Stability or change in heritage Norwegian?
  -   **diachronic development in the patterns of language mixing**

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Introduction: This paper provides data showing systematic diachronic changes in the heritage language American Norwegian (AmNo), and it analyses these changes assuming that the underlying grammar has undergone alterations. Empirically, I will investigate noun phrases involving mixing of English and Norwegian, and I focus on the nominal categories number and definiteness where we find diachronic changes in the form of omission of obligatory functional suffixes and usage of English functional exponents in Norwegian structures.

Background and data: AmNo is a variety of Norwegian spoken by immigrants who settled in the US roughly from the 1850s and until the 1920s, and their descendants. A great amount of data is collected in Haugen (1953) and Hjelde (1992), and more recently in the Corpus of American Norwegian Speech (CANS) (Johannessen, 2015). Although AmNo is the L1 for these speakers, their dominant language is English, and frequent mixing of the two languages is a regular attribute of AmNo. Some studies of language mixing in AmNo have been conducted (e.g. Grimstad, Lohndal, and Åfarli, 2014; Alexiadou et al., 2015). However, less attention has been given the nominal domain, and moreover, this paper is the first to provide a systematic, diachronic study of AmNo.

The *typical* pattern of mixing in AmNo noun phrases is English content items occurring with Norwegian determiners, suffixes and in a Norwegian word order. (1) provides examples where English nouns occur with Norwegian indefinite articles. This general pattern is recognized by Haugen and by Hjelde, as well as in CANS.

(1)	a) ei **nurse**	*a.INDF.SG.F nurse*	(CANS; coon_valley_WI_02gm)
	b) et **shed**	*a.INDF.SG.N shed*	(CANS; coon_valley_WI_02gm)
	c) en **chainsaw**	*a.INDF.SG.M chainsaw*	(CANS; blair_WI_07gm)

The present paper, on the other hand, conducts a detailed comparison of data in (primarily) Haugen (1953) and CANS to uncover diachronic changes in the mixing patterns, with special concern for the nominal categories number and definiteness.

Number: In Haugen's data, English stems in AmNo are typically given the appropriate Norwegian plural suffix, as in (2a), although some phrases occur with the English plural -*s*. In the newer material, the usage of the plural -*s* increases at the expense of the Norwegian equivalent (2b and c), and in addition, a new pattern emerges showing phrases without any plural suffix (2d).

(2)	a) **creek-**ar	*creek-INDF.PL.M*	(Haugen, 1953: 450)
	b) mange **lawyers**	*many lawyers*	(CANS; sunburg_MN_03gm)
	c) alle disse **minutes**	*all these minutes*	(CANS; stillwater_MN_01gm)
	d) flere **store_**	*more store_*	(CANS; westby_WI_03gk)

Definiteness: Adding the Norwegian definite suffix is obligatory in Haugen's material, as in (3a). In the newer material, there are cases where the expected functional suffix is lacking (3b and c). Moreover, the English determiner *the* is occasionally used in the newer material, (3d-e), whereas this is not permitted according to Haugen. Notice that the English determiner may co-occur with the Norwegian definite suffix (3e).

(3)   a) **field**-a   *field-DEF.SG.F*   (Haugen, 1953: 575)
        b) denne **cheese**_   *this cheese*   (CANS; blair_WI_04gk)
        c) **nephew**_ min   *nephew my ('my nephew')* (CANS; portland_ND_02gk)
        d) **the** by   *the city*   (CANS; chicago_IL_01gk)
        e) **the** gård-en   *the farm*-DEF.SG.M   (CANS; gary_MN_01gm)

Analysis: An exoskeletal model, where syntactic structures are generated independently of lexical items, is employed in the analysis (e.g. Grimstad, Lohndal & Åfarli 2014). This approach separates between two kinds of syntactic terminals: 1) functional feature bundles where phonological exponents are inserted based on feature matching, following the Subset Principle (Halle, 1997), and 2) open positions where lexical content items can be freely inserted (see e.g. Embick & Noyer, 2007). The traditional mixing pattern, as described above, is predicted by the model: AmNo speakers produce structures with functional features typical for Norwegian, and the functional exponents are then chosen from the Norwegian pool of exponents, due to feature matching requirements. English lexical items, on the other hand, are freely inserted into designated slots in the structure.

The patterns of change require additional analyses. I will discuss two potential scenarios explaining the observed change, namely change in the phonological exponents or change in the structure itself. An analysis following the former scenario, incorporates the *Missing Surface Inflection Hypothesis* (Lardiere, 2000), describing a situation where the underlying structure is present despite the lack of an overt realization of the morpheme. Instead, to prevent mismatched forms, the speaker avoids inserting functional exponents, a strategy that could explain the omission of functional suffixes as in (2d) and (3b-c). The second alternative assumes that heritage grammars may undergo a structural reanalysis due to the absence of consistent input and reduced activation (e.g. Polinsky, 2011; Putnam and Sánchez, 2013).

Both alternatives would disrupt the process of insertion, facilitating realizations diverging from the expected pattern, and they are not necessarily mutually exclusive. However, based on the observed patterns of change in the data, I argue in favor of a structural reanalysis of AmNo grammar, where the features of the structure are gradually rearranged due to the consistent influence from, and a potential structural takeover by the dominating language English. For instance, the omission of Norwegian definite suffixes complies with an English structure where such suffixes do not exist. Moreover, usage of English functional material, like the plural *-s* and the determiner *the,* suggests that the feature bundles in the structure are rearranged in way favoring English exponents (cf. the Subset Principle). An illustrative example is the usage of the English determiner *the* (3d-e)*.* In both cases, I assume that the feature bundle in D is rearranged in order for the English determiner to be inserted instead of a Norwegian alternative, whereas such a reanalysis in the functional terminal for the suffix has occurred in (3d) but not in (3e). Thus, (3e) appears to be in an in-between stage of a gradual development, whereas (3d) could be considered an English structure, in which a Norwegian noun is incorporated. This suggests that a gradual, structural reanalysis of noun phrases is ongoing in AmNo grammar.

Selected references: Grimstad, Maren B., Terje Lohndal, and Tor A. Åfarli. 2014. Language mixing and exoskeletal theory: A case study of word-internal mixing in American Norwegian. *Nordlyd* 41 (2): 213–237. Haugen, Einar. 1953. *The Norwegian Language in America*. Philadelphia: University of Philadelphia Press. Hjelde, Arnstein. 1992. *Trøndsk talemål i Amerika*. Trondheim: Tapir. Johannessen, Janne B. 2015. The Corpus of American Norwegian Speech (CANS). I B. Megyesi (red.): Proceedings of the 20th Nordic Conference of Computational Linguistics, NODALIDA 2015, May 11-13, 2015, Vilnius, Lithuania. NEALT Proceedings Series 23.