
4	(19) The professor was surprised to discover <i>how many of the students</i> <b>who</b> failed the exam.
3.9	(11) She had to solve the dilemma of <i>which of the high-ranking officers</i> <b>that</b> should sit next to the President.
3.9	(17) Nobody knew <i>how many of the teachers in high school</i> <b>who</b> actually taught without formal training.

## 4.2 Translations

With focus on the complementizer *som*, a full score (seven points) was given if participants successfully translated all seven target sentences using the correct Standard English structure. Other errors, such as spelling, word order, etc. were ignored, and each target sentence received one point as long as there were no ungrammatical translations of the complementizer. For instance, example 29 was given one point, while example 30 received zero points.

Hva som var den beste ideen var fremdeles uklart.

*What that was the best idea was still unclear.*

29. It was unclear which of the ideas was the best one.

30. Which of the ideas **that** was the best is still uncertain.

The number of correct translations are presented in table 4, showing the score from 1-7 and the number of participants receiving that score. Five of the 54 participants were omitted because they did not complete translations of all target sentences.

Table 4: Number of correct target structure translations

Target structure translations	
Score	Number of participants
1	5
2	4
3	13
4	11
5	3
6	2
7	11
Sum:	49

22.4% of the respondents gave grammatical English translations of all target sentences, while the rest directly translated the Norwegian structure in one or more sentences. Five participants only produced correct translations of one out of seven target sentences.

One sentence was correctly translated by all participants:

31. Jeg vet ikke hvem som kommer til å vinne konkurransen.

*I know not who that will win the competition*

Overall, target structures including complex wh-phrases were more often translated using the Norwegian structure (with the pronounced complementizer). The target structure translation sentences – and the number of correct translations – are given in table 5. The wh-phrases are shown in italics, and the complementizers are in bold.

Table 5: Target sentences and the number of correct translations.

Correct translations:	Sentence:
49	Jeg vet ikke <i>hvem</i> <b>som</b> kommer til å vinne konkurransen.
35	<i>Hva</i> <b>som</b> var den beste ideen var fremdeles uklart.
30	De diskuterte <i>hvilken sukkerfri drikke</i> <b>som</b> hadde flest tilhengere i Norge; Pepsi Max eller Cola Zero.
29	Julie undersøkte <i>hvilken av de gamle, støvete bøkene i hylla til bestefaren</i> <b>som</b> hadde flest sider.
22	Politiet løste mysteriet om <i>hvem av de mistenkte fra saken i 1965</i> <b>som</b> hadde utført drapet.
18	Heldigvis oppdaget vi <i>hvem av de forvirrede studentene</i> <b>som</b> hadde tatt feil jakke i går.
17	De fant ut <i>hvilken lærer fra førsteklasse i barneskolen de gikk på</i> <b>som</b> hadde skiftet jobb og blitt safariguide.

Comparing each participant's translation score and acceptability judgements, there seemed to be no relationship between high/low translation scores and consistency in acceptability judgements. Consulting the background information provided by each respondent, participants with seven correct translations had a higher average background score (10,6) than participants with only one or two correct translations (7,0).

## 5 DISCUSSION

### 5.1 Acceptability judgement scores – category 2 and 1

The relatively small differences between the Norwegians' and the control group's acceptability judgement scores might stand out as surprising – a hypothesis focusing on transfer would possibly predict deviant Norwegian scores in ungrammatical English sentences, if they were grammatical in the L1. For example, as described in chapter 2, in indirect questions with *wh*-movement from the subject position, Norwegian requires the pronounced overt complementizer in the C position. While pronunciation of the complementizer would be ungrammatical in such structures in English, one might expect Norwegians to accept this to a considerably higher degree than English speakers, transferring structures from the L1 into the L2 (e.g. Odlin, 2015).

#### 5.1.1 Category 2 (Target structure)

While the Norwegian acceptability judgement scores did not differ greatly from the control group's scores, Norwegians consistently gave lower scores in each category – except from in category 2 (IQ; subject + *that*). Because of this, despite the small differences, the higher acceptance in category 2 stands out as interesting. While not judging this category as completely acceptable – giving an average score of 3.4 out of 6 – Norwegians showed greater acceptance than the control group in this category only, which is too striking to dismiss as incidental.

This fact can be taken as an argument that, to some degree, Norwegians tend to accept the target structure more than English speakers do. One might even hypothesize that because the Norwegian group was so much stricter in all other categories, they also downgraded their judgements in category 2 – meaning the scores could possibly be even higher if the Norwegian participants were not so restrictive when judging the different sentence types. Looking at each participant's individual judgements, a point to be noticed is that each sentence within category 2 had at least two respondents scoring it as “6: completely acceptable”; thirteen 6's were given to the sentence with most top scores, despite its ungrammaticality in English:

32. Nobody knew how many of the teachers in high school who actually taught without formal training.

Although these results were spread out, with different participants giving high scores on the various sentences, this further strengthens the claim that some Norwegians seem to be very accepting of the structure ‘IQ; subject + *that*'.

### 5.1.2 Category 1

When examining category 1, which was the grammatical English version of category 2, one might expect significantly lower scores from Norwegian participants than from the control group, considering the ungrammaticality of the structure ‘IQ; subject – *that*’ in Norwegian. Comparing the means statistically, both the t-test and Mann Whitney U test actually found significant differences between the Norwegian group and the control group, confirming that Norwegians were more restrictive of structure 1. Interestingly, according to Kendall’s Tau correlation analysis, participants reporting high influences of English in their background information more readily accepted category 1 sentences. Still, the average score in category 1 was lower than in the other correct structures (3 and 5; see below), which are grammatical in both Norwegian and English. This might indicate that at least some of the Norwegian participants had an inclination that the structure is ungrammatical – a point which is reinforced by the fact that several participants gave scores of 1 or 2 on different sentences within the category (see appendix V).

At the same time, the control group also gave category 1 the lowest average score of the three grammatical structures, which might indicate there is something about the sentence type that leads participants to be more restrictive. Also, one must consider the relatively small number of participants in the control group, meaning their scores were not optimal for statistical comparison. Nevertheless, the fact that Norwegians gave significantly lower scores in this category reinforces the argument of negative transfer, despite the similar low scores of the control group.

As discussed by Gass and Selinker (2001), L2 learners often reach a stage in the acquisition process where proficiency levels plateau on a level below native proficiency, and influences from the L1 might characterize target language outputs. Further, Odlin (2015) points to studies supporting the role of transfer in SLA, showing evidence of both negative and positive transfer. Despite the small differences in the Norwegians’ and control group’s acceptability judgements, I argue that the results from category 1 and 2 indicate some degree of negative transfer from the L1 to the L2. First, the Norwegian participants showed higher acceptance than the control group in category 2 only, which was the only category grammatical in Norwegian but not in English. Second, category 1, which was the one category ungrammatical only in Norwegian, was given the lowest score out of three grammatical English structures by Norwegian responders – with several individual participants giving scores of 1 or 2 in some of the sentences. Furthermore, statistic comparison showed that the Norwegians’ scores were

significantly lower than the control group's scores in category 1. As Norwegian participants with higher background scores were more acceptant of the structure than other participants in the Norwegian group, this might indicate that these participants were not as affected by negative transfer.

## **5.2 Acceptability judgement scores – category 3 and 4**

Out of the five sentence types tested in acceptability judgements, three structures coincided in Norwegian and English; they were either grammatical or ungrammatical in both languages. Among these three, two were grammatical structures (3. IQ; object (etc.) – *that*; 5. Relative sentences) while one was ungrammatical (4. IQ; object + *that*). In this section, I will compare results in category 3 and 4, which represent the grammatical and ungrammatical versions of the same structure.

### **5.2.1 Category 3 and 4**

The Norwegian group gave category 3 (IQ; object (etc.) – *that*) an average score of 4.9, the second highest score out of all five categories. This sentence type was one out of two structures grammatical in both Norwegian and English. In contrast, category 4 (IQ; object (etc.) + *that*) was judged as least acceptable out of all five categories, receiving an average score of 3.1. This sentence type was the only structure ungrammatical in both Norwegian and English.

From these results, one conclusion is that there is evidence of positive transfer; the Norwegian group appeared more confident in structures similar in the L1 and L2, and correctly judged the ungrammatical and grammatical sentence types as respectively least and most acceptable. Judging ungrammatical structures as less acceptable and grammatical structures as more acceptable might not indicate transfer in itself, even if the structures are the same in the L1 and L2. Nevertheless, structure 1 (IQ; subject – *that*), which is also grammatical in English, did not receive as high scores as the other grammatical sentence types. In addition, category 2 (IQ; subject + *that*), which is ungrammatical in English, also received a relatively low score – still, in this category the Norwegian group appeared less confident, deviating from the pattern of giving lower scores than the control group in all sentence types. This strengthens the claim that the Norwegian group displayed more confidence in patterns similar in Norwegian and English, and that positive transfer could have influenced the acceptability judgements in category 3 and 4.

## **5.3 Acceptability judgement scores – category 5**

As explained in section 2.2.2, relative sentences function well as fillers because they may formally be practically identical to indirect questions, and because their restrictions are the same

in English and Norwegian when the subject of the relative clause is relativized; that the overt complementizer must be pronounced. Essentially, these sentences were used as fillers in the acceptability judgements to camouflage the target structure.

Still, as one of the three coinciding structures, category 5 is an interesting addition when comparing the Norwegians' and the control group's scores; this was the category receiving the highest average scores in both groups, and was ultimately one of the categories where Norwegians seemed most confident in their judgements (in addition to the ungrammatical 'IQ; object (etc.) + *that*'). However, when examining the acceptability judgement results in both groups statistically, category 5 turned out to be the category with the most significant difference between the Norwegian group and the control group, with Norwegians giving significantly lower scores to relative sentences. This is an unexpected result – one might think this category would receive even scores from both groups, considering the structure is grammatical in both languages.

When looking at the individual scores for each relative sentence, one clear tendency is that the Norwegian group gave the lowest scores to *that*-relatives, and that the *wh*-relatives all received scores over 5 – the average score of the *wh*-relatives alone is 5.5, which is the same as the total average score given by the control group. It seems as if the Norwegian participants might prefer *wh*- or zero-relatives over *that*-relatives, and this could simply be the reason for the significantly lower score. If this is the fact the reason, one might question *why* the Norwegian participants prefer *wh*-relatives, given that Norwegians have no *wh*-relatives in their L1 (Faarlund et. al., 1997). It could be that this difference is one which is explicitly taught in English teaching in schools, and that Norwegians are generally 'metalinguistically aware' of this case because they have been taught to use *who* and *which* in relative clauses. As there were only five relative sentences in the acceptability judgement sentences, and no zero-relatives to confirm my supposition, I choose to be careful with drawing conclusions from such limited material. Nevertheless, the category still has the highest average score of all sentence types, and is the structure Norwegians seemed most confident in. Because of this, and the fact that the structure is the same in the L1/L2, the results could be seen as reinforcing the suggestion of positive transfer. In addition, it emphasizes the fact that for some reason, the Norwegian participants were more sceptical than the control group toward *all* the English structures – with the exception of the target structure in category 2. This again strengthens my argument that Norwegians do not reject the target structure as consistently as would have been expected if there were no negative transfer present.

## 5.4 Translations

The translation sentences consisted of seven target sentences, and eight filler sentences with other structures. I discuss the results of the target sentences only, as the single issue in focus were the correct/incorrect use of the pronounced complementizer.

On average, participants produced four correct translations each. In total, only 11 out of 49 participants correctly translated all target sentences. In other words, 38 participants applied the pronounced complementizer in one or more translations, indicating direct translation of the Norwegian structure. This alone is a strong indicative of negative transfer.

As with the acceptability judgements, comparison of individual translation scores with the background information provided gave no indications that the calculated background score had any connection with the number of correct translations. Even though participants with seven correct translations had a higher average background score (10.6) than participants with only one or two correct translations (7.0), seen in context with the general results there seemed to be no consistent relationship. For example, two participants with individual background scores of 1 and 13 both had four correct translations; this inconsistency seemed to characterize the other participants as well. This is inconsistent with my prediction that participants with less reported influence from English might perform poorer in the translation test.

## 5.5 Acceptability judgements and translations compared

Comparing each participant's translation score and acceptability judgements, there seemed to be no relationship between high/low translation scores and consistency in acceptability judgements. One possible conclusion drawn from this is that the results show a distinction between language production and language knowledge – for example, participants may produce grammatical translations, but their acceptability judgements do not always match these outputs. For instance, participants might accept ungrammatical structures when presented with them, but never produce such structures themselves.

The fact that some participants seem to accept ungrammatical structures, while not producing such structures themselves, might well highlight the distinction between production and knowledge – it also brings the issue of avoidance into relevance. As seen in section 2.3.3, avoidance is one of the concerns connected with L2 production (e.g. Odlin, 2015; Schachter, 1974). When forced to translate the target structure, participants had to make a decision regarding how to produce indirect questions with wh-movement from the subject position. 11 participants correctly translated all target sentences, but they still accepted 'IQ; subject + *that*' in some cases. This might imply that they do not *know* that the sentences are ungrammatical,

but still avoid using the structure themselves – further, it underlines the importance of realizing the restrictions of acceptability judgements. When also encouraging participants to produce language output, one might get a clearer picture of their language knowledge.

## **5.6 Complexity of wh-phrase**

From the results, it seems evident that the complexity of the wh-phrases affected both translations and acceptability judgements. In general, Norwegians more often applied the pronounced complementizer in translations with complex wh-phrases. Additionally, in both test groups, target structures with complex wh-phrases + *that* were judged as more acceptable than target structures with single word wh-phrases + *that*.

### **5.6.1 Norwegian group**

Focusing on the target structure, all five of the sentences with the highest scores in acceptability judgements had complex wh-phrases (*how many; how much; which of the high-ranking officers; how many of the teachers in high school*). An assertion made from these results is that it might be easier for Norwegians to detect the (un)grammaticality of less complex structures or constituents. For example, the target sentences with the lowest scores had ‘*who that...*’ and ‘*whose motorbike which...*’. In general, when the wh-phrase was part of a complex phrase, the acceptance was higher than when followed directly by the complementizer. The same tendency was found in translations; the one sentence correctly translated by all participants included a single wh-word immediately followed by *that*. In contrast, in the sentence with least correct translations the wh-word was part of a complex phrase.

As discussed in section 2.3.1, near-native levels of proficiency frees up cognitive resources, and make it easier to process higher-level information (Dussias and Pilar, 2009). Similarly, structures that are more complex might be more easily processed with high proficiency. In line with this, one might argue that L2 speakers more easily resort to their L1 when presented with more complex structures. This could be a reason to why Norwegians tend to accept ungrammatical structures to a higher degree when the wh-phrase is complex. Still, control group participants also seemed to accept complex wh-phrases + *that* to some degree; this will be discussed in the following section.

### **5.6.2 Control group**

As seen in the previous chapters, wh- + *that* structures are generally viewed as ungrammatical in Standard English. Nevertheless, as discussed in section 2.2.1, examples of this structure do in fact occur in the English language, both in formal and informal use (e.g. Seppänen and Trotta, 2000; Zwicky, 2002). Still, repeating the conclusions of Seppänen and Trotta (2000),



informants normally rejected the single word wh-phrase followed by a pronounced complementizer. This coincides with the results of this study – in the acceptability judgements made by the control group, target structures with a single wh-word + *that* were amongst the sentences with the lowest average scores (see appendix VI). This is also in line with the theory presented by Zwicky (2002), who found that the wh- + *that* clause is subject to the LHR; the wh-word is a modifier of a lexical word, such as a noun. Correspondingly, the control group gave higher scores to sentences with phrases such as “to *what extent that*” and “*whose car keys that*” than to sentences with a single wh-word + *that*. Still, when the wh-word introduced more complex phrases – such as “*which naughty little boy that*” – some target structures were accepted to a lesser degree than when the wh-word introduced a single lexical word preceding *that*. It seems evident that the complexity of the wh-phrase is not the only feature affecting the acceptability of wh- + *that* – issues such as type of wh-word and phrase composition might also be some of the reasons why certain target sentences were judged as less acceptable than others.

Interestingly, the type of complex wh-phrase seemed to be more critical for the control group than for the Norwegian participants. The control group participants appeared to distinguish between two types of complex wh-phrases; with and without a quantifier or sortal noun. Complex wh-phrases introduced by *how much*, *how many* and *what kind* were scored higher than i.e. *what*, *which* and *who*, regardless of whether they introduced a complex phrase or a single lexical word (*how many of the Ns that*, *which N that*, etc.). In the Norwegian group, when the wh-word was part of a complex phrase containing a lexical word, the sentence generally received higher scores regardless of the presence of a quantifier or sortal noun. This could be an argument that for the Norwegian L2 group, the higher acceptance of more complex structures concerns processing/cognitive resources more than just the structure’s occurrence in non-standard L1 English.

Overall, the control group’s acceptability judgements in category 2 still comply with the theory presented earlier (Seppänen and Trotta, 2000; Zwicky, 2002). Even though the structure was judged as least acceptable of the five sentence types, wh- + *that* was accepted to a higher degree when there was a complex wh-phrase, and especially when the wh-phrase included a quantifier or sortal noun.

## **5.7 Background information and proficiency**

When comparing the Norwegian participants’ acceptability judgements, translation scores and background information, no groups of individuals stand out as particularly consistent. An important aspect to consider when analysing the results is the Norwegian participants’ general

proficiency in English. My prediction was that Norwegians reporting high influences of English on the background information questionnaire would generally produce more correct acceptability judgements, and vice versa. However, as background scores and acceptability judgements were checked for correlation, this turned out not to be the case. The same result was found when comparing background scores with translations. In addition, the Norwegian participants' acceptability judgement scores were for most sentence types not significantly different from the control group's scores, even for those who reported less influence from English in their background information. A possible reason explaining these results is that young Norwegians generally are quite proficient in English, because they get high degrees of English input from early on – through education and everyday influences such as television, movies, music, and the like. Even though the English grammar of Norwegians will vary in complexity and extent, the general proficiency might explain the similar scores in the Norwegian group and control group's acceptability judgements.

Even though there were no apparent connections between the background information provided and the Norwegian group's acceptability judgements and translations – and despite the fact that most young Norwegians have relatively high proficiency in English – the results still show some evidence of transfer from the L1. As discussed in section 2.3.1, higher levels of proficiency are required to converge on native-like processes (Dussias and Pilar, 2009). Despite the similarities between the Norwegian and control group participants' acceptability judgements, their different levels of proficiency seemed to have consequences for how Norwegians were able to process linguistic structures. This is arguably reflected in how Norwegian participants judged different sentences containing wh-phrases, in addition to translations where L1 structures were often applied in more complex sentences.

## 6 CONCLUSIONS

### 6.1 Conclusions

Focusing on L1 influence on L2, the research question in this project was: In the case of indirect questions, is there evidence of transfer in Norwegians' L2 English? Exploring different constructions of indirect questions, a central structure involved wh-movement from the subject position, because the processes involved in such structures contrast in Norwegian and English – in Standard English, pronunciation of the overt complementizer leads to ungrammaticality, while in Norwegian the pronounced complementizer is required. Thus, these structures were well suited for testing whether Norwegians accepted or produced L1 structures in the L2 – or in other words, if there was evidence of transfer in their L2 English. Providing data for analysis, a group of 54 Norwegian participants submitted acceptability judgements, translations from Norwegian to English, and responses on a background information questionnaire. In addition, a control group of 12 English speakers were included, submitting acceptability judgements and background information.

Surprisingly, the Norwegians' and control group's acceptability judgement scores did not differ as much as expected. Despite small differences, there is in fact some evidence of transfer from the L1: first, Norwegian participants were more restrictive than the control group in all sentence types, with only one exception – the target structure (category 2), which was the only category where Norwegians gave higher scores than the control group. This is ultimately in favour of the argument that Norwegians tend to accept the target structure to a higher degree than English L1 speakers do. Second, the Norwegian group gave significantly lower scores than the English group in category 1, which was the grammatical English version of category 2 – but with an ungrammatical structure in Norwegian. This also supports the claim that transfer affects Norwegians' acceptability judgements in structures differing in the L1 and L2. Finally, one can argue that the results reveal Norwegians as more confident in structures similar in the L1 and L2, giving the lowest score to category 4 – which is ungrammatical in both Norwegian and English – and the highest scores to category 3 and 5, which are grammatical in both languages. Thus, there is evidence of both positive and negative transfer in the overall results.

The argument of negative transfer is also supported by the translation results, where several Norwegian participants produced ungrammatical English sentences, applying the pronounced complementizer in the target structure. While some participants correctly translated all target sentences, there was no clear relationship between volume of English input and number of correct translations. What is more, these participants still sometimes accepted ungrammatical

structures in the acceptability judgement test. Avoidance could be one explanation behind this inconsistency, and the results highlight the distinction between language production and actual language competence.

Contradicting my initial expectations, participants reporting higher influences of English did not reject ungrammatical sentences to a higher degree than other participants, nor produce more correct translations. Overall, no groups of Norwegians stood out as particularly consistent in neither acceptability judgements nor translations, despite their reports of high/low influence of English in their background information. The generally high proficiency in young Norwegians' L2 English might be the reason behind this, challenging the characterization of certain participants as 'less influenced' by English.

Although the results are not as straightforward as expected, my conclusion is that there is some evidence of transfer in the Norwegian participants' L2 English. This seems to appear in acceptance of ungrammatical structures (category 2), and arguably to an even greater extent in low acceptance of grammatical structures (category 1). In addition, evidence of transfer also appeared in translations of Norwegian sentences into English. Thus, the findings show both evidence of transfer *and* illustrate how transfer is not a simple and straightforward phenomenon. This is emphasized by the fact that, as pointed out in earlier chapters, the participants are generally highly proficient L2 speakers.

## **6.2 Limitations**

One clear limitation when comparing the Norwegian group with the control group is the relatively small number of English L1 speakers. The limited size of the control group means that their results were not optimal for statistical comparison – still, another main function of the control group was to ensure that the presented theory is relevant and descriptive of actual English L1 structures. As discussed, the control group results confirmed that English L1 speakers generally judge wh- + *that* structures as less acceptable, but that aspects such as the complexity of the wh-phrase can affect the degree of acceptability.

Another obvious limitation is that the design of test material – and not least analyses of results – will indisputably be subject to selectivity and interpretation, and might not always describe a clear and objective picture of language competence. For example, a background questionnaire cannot cover all aspects of L2 influence, nor give a complete picture of a participant's proficiency in the L2 – both because of selectivity in questions and because one has to trust participants' own evaluations of themselves. One must acknowledge the fact that tests do not

always provide clear insight into language competence, and that results can be interpreted and processed in various ways.

As an additional note on test limitations, another factor involving implications for the results is that participants were given no information on what to look for in acceptability judgements; this because specific instructions could have revealed the target structure. Thus, participants might have let other issues than grammaticality (i.e. semantic content) affect their acceptability judgements. Moreover, one cannot overlook the fact that some participants – particularly those in the control group – might try to be ‘kind’ when evaluating sentences, knowing the structures have been produced by an English L2 speaker. A sentence might be ungrammatical in English, but still be judged as somewhat acceptable, especially when produced by someone with English as an L2.

### **6.3 Suggestions for further research**

An interesting issue to explore further could be how differences in proficiency levels have an effect on degree of transfer from the L1; for example, one could hypothesise that even younger Norwegian L1 speakers – i.e. in lower secondary school – would provide different results than the ones collected in this thesis, because their L2 grammar is less developed. Such participants could possibly accept more ungrammatical structures than the participants in this study did. If including such groups in investigations, the higher/lower English influence distinction might also be more easily imposed, and evidences of transfer might vary in the different groups. In addition, equally sized test and control groups would allow for more valid statistical analysis.

Another aspect to examine could be L2 influence on L1 – as Norwegians fail or succeed in accepting/producing grammatical English structures, does this influence their acceptance of English-like structures in Norwegian? For example, it would be interesting to investigate whether Norwegians accept the omitting of *som* where it is usually required in Norwegian indirect questions.



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# Appendix I: Information sheet for Norwegian participants

## Forskningsprosjekt om nordmenns engelsk

Dette er en forespørsel om deltagelse i et forskningsprosjekt om språk, og jeg håper du er villig til å delta! Deltagelse vil innebære at du rangerer 40 engelske setninger på en skala fra 1-6. Du vil også bli spurt om å oversette noen norske setninger til engelsk. I tillegg vil det følge med et bakgrunnsskjema der du blir spurt om å oppgi noen få opplysninger om språkbakgrunn, som morsmål, andrespråk, og bruk av engelsk i hverdagen.

### Bakgrunn og formål

Prosjektet vil undersøke hvordan nordmenn med engelsk som andrespråk vurderer ulike engelske setninger. Prosjektet er en mastergradsstudie ved NTNU.

### Hva skjer med informasjonen om deg?

Alle opplysninger vil bli behandlet konfidensielt. Ingen personidentifiserende opplysninger vil bli innhentet, og kun student og veiledere for masteroppgaven vil ha tilgang til responsen på spørreskjema. Deltagere i prosjektet vil altså ikke være mulig å identifisere eller gjenkjennes i publikasjonen eller i prosjektet for øvrig.

Ved bruk av elektronisk spørreskjema vil responsen være indirekte sporbar til epost eller IP-adresse, men individuelle svar vil kun håndteres av student og veiledere for prosjektet. Ingen informasjon som kan spore enkelt svar tilbake til deltakere vil publiseres.

### Frivillig deltagelse

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn – dette ved enten å oppgi at du ikke lenger ønsker å delta, eller ved rett og slett å la være å svare på spørreskjemaet.

Samtykke gis ved å svare på og levere inn spørreskjema med setningsvurderinger og bakgrunnsinformasjon. Det vil ikke være mulig å trekke sitt samtykke etter at skjemaet er besvart, da individuell respons i hovedsak ikke vil være mulig å spore etter innlevering.

Takk for din deltagelse i prosjektet!

Kontakt meg gjerne for eventuelle spørsmål om skjemaet eller prosjektet generelt, ved epost: kari.domaas@stud.ntnu.no.

Mvh.  
Kari Domaas,  
mastergradsstudent

Studien er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

## **Appendix II: Information sheet for control group participants**

### **Research project on Norwegians' English**

This is an invitation to participate in a research project on language, and I hope you are willing to help me! Participation will involve answering a form which contains a number of sentences you will be asked to rank on a scale of 1-6. In addition, you will be asked to provide some background information, including details about your language background, such as your mother tongue, any second/third languages, etc.

#### **Background and purpose**

The project will examine how Norwegians with English as a second language evaluate various English sentences. The project is part of a Master's degree at the Norwegian University of Science and Technology (NTNU).

For this, we need native English speakers as a control group for comparison against Norwegian speakers' evaluations.

#### **What happens to your information?**

All information will be treated confidentially. No personally identifiable information will be collected, and only the student and supervisors for the Master's thesis will have access to the questionnaire responses. Participants in the project will therefore not be identifiable in the publication or the project in general.

Through the electronic questionnaire, responses will be indirectly traceable to email or IP addresses, but individual responses will be handled only by the student and tutors for the project. No information which can track individual responses back to the participants will be published.

#### **Voluntary participation**

Participation in the study is voluntary, and you may at any time withdraw your consent without giving any reason – by simply not completing the questionnaire.

Your consent to participate is given by answering and submitting the sentence assessments and background information. It will not be possible to withdraw your consent after the form has been submitted, as individual responses essentially cannot be tracked after submission.

Thank you for your participation in the project!

Please contact me for any questions about the form or the project in general, by email:  
kari.domaas@stud.ntnu.no.

Regards,  
Kari Domaas,  
master student

The study is reported to the Norwegian Social Science Data Services.

## Appendix III: Acceptability judgement sentences, categorized

(number in survey shown in parenthesis)

### 1. Indirect questions; subject – *that*

- a. (22) John asked who ate the cake.
- b. (13) I should try to figure out how much of the money will be left after our vacation.
- c. (27) Which of the girls that went out last night lost her wedding ring is unknown.
- d. (31) Luckily, I knew which bus that stopped in the city center went in the right direction.
- e. (9) I don't know how many people saw the film last night.
- f. (29) It would be interesting to know whose backpack weighs the most.
- g. (25) I wonder what kind of jewelry piece is the most expensive in the shop.
- h. (21) The detective was investigating how many of the criminals were without an alibi.
- i. (18) Roger did not know how much time was left to finish the task.
- j. (23) John wanted to know which of the many rollercoasters in the amusement park had the best reviews.

### 2. Indirect questions; subject + *that*

- a. (20) I wonder who that took the dog out this morning.
- b. (40) He tried to figure out which students in this year's class that had cheated on the test.
- c. (34) He asked whose car keys that were on the table.
- d. (37) Julie questioned which naughty little boy that had caused the racket outside.
- e. (11) She had to solve the dilemma of which of the high-ranking officers that should sit next to the President.
- f. (30) Who that actually ate the cake John made is still unknown.
- g. (1) If I asked Lisa how much money that she had spent on her dress, she would not give me an answer.
- h. (10) I want to tell you what experiences that I've had here in my work (Beaver et.al., 2002).
- i. (24) I hadn't realized just how many people that were there (ibid.).
- j. (7) She did not know how much of her time that would be required to finish the project.
- k. (28) I still don't know what kind of texts which will be most relevant to read for the exam.
- l. (15) John asked his dad whose motorbike which stood in the garage.
- m. (19) The professor was surprised to discover how many of the students who failed the exam.
- n. (17) Nobody knew how many of the teachers in high school who actually taught without formal training.
- o. (12) The sweet old woman could fortunately tell us which of the many crisscrossing streets in the old town which were safe in the night-time.

### 3. Indirect questions; object (etc.) – *that*

- a. (6) I wonder which house she lives in.
- b. (33) John will investigate what we should bring for the party.
- c. (5) In the job interview, they asked me when I am planning to finish my education.
- d. (32) I don't know how long Lisa will be staying in Norway.
- e. (2) Elsa asked me yesterday which character she should be in the high school musical.

**4. Indirect questions; object (etc.) + *that***

- a. (39) They wanted to know which cases that we would be discussing at the meeting.
- b. (16) We had to figure out how often that the south-going buses went to the city.
- c. (4) John asked to what extent that the exam results would affect his job opportunities.
- d. (36) I wonder how long that Elsa will stay for at the party tomorrow.
- e. (3) She questioned me about what time that I left work.

**5. Relative sentences**

- a. (8) The book that I was reading was very good.
- b. (38) The baker who lives in Trondheim is the happiest man I know.
- c. (26) Here is the chair that I bought yesterday.
- d. (14) I have a friend who lives in Australia.
- e. (35) John does not know the people who live across the street from him.

## Appendix IV: Translation sentences

### Target sentences:

Jeg vet ikke hvem som kommer til å vinne konkurransen.

*I know not who that comes to win competition-the*

‘I do not know who will win the competition’

Julie undersøkte hvilken av de gamle, støvete bøkene i hylla til bestefaren som hadde flest sider.

*Julie investigated which of the old, dusty books in shelf-the of grandfather-the that had most pages*

‘Julie investigated which of the old, dusty books on her grandfather’s shelf had the most pages’

Heldigvis oppdaget vi hvem av de forvirrede studentene som hadde tatt feil jakke i går.

*Fortunately discovered we who of the confused students that had taken wrong jacket yesterday*

‘Fortunately, we discovered which of the confused students had taken the wrong jacket yesterday’

Hva som var den beste ideen var fremdeles uklart.

*What that was the best idea was still unclear*

‘What was the best idea was still unclear’

De diskuterte hvilken sukkerfri drikke som hadde flest tilhengere i Norge; Pepsi Max eller Cola Zero.

*They discussed which sugar-free drink that had most followers in Norway; Pepsi Max or Cola Zero*

‘They discussed which sugar free drink had the most followers in Norway; Pepsi Max or Coca Cola’

De fant ut hvilken lærer fra førsteklasse i barneskolen de gikk på som hadde skiftet jobb og blitt safariguide.

*They figured out which teacher from first-grade in elementary-school-the they went on that had changed job and become safari-guide*

‘They figured out which teacher from first grade in the elementary school they went to had changed jobs and become a safari guide’

Politiet løste mysteriet om hvem av de mistenkte fra saken i 1965 som hadde utført drapet.

*Police-the solved mystery-the of which of the suspects from case-the in 1965 that had performed murder-the*

‘The police solved the mystery of which of the suspects from the case in 1965 had performed the murder’

### Filler sentences:

Hva vil du ha til middag i dag?

*What do you want to dinner in today*

‘What would you like for dinner today?’

Terje drikker alltid kaffe til frokost.

*Terje drinks always coffee to breakfast*

‘Terje always drinks coffee for/with breakfast’

Jeg har ikke sett Lisa på over to år, fordi hun flyttet til Oslo.

*I have not seen Lisa on over two years, because she moved to Oslo*

‘I have not seen Lisa for over two years, because she moved to Oslo’

De prøvde å planlegge et overraskelsesselskap med alle vennene til Findus.

*They tried to plan a surprise-party with all friends to Findus*

‘They tried to plan a surprise party with all of Findus’ friends’

Husker du den gangen vi dro til London og nesten mistet flyet hjem igjen?

*Remember you that time we went to London and almost lost plane-the home again?*

‘Do you remember the time we went to London and almost lost the plane back home?’

John kan være en morsom type, selv om han har litt dårlig humor.

*John can be a funny guy, even if he has little bad humour*

‘John can be a funny guy, even though his humour can be a little bad’

Hun kommer for sent nesten hver gang hun har en avtale.

*She comes too late almost every time she has an appointment*

‘She arrives too late almost every time she has an appointment’

Han likte å være i militæret, men gledet seg til å komme hjem neste helg.

*He liked to be in military-the, but looked-forward-to himself to come home next weekend*

‘He liked being in the military, but looked forward to coming home next weekend’



## Appendix V: Background information questionnaire (Norwegian participants)

1. Hva er ditt/dine morsmål? Flere svar er mulig om du har vokst opp med mer enn ett språk.

- Norsk
- Engelsk
- Annet – spesifiser: \_\_\_\_\_

2. Hvilke språk snakker du i tillegg til morsmålet ditt/morsmålene dine? Spesifiser språk og kompetanse (lav – middels – høy)

- Ingen andre språk
- Språk 1 + kompetanse \_\_\_\_\_
- Språk 2 + kompetanse \_\_\_\_\_
- Språk 3 + kompetanse \_\_\_\_\_
- Flere enn tre språk – spesifiser språk og kompetanse \_\_\_\_\_

3. Har du bodd utenfor Norge?

- Ja
- Nei

4. Hvis du har bodd utenfor Norge, svar på følgende spørsmål. Hvis du ikke har bodd utenfor Norge, hopp til spørsmål 6.

I hvilket/hvilke land har du bodd utenfor Norge? \_\_\_\_\_

Hvor lenge har du (til sammen) bodd utenfor Norge? \_\_\_\_\_

Hvor gammel var du da du bodde utenfor Norge? \_\_\_\_\_

5. Brukte du engelsk da du bodde utenfor Norge? Kryss av for det alternativet/ de alternativene som passer best.

- |   |   |
|---|---|
| <input type="radio"/> Engelsk på skolen         | <input type="radio"/> Brukte ikke engelsk           |
| <input type="radio"/> Engelsk hjemme            | <input type="radio"/> Engelsk i andre sammenhenger: |
| <input type="radio"/> Engelsk sammen med venner | _____   |
| <input type="radio"/> Engelsk på jobb           |   |

6. Har du nære venner/familie som du snakker med på andre språk enn norsk?

- Nei
- Ja – spesifiser relasjon og språk \_\_\_\_\_

7. Hvor ofte snakker du med nære venner/familie på andre språk enn norsk? Velg det alternativet som passer best.

- Aldri
- 1-2 ganger i året
- 3-4 ganger i året
- 1-2 ganger i måneden
- 1 gang i uka
- Flere ganger i uka

Hver dag

8. Hvilken studieretning følger du? Spesifiser \_\_\_\_\_

9. Har du på noe tidspunkt studert engelsk på høyskole/universitetsnivå? Hvis ja, hvor mange studiepoeng?

Nei

Ja – antall studiepoeng: \_\_\_\_\_

10. Følger du en studieretning som anvender engelsk i undervisningen? Det er mulig å krysse av for flere alternativer.

Nei

Ja – forelesninger/seminarer på engelsk

Ja – deler av pensum på engelsk

Ja – alt/i hovedsak pensum på engelsk

11. Når bruker du engelsk ellers i hverdagen?

	Aldri	1-4 timer i uken	4-8 timer i uken	8-12 timer i uken	Mer enn 12 timer i uken
Hører engelsk på TV/film med undertekster					
Hører engelsk på TV/film uten undertekster					
Snakker med venner/familie					
På jobb					
Leser engelske blogger/nettsider/artikler					
Leser engelske bøker (utenfor pensum)					
Skriver engelske tekster (utenfor skolen)					

12. Har du en eller flere andre hobbyer/fritidsaktiviteter som innebærer bruk av engelsk?

Eksempler kan være teater/rollespill, gaming, aktiviteter med andre som ikke snakker norsk, etc. Hvis svaret er nei, trenger du ikke svare på de siste spørsmålene (13-14).

Nei

Ja – spesifiser: \_\_\_\_\_

13. Hvor mye tid bruker du sammenlagt på hobbyer/fritidsaktiviteter der du snakker engelsk?

Mindre enn 1 time i uken

1-4 timer i uken

4-8 timer i uken

Mer enn 8 timer i uken

14. Hvor mye engelsk bruker du i løpet av hobbyen/fritidsaktiviteten? Hvis du har flere hobbyer, velg det alternativet som passer best for den hobbyen der du bruker mest engelsk.

- Hele tiden
- Mer enn halvparten av tiden
- Ca. halvparten av tiden
- Under halvparten av tiden
- Svært lite – kun enkeltord/setninger innimellom

## Appendix VI: Background information questionnaire (Control group participants)

What is your native language(s)? More than answer is possible if you have more than one mother tongue.

- English
- Other – please specify: \_\_\_\_\_

What other languages do you speak in addition to your mother tongue? Specify language and fluency (high competence – middle competence – low competence)

- No other languages
- Other; language + competence: \_\_\_\_\_
- Other; language + competence: \_\_\_\_\_
- Other; language + competence: \_\_\_\_\_
- More than three other languages; language(s) + competence: \_\_\_\_\_

Do you have family/close friends who you talk with in a language other than English?

- No
- Yes – please specify relation and language: \_\_\_\_\_

How often do you speak with family/close friends in a language other than English?

- Never
- 1-2 times a year
- 3-4 times a year
- 1-2 times a month
- 1-2 times a week
- Several times a week
- Every day

What is your education (if you are no longer a student)/in what study programme are you currently enrolled?

- Please specify: \_\_\_\_\_

## Appendix VII: Acceptability judgement results (Norwegian participants)

(Participants' ID as 'Nr.', sentences as given in survey numbers 1-40)

Nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
23	4	3	6	4	4	6	6	6	6	5	5	5	6	6	2	3	5	4	4	1	3	6	6	4	5	6	2	2	6	1	1	4	3	5	6	1	3	6	6	4
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178	6	6	6	5	6	4	6	6	6	6	6	6	6	6	6	6	4	6	4	6	6	6	6	6	5	6	4	5	5	6	5	6	6	6	6	6	6	6	6	6
183	4	2	2	3	5	6	5	4	4	2	4	2	3	6	2	3	4	5	5	1	4	5	5	5	5	4	5	2	5	2	3	4	5	2	4	2	5	5	2	5
186	2	3	4	3	2	5	3	3	4	2	6	3	2	6	1	4	2	5	5	1	4	4	4	4	3	4	3	3	4	2	2	6	2	3	4	3	4	5	3	3
191	2	5	1	1	2	6	1	1	3	1	1	3	5	6	2	1	3	6	4	1	2	6	4	2	6	3	1	6	5	1	1	6	6	1	6	1	2	5	1	1
192	5	3	2	5	6	6	2	2	5	1	3	5	2	6	1	2	2	3	2	1	5	6	5	5	4	5	3	2	6	1	1	6	2	2	6	1	2	6	2	1
194	4	5	3	6	6	4	2	3	4	3	3	2	6	6	3	2	3	5	2	1	6	6	6	5	3	6	1	1	6	3	2	6	6	5	6	2	4	6	4	4
199	2	5	2	2	6	6	5	2	5	3	1	2	5	6	1	2	1	5	3	1	5	6	6	2	5	6	5	3	5	2	4	6	6	2	6	1	2	6	2	2
202	2	5	1	6	5	6	6	3	5	4	6	4	4	6	2	4	6	6	3	1	3	2	4	1	6	5	2	5	6	1	1	4	4	5	5	1	1	6	6	6
203	3	3	4	4	2	6	4	2	5	5	4	3	5	6	2	3	4	4	4	2	4	4	6	5	4	4	3	2	6	2	3	4	5	4	4	3	3	6	3	4
205	3	4	4	5	5	4	5	4	3	4	4	3	4	4	4	4	3	3	4	3	3	4	4	4	4	4	3	4	4	3	3	6	5	6	5	3	4	6	4	4

206	5	5	5	5	5	6	5	6	6	4	4	5	5	6	1	2	2	6	4	3	6	6	6	5	6	5	5	4	6	3	2	6	6	5	6	1	3	6	3	5
207	2	2	2	2	2	6	2	6	6	2	2	1	3	6	1	2	1	2	1	6	5	2	6	6	5	6	2	2	6	1	2	6	5	5	6	1	1	4	2	1
MEAN	3.4	4.5	3.2	3.9	4.3	5.6	4.2	4.2	4.8	2.9	3.9	3.1	4.3	5.8	2.4	3.0	3.9	5.1	4.0	1.9	4.2	4.8	5.0	4.6	4.7	4.7	2.9	3.8	5.5	2.5	2.3	5.5	4.5	3.6	5.2	2.3	3.2	5.5	3.3	3.6

## Appendix VIII: Acceptability judgement results (control group participants)

(Participants' ID as 'Nr.', sentences as given in survey numbers 1-40)

Nr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
3	4	4	4	3	4	3	4	6	5	4	5	4	3	6	2	3	1	4	2	1	6	6	6	6	5	5	1	1	6	1	2	6	3	3	6	2	1	6	1	2	
5	2	5	2	4	6	6	2	6	6	1	2	1	6	6	2	2	2	6	3	2	6	6	6	4	3	6	2	3	5	2	2	6	5	2	5	1	2	6	3	2	
7	5	5	6	6	5	6	4	6	6	4	3	3	6	6	1	3	2	6	2	1	6	6	4	5	3	6	1	5	6	1	3	6	5	6	6	3	2	6	3	2	
8	5	5	6	6	6	6	6	6	6	6	3	6	6	6	3	2	4	6	2	6	6	6	6	3	5	4	2	6	6	4	5	5	4	5	6	5	1	6	4	1	
10	3	6	4	3	3	2	4	6	4	3	4	3	3	6	3	4	3	5	4	3	5	6	5	2	5	5	5	4	5	2	5	6	3	2	2	5	2	3	2	6	
14	1	4	3	2	3	4	2	5	5	3	2	2	3	5	2	2	3	4	3	2	4	5	4	3	5	4	2	2	4	2	2	5	4	3	4	2	2	4	2	3	
16	3	5	4	3	6	6	3	6	6	3	3	2	6	6	1	3	3	6	3	1	6	6	2	4	6	6	1	2	6	5	2	2	6	6	6	3	2	6	5	4	
22	2	1	3	3	4	6	4	5	6	4	1	1	1	6	1	3	1	6	4	1	5	6	5	4	4	6	1	1	6	1	1	6	4	3	5	4	3	6	3	2	
24	4	5	2	5	4	4	5	6	5	3	4	2	4	6	4	5	1	4	2	3	2	4	4	3	3	2	2	3	3	2	4	5	5	4	4	3	2	4	4	1	
26	5	6	5	4	5	6	4	5	6	5	2	2	4	6	2	5	5	6	5	1	6	6	5	4	6	6	5	3	5	1	6	6	5	6	6	5	3	6	4	4	
27	2	6	5	6	6	5	5	6	6	5	4	4	6	6	3	5	4	6	5	5	5	6	6	6	5	6	4	5	6	5	5	6	6	5	6	5	5	6	5	5	
30	1	5	3	1	2	6	1	6	6	1	1	1	6	6	1	6	1	6	1	1	6	6	5	1	5	6	1	1	6	1	6	6	6	6	6	6	1	1	6	1	1
MEAN	3.1	4.8	4.2	4.3	4.8	5.2	3.7	5.8	5.6	3.8	2.8	2.5	5.0	5.9	1.8	3.9	2.3	5.4	3.0	2.1	5.3	5.8	4.8	4.0	5.1	5.2	2.3	3.0	5.5	2.3	3.6	5.4	5.0	4.7	5.2	3.3	2.0	5.6	3.1	2.7	



## **Appendix IX: Didactic Relevance**

Working with this master's thesis, there are several points to be made concerning its didactic relevance. For example, the aspect of language acquisition is a central issue when working as a language teacher, both when concerned with the native language and with L2s. As my main subjects are Norwegian and English, the question of how learners acquire a (second) language is crucial, and insight into how first and second languages develop help my understanding of how to teach language in the classroom. Further, the topic of proficiency is an interesting matter to consider, especially when teaching English – questions such as what it really means to be “proficient” in a second language, and how language proficiency can (or cannot!) be improved prove highly relevant in the SLA classroom. All these issues were explored in the theory chapter of this thesis, which have provided me with enhanced knowledge of various aspects of language learning.

In addition, my work with this master's thesis involved specialized knowledge of language structures in both Norwegian and English. This insight into different features of the languages I will teach will hopefully help me feel even more competent when starting my work as a language teacher. Also, my knowledge of transfer and the role of the native language has become more advanced, providing insight which is directly applicable in the SLA classroom. These issues were explored thoroughly in the theory chapters, but were also observed in the actual collections of data from both the Norwegian group and the control group – confirming and disconfirming my expectations of what the results would show. Furthermore, the realization that language production does not always reflect language knowledge was emphasized through working with acceptability judgements and translation tests.

As a final thought, the actual process of working on the master's thesis is an important point when considering its relevance for my work as a teacher. The writing in itself was, at times, a demanding process, and I think it is important to acknowledge that for some students, regardless of the length and scope of a task, writing in both the L1 and the L2 can be an intimidating mission. Remembering this when designing, assessing and motivating students' writing can be a valuable asset as a teacher. In addition, my work on the thesis proved, through countless alterations and re-adjustments, that feedback from peers or supervisors can really improve one's writing skills and final result. Letting other people help you with improving your talents – and this is not only applicable to production of text – is something I hope to convey as a learning strategy in the language classroom.