Learning subtle syntactic constraints in L2: Evidence from Norwegian-English Bilinguals

Full Transfer models of L2 acquisition [1] hold that L2-learners initially analyze L2 input using their L1 grammar and restructure only when the native grammar cannot accommodate the input. Under such models learners may have difficulty acquiring new syntactic generalizations when the structures allowed by the L2 comprise a *proper subset* of those generated by L1. Since the L1 grammar can presumably generate all (and more) of the L2 structures/strings, there is little motivation for the learner to posit a more restrictive grammar for the L2. We tested how learners fare in one such case by investigating how native speakers of Norwegian judge structures that constitute island violations in English, but not in Norwegian.

Norwegian and English both allow filler-gap dependencies into embedded declarative clauses, but Norwegian allows the dependencies to cross into embedded questions [2], which are typically considered *islands* for movement in English. For example, *Wh-Trace* constructions like (1b), where a subject phrase has moved out of an embedded object question, are reportedly permissible in Norwegian, but their English counterparts are not(1a). The set of acceptable dependencies in English is a subset of the dependencies in Norwegian, thus we might expect native Norwegians to not treat embedded questions as islands in English.

Experiment. We tested whether native Norwegian speakers of L2 English display Norwegian or English-like island sensitivity when judging English sentences. We ran a judgment study testing the acceptability of relative clause movement from embedded questions like (1). Our study used the factorial design used in [3,4], which defines island effects as the super-additive interaction of two independent factors: **Structure** (NoIsland, Island) and **Dependency Length** (Short, Long)**.** A Wh-Trace item exemplifying the design is in (2). We collected judgments from English monolinguals (N=32) on the English sentences. We had native Norwegians (all university students of and proficient in English, N=26, *data collection ongoing*) judge the same experimental sentences in English, as well as their Norwegian equivalents. We also had each group judge RC movement from *subject islands*, which is unacceptable in both languages, see (3). These comparisons were included as controls.

Results. Native English participants rated Wh-Trace constructions and Subject Island violations reliably lower than other test sentences, yielding large island effects (see Figure 1; *p*s < .01). Norwegians participants accepted Wh-Trace constructions in Norwegian, showing no reliable Wh-Trace island effect, but generally rejected Wh-Trace constructions in English (see Figure 2), displaying a significant Wh-Trace island effect ($p < .01$). Norwegian participants exhibited strong subject island effects in both languages that they were tested in (see Figure 3, *p*s < .01).

Discussion. Our findings suggest that proficient Norwegian speakers have intuitions about islands in their L2 English that resemble the intuitions of native English speakers. These results are surprising under Full Transfer models of L2 acquisition as it is not clear how these intuitions are acquired. We consider three possible explanations: First, L2 acquirers may be conservative when learning generalizations in their L2. Second, it is possible that the English input includes indirect triggers that rule out a Norwegian analysis of L2 English structures. It is currently unclear what such a trigger might be. Finally, it is possible that transfer from L1 is only partial and depends on *markedness* relations. Under such an account Norwegians would not transfer Wh-Trace constructions, to English, because they perceive them as acceptable but *marked* in their L1.

(1) a. *The sailors saw a signal$_i$ that nobody knew what __$_i$ meant.
b. Sjømennene så et signal$_i$ som ingen visste hva __$_i$ betydde.

(2) **Example Experimental Item**
a. The sailors found someone that __ knew that the signal meant danger. **[Short,NoIsl]**
b. *The sailors saw a signal$_i$ that they knew __$_i$ meant danger. **[Long,NoIsl]**
c. The sailors found someone that __ knew what the signal meant. **[Short,Island]**
d. *The sailors saw a signal$_i$ that nobody knew what __$_i$ meant. **[Long,Island]**

(3) a. *The boy played with the dog$_i$ that the girls said the stories about __$_i$ weren't true.
b. *Gutten lekte med hunden som jentene sa historiene om __$_i$ ikke var sanne.

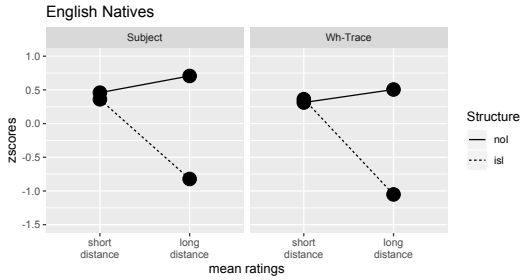

Figure 1. English control participants' judgments of English sentences from Wh-Trace and Subject Island sub-experiments.

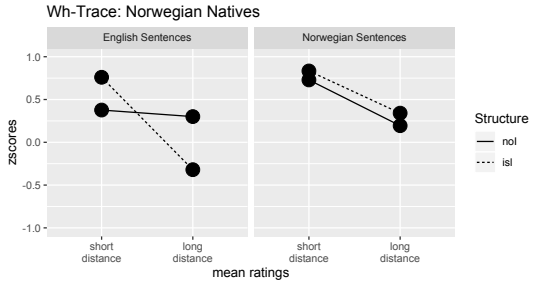

Figure 2. Norwegian participants' judgments of items in the Wh-Trace island sub-experiment. Panels correspond to whether judgments were of English or Norwegian sentences

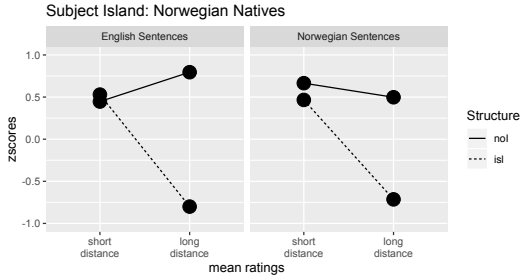

Figure 3. Norwegian participants' judgments of items in the Subject island sub-experiment. Panels correspond to whether judgments were of English or Norwegian sentences.

References. [1] Schwartz & Sprouse. 1996. *Second Language Research*. [2] Maling & Zaenen. 1982.*The nature of syntactic representation*. [3] Sprouse, Wagers & Phillips. 2012. *Language*. [4] Kush, Lohndal & Sprouse. 2018. *NLLT*.