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Simplification in 43 varieties of urban Norwegian

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Abstract: This paper investigates the linguistic outcomes of contact situations in 43 Norwegian urban towns, comparing the urban varieties' noun systems to those of the rural dialects surrounding each town. Two questions are explored: i) Is the morphology of the urban Norwegian varieties always more simplified, in terms of paradigmatic complexity and repertoire of inflectional suffixes, when compared to neighbouring rural varieties? ii) Can the noun morphology of urban Norwegian varieties best be explained as resulting from levelling and standardisation processes or as grammatical simplification between dialects in contact? We find that the urban varieties' noun systems form a close, yet consistently simplified, match to their neighbouring rural varieties. The urban varieties can, however, not easily be placed on a scale between traditional rural dialects and standard language, indicating that the noun systems in the urban varieties of Norway are best understood as resulting from simplification rather than standardization.

Keywords: language contact, morphology, Norwegian, simplification, urban varieties

1 Introduction

Theories of language contact and change generally assume that contact between multiple language systems leads to linguistic simplification (Britain 2010; Kerswill 2002, 2010; Trudgill 1986). Therefore, communities with a higher degree of long-term linguistic contact, such as urban centres, are assumed to cultivate societal conditions that promote greater simplification of linguistic systems than more rural communities. In this article, we investigated these assumptions by comparing the spoken varieties in 43 urban settlements in Norway to 43 neighbouring rural communities.

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Two questions are explored in this paper:

- i) Is the morphology of the urban Norwegian varieties always more simplified, in terms of paradigmatic complexity and repertoire of inflectional suffixes, when compared to neighbouring rural varieties?
- ii) Can the noun morphology of urban Norwegian varieties best be explained as resulting from levelling and standardisation processes or as grammatical simplification between dialects in contact?

This paper thus provides an empirical contribution to the wider debate on dialect contact and urbanization as driving forces for language change.

2 Background

2.1 Grammatical simplification, levelling and standardisation

Grammatical simplification is an overarching term for various reductions in a grammatical system such as “a decrease in irregularity in morphology and an increase in invariable word forms, as well as the loss of categories such as gender, the loss of case marking, simplified morphophonemics (paradigmatic levelling), and a decrease in the number of phonemes” (Kerswill and Trudgill 2005: 198). Grammatical simplification is a known result of language contact environments (Mufwene 2001) as well as of less intensive linguistic contact situations such as new dialect formation (Neteland 2019; Trudgill 1986) or everyday dialect contact (Sandøy 1998, 2013). Trudgill (2011) discusses how some contact situations lead to simplification while others lead to complexification. He finds that linguistic contact between adult speakers of different lects results in simplification, while long-term contact situations in which children become bilingual are more likely to lead to complexifications (Trudgill 2011: 41–42).

Another effect of dialect contact, as part of a standardisation process, is levelling. *Dialect levelling* is a metaphorical term that describes the gradual process of reducing linguistic variation (Hinskens et al. 2005: 11). An ongoing discussion in the explanation of dialect change in Norway is whether such changes are best explained as resulting from dialect contact between varieties of equal social status or as a result of influence from higher prestige dialects, such as a standard spoken variety (Berg et al. 2018: 246; Røyneland 2020). A common reference (see for example Akselberg 2006; Berg et al. 2018; Hårstad 2009; Jahr and Mæhlum 2009) in this discussion is Auer’s model, in which dialect convergence is described along vertical and horizontal axes (Auer 2005; Auer and Hinskens 1996). A process that is moving along the horizontal axis describes a reduction of local features in favour of

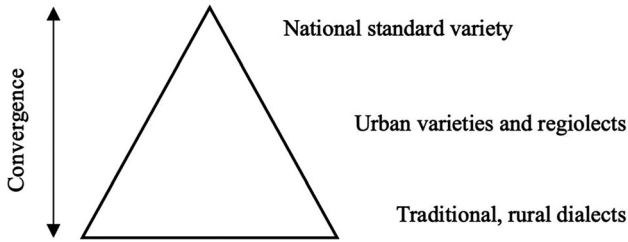


Figure 1: Model of convergence between standard language and traditional dialects based on Auer (2005) and Auer and Hinskens (1996: 7–11).

those of standard or prestige varieties, while a process moving along the vertical axis leads to convergence between varieties on the same level in the social hierarchy (see Figure 1). The model proposed by Auer and Hinskens (1996: 7, 11) and revised in Auer (2005) places the urban varieties in between the linguistically diverse local rural dialects and the homogenous standard language (see Figure 1). In addition to illustrating a decrease in variation on the horizontal axis, the model serves to illustrate the vertical dimension of levelling between features of a standard language and those of rural dialect features.

2.2 Urban Norwegian dialects as a test environment

Sociolinguistic research on contact varieties includes numerous in-depth case studies of simplified dialects, koinés and languages. The present study, however, is a large-scale comparison of simplification in 43 Norwegian towns. These dialects derive historically from the same linguistic roots, allowing us to analyse the development of the same linguistic features in all varieties. The dialects are furthermore all located within a single country, and are theoretically under the influence of the same standard language. In sum, this provides favourable conditions for the comparison of varieties with varying degrees of linguistic contact within a large and relatively homogenous sample.

Since there is a greater diversity in the morphological systems of Norwegian dialects compared to languages such as English (Kerswill 1994a), there is also greater potential for grammatical simplification in a Norwegian dialect contact context. For the present article, we have chosen to analyse a set of morphological variables, namely the morphological categories and suffixes of nouns in the plural indefinite and definite forms, in 43 towns in comparison with the corresponding

noun system in a nearby local rural dialect.¹ These variables were chosen due to the diversity and varying levels of paradigmatic complexity in the noun systems of Norwegian dialects. These variations can, therefore, serve as examples of grammatical simplification if any decrease in conjugation classes or allomorphic regularization is observed.

The present comparison of noun inflections in the spoken varieties in 43 towns and their surrounding areas is possible due to the existence of two sets of historical data; i) the Norwegian population census data, and ii) the available linguistic data on dialect variation in Norway. First, the Norwegian Central Bureau of Statistics (Statistics Norway) has tracked the national population since 1876, providing easily available official population census data on a.o. population, town size, migration patterns and employment structure. Before 1950, most Norwegians lived in rural areas, whereas since the 1950 census more than half of the total population have lived in towns or urban areas. This is a rather late tipping point compared to other industrialized and urbanized countries such as Denmark, where the majority of the population have lived in towns since 1910 (Danmarks Statistik 2000). Due to the historically late urbanization of Norway, the urbanization process and development of urban areas falls within the timeframe of our extant modern census records.

The other important data set enabling our study is the extensive mapping of Norwegian dialects that has been conducted by students and researchers during the last century. Dialect grammar, as a subject for master's theses in Scandinavian linguistics, was particularly popular from the 1970s, and such theses were often produced by students who had native proficiency in the dialect in question. The establishment of the Norwegian state educational loan fund in 1947 combined with the post-war baby boom led to a more diverse university system newly available to the masses, and due to the relatively rural demographics of Norway at the time, many of the first-generation students entering universities in the 1960s came from rural areas. Hence, the extensive mapping of Norwegian dialects, particularly in the post-war era, is perhaps less a product of national romanticism than the result of students of Nordic linguistics using their personal backgrounds and linguistic resources in their own research. In general, the methodologies of the dialectological studies of the 1970 and 1980s were based partially on older Scandinavian dialectological surveys and partially on newer Labovian sociolinguistic methods.

¹ Recent changes in the three gender system of urban varieties in Norway is not discussed in this article, as this study focuses on established differences between urban and rural varieties. See Busterud et al. (2020), Lødrup (2011), Westergaard and Rodina (2016), Rodina and Westergaard (2021), and Van Epps et al. (2021) for more information on the ongoing changes in the three gender system in Oslo, Tromsø and Trondheim.

A consequence of the latter focus was a renewed interest in low prestige urban varieties. One result of the combination of older dialectological with modern variationist approaches was that it became conventional for theses to contain both a dialectological overview of the dialect, usually including a schematic overview or description² of the established noun declension system, as well as a sociolinguistic survey of variation in selected linguistic variables. For the current survey, it is the schematic dialectological overviews and descriptions of dialect grammar that formed the basis of our data sets. Though the overall number of student dialect surveys increased in Norway until the 2000s, there was a gradual decline in theses that included such overviews of the established noun declension systems of the surveyed dialects.

Urban varieties are often presented on the one hand as varieties closely related to the standard language and on the other as the traditional rural dialects of their region (cf. Auer and Hinskens 1996). The levelling process that typically occurs between these two extremes is thus assumed to have resulted in the urban variety: a standardised version of the traditional local speech. However, as previously mentioned, urban varieties can also become grammatically simplified as a result of the contact experiences in these towns. Although the processes of levelling and simplification *can* lead to the same linguistic outcome, this is not necessarily the case when the dialects in contact are diverse and distinct from the standard language (Røyneland 2020: 39). Our large-scale investigation sheds light on one such case, i.e., whether the noun morphology patterns in urban Norwegian settlements are best explained as consequences of levelling and standardisation processes or as grammatical simplification between dialects in contact.

Norway does not have a codified, standard spoken language and is today characterized by a high tolerance for dialect use in all spheres of society (Nesse 2015; Røyneland 2020: 34). However, during the period leading up to the timeframe for the present study, a high prestige variety was spoken among the upper class in the larger Norwegian cities, especially from the 19th to the mid 20th century (Berntsen and Larsen 1925; Larsen 1907; Larsen and Stoltz 1912). Two standard written languages were, and are, still in use in Norway: ‘Bokmål’ (formerly known as Riksmål), which is derived from the socially dominant Danish-based variety of 19th Century Norway, and ‘Nynorsk’ (formerly known as Landsmål), which was constructed in the 19th century on the basis of a historical-comparative analysis of rural dialects. A high prestige spoken variety of Nynorsk was never established as a commonly spoken variety in towns, though spoken Nynorsk was used in formal speech in a limited number of social domains and in informal speech by a small group of pioneers who were often ideologically motivated. However, the

2 Often referred to as a *grammatikkskisse*.

commonly used prestige variety spoken in Norwegian towns reflected Bokmål, and this variety is thus the most relevant one in which potential dialect levelling may be observed. The morphology of the standard spoken Bokmål-based dialect appears to have primarily reflected that of the written Bokmål of its day, but is also reported to have displayed a high degree of inter- and intra-individual variation (Hoel 1915; Seip 1921; Torp and Falk 1898).

By the end of the 20th century, the sociolectal variation in Norwegian towns that included the high prestige variety had largely been lost, leaving behind a general pattern of modified urban low prestige varieties prevailing in its stead (Berg et al. 2018: 240; Doublet 2012; Sandøy 2002: 11–12, 2011: 123; Sandøy et al. 2014). In this paper, we compare these prevailing urban vernaculars to their neighbouring dialects. The high prestige urban varieties, which are less frequently studied and used, are not included in the quantitative data analyses but are included in the discussion.

3 Methodology

3.1 Selection of urban settlements

The selection of urban settlements³ in our study was stratified to ensure geographical distribution as well as diversity in industrial structure using relative population size as a primary selection criterion. Based on population data from 1950, we included at least three of the largest urban communities from each of what were (at that time)⁴ the eighteen counties of Norway. This geographical stratification included urban varieties based in all major regions of Norway (Northern Norway, Trøndelag, Western Norway, Southern Norway and Eastern Norway), which roughly corresponds to the main dialect areas of Norwegian (see Sandøy 1996). Since we originally wished to test the explanatory power of societal typology on paradigmatic simplification, we also included urban settlements representing a range of industrial structures in each region according to the classification system of Myklebost (1960). This selection gave us an initial list of 70 urban communities that fulfilled the selection criteria and for which we had sufficient historical demographic data to perform our comparative analysis.

³ Note that “urban settlement” is the term Statistics Norway uses in their own translations of the Norwegian term *tettsted*, equivalent to towns and urban communities (introduced by Myklebost 1960).

⁴ As of 2020, this number has been reduced to 11 counties following a reform (Regionsreformen) approved by the Norwegian Storting in 2017.

The definition and demarcation of a town as *urban* varies between countries. Norway is a relatively sparsely populated country (1945: total population 3 million; 2021: total population 5.4 million with a population density of 14 inhabitants/km²), that became urbanized late in comparison to other European countries. The definition of a *tettsted*, i.e., “urban settlement” used by Statistics Norway reads “A settlement is defined as an urban settlement if inhabited by at least 200 persons. The distance between houses shall normally not exceed 50 m”.⁵ By including only the largest urban settlements in each county we avoided the mass of small Norwegian towns and settlements that are also categorized as *urban*. In this manner we ensured that each urban settlement studied could be assumed to be a centre within its own geographic region in relation to its surrounding rural area (1950 population size of the towns in our sample: mean 12,750 inhabitants; median 5,585 inhabitants; range from 650 in Sogndalsfjøra to 138,000 in Bergen). As Oslo, the capital, deviated from other urban centres with regards to its political and financial position in the 19 and 20th centuries, we have chosen to exclude it from this survey.

Based on this list of 70 urban settlements, we conducted a literature review of all dialectological studies, including doctoral theses, master’s theses, and scientific articles, that provided a comprehensive description of the noun inflection patterns of these local varieties and in which the description revealed the noun system of speakers who were young adults in the middle of the 20th century (i.e., around 1950). To make this comparison possible, we based our selection on the birth year of the informants. As noted in Section 2.2, we relied on schematic dialectological overviews and descriptions of the noun declension patterns for each urban variety in question. This means that studies which lacked this particular component were less useful for our particular purpose and are not included in our reference list (for a complete bibliography of Norwegian dialect surveys up to 1985, see Nes 1986). In this manner we found relevant data on the inflectional system of 43 urban Norwegian settlements: Arendal, Bergen, Bodø, Eidsvoll Verk, Grimstad, Hamar, Hammerfest, Harstad, Haugesund, Hønefoss, Høyanger, Kirkenes, Kongsberg, Kristiansand, Kristiansund, Lillehammer, Lillesand, Mo i Rana, Molde, Narvik, Odda, Otta, Porsgrunn, Risør, Rjukan, Røros, Sandefjord, Sandnes, Sarpsborg, Sauda, Skien, Sogndalsfjøra, Stavanger, Steinkjer, Svolvær, Tromsø, Trondheim, Tønsberg, Vadsø, Vardø, Vennesla, Øvre Årdal and Ålesund.⁶ The selection included 12 towns from Eastern and Mid-

5 “En hussamling skal defineres som et tettsted dersom det bor minst 200 personer der. Avstanden mellom husene skal normalt ikke overstige 50 m” (Statistics Norway 2015). Note also that in 1950, half of the population of Norway lived in rural settlements, i.e., in settlements that did not fulfil the criteria of being *urban*.

6 References for the studies: Arendal (Røsstad 2015; Voss 1940), Bergen (Doublet 2012; Kerswill 1994b; Nesse 1994; Nornes 2011; Villanger 2010), Bodø (Elstad 1976; Nesse 2008; Nesse and Sollid 2010), Eidsvoll Verk (Sundli 1941), Grimstad (Torp 1986), Hamar (Hekneby et al. 1999), Hammerfest

Norway, 12 towns from Western Norway, 6 towns from Southern Norway, 3 from Trøndelag and 10 from Northern Norway. Although widely varied, the geographical distribution of this data reflects a somewhat uneven historical distribution of dialectological surveys of Norwegian urban settlements.

The next step in our data selection process was to pair each urban variety with the closest documented rural variety that fulfilled the survey criteria. Because the time period of the original urban variety data collection varied for each source, we used the birth years of the documented speakers of each urban variety as our starting point to pair the towns with a fitting dialectological survey that had reported the noun inflections of the corresponding generation of speakers in a neighbouring rural variety with the closest possible geographical proximity to the urban settlement in question.

3.2 Examples of urban-rural variation

The following four examples of rural-urban pairs from our data set will serve to illustrate the linguistic variation in Norwegian varieties as well as the method used for counting declension classes and suffix forms. For reference, we will start by giving the noun system of the two standardised written varieties of Bokmål. These can also serve as examples of the high prestige spoken varieties used during the historical period in which our data was collected (i.e., the middle of the 20th century). We have not included the written variety of Nynorsk, as Nynorsk did not hold a position as a prestige variety equivalent to Bokmål within this time period. The table gives information on declension classes, inflection suffixes in plural indefinite and definite form. The inflection system used in the far left column of Table 1 is based on Sandøy (1998: 86–87), and indicates the maximal range of

(Elstad 1982), Harstad (Elstad 1979; Nesse and Sollid 2010), Haugesund (Gabrielsen 1991), Hønefoss (Hilton 2010; Lyse and Frøyset 1976; Skolseg 1994), Høyanger (Solheim 2006), Kirkenes (Paulsen 1971), Kongsberg (Endresen 1990), Kristiansand (Johnsen 1942–1954; Omdal 1994; Røsstad 2008), Kristiansund (Kleivenes 2002), Lillehammer (Hekneby et al. 1999), Lillesand (Torp 1986), Mo i Rana (Mellingen 1994), Molde (Bugge 2014; Hovdenak 1978; Sandøy 1998), Narvik (Nesse and Sollid 2010; Neteland 2009), Odda (Sandve 1976), Otta (Andersen 1984), Porsgrunn (Dalene 1947), Risør (Torp 1986), Rjukan (Dybdal 1979), Røros (Røynealand 2005), Sandefjord (Dahl 2002), Sandnes (Ims 2010; Sandvik 1979), Sarpsborg (Bjørnemyr 1985), Sauda (Neteland 2013; Sandvik 1979), Skien (Dalene 1947; Roksund 1997), Sogndalsfjøra (Haugen 2004), Stavanger (Aasen 2011; Gabrielsen 1984; Ims 2010; Sandvik 1979), Steinkjer (Dalen 1972), Svolvær (Elstad 1976; Jahr and Skare 1996), Tromsø (Elstad 1979; Nesse and Sollid 2010), Trondheim (Hårstad 2010, 2015; Ostad 1984), Tønsberg (Gulbrandsen 1975), Vadsø (Hatlebrekke 1976), Vardø (Jahr and Skare 1996), Vennessla (Horn 1994), Øvre Årdal (Bjørkum 1968, 1974; Myklebust 2012) and Ålesund (Aarsæther 1984).

declension classes that can be found in each of the Norwegian dialects, excepting the umlaut classes. The category labels of each class in the table below indicate grammatical gender (masculine, feminine, and neuter), their categorization as weak or strong according to Norwegian dialectological descriptions (see for example Christiansen 1976), and the plural indefinite form suffixes for strong noun classes in modern standard written Nynorsk. These modern inflections can be seen as a simplification of the Old Norse system (Berg 2019), yet also contain a few complications, i.e., the split in weak noun classes caused by the quantity shift (see Sandøy 1998: 87), which is also indicated in Table 1.

Most Norwegian dialects have merged several classes from the historical ten-class system, resulting in a noun inflection system that consists of between four and eight classes. An example of the most simplified Norwegian system is found in the conservative and, during this historical period, highly prestigious variant Bokmål 1 (See Table 1: 3 declension classes, one suffix variant in plural definite form, and a merger between feminine and masculine to common gender). As a spoken form (sometimes coined *talt Riksmål*), this system represented an historical koine formation of the written Danish language and the local urban variety of Oslo (Jahr 2014: 20–23) that shared similarities with standard spoken Danish in noun morphology (Haraldsrud 2012: 109). This standard spoken language was also used in a slightly more complex variant, coined Bokmål 2 in Table 1, which contained 3

Table 1: Bokmål 1 and 2, noun declension classes and suffixes in plural form.

	<i>Bokmål 1</i>			<i>Bokmål 2</i>		
	Noun declension classes in Bokmål 1	Infl. suffixes in pl. indef.: Bokmål 1	Infl. suffixes in pl. def.: Bokmål 1	Noun declension classes in Bokmål 2	Infl. suffixes in pl. indef.: Bokmål 2	Infl. suffixes in pl. def.: Bokmål 2
Maximal current Norwegian regular noun declension classes (excluding umlaut)	3 classes	2 suffix variants	1 suffix variant	4 classes	2 suffix variants	1,5 suffix variants
Masc. st. -ar	Common gender	-er	-ene	Masc.	-er	-ene
Masc. st. -er						
Masc. w. 1						
Masc. w. 2						
Fem. st. -er						
Fem. st. -ar						
Fem. w. 1						
Fem. w. 2						
Neut. 0	Neut. 0	-Ø		Neut. 0	-Ø	-a/ene
Neut. w.	Neut. w.	-er		Neut. w.	-er	-a/ene

grammatical genders, 4 declension classes, and two suffixes. The additional classes in Bokmål 2 correspond to the lower prestige varieties spoken locally in the Eastern Central region of Norway (Røyneland 2020). Note that identical suffixes in the plural form do not indicate a merger of noun classes since this distinction between classes is maintained in other inflectional forms, i.e., the singular forms and/or the plural indefinite form. It is also worth noting that both variants of Bokmål represented in Table 1 have noun inflection systems with fewer distinct classes and fewer distinct suffixes than the majority of both urban and rural variants in all regions of Norway, with the exception of the South coast of Agder.

An example of a rural-urban dialect pair that demonstrates a high degree of paradigmatic complexity is the pair of Sunndalen and Sunndalsøra (both documented in Jenstad 1982) in Table 2. The rural dialect of Sunndalen has seen a

Table 2: Sunndalen and Sunndalsøra, noun declension classes and plural suffixes, nominative^a.

Maximal current Norwegian regular noun declension classes (excluding umlaut)	Sunndalen <i>Rural</i> Northwest Norway			Sunndalsøra <i>Urban</i> Northwest Norway		
		Pl. indef.:	Pl. def.:		Pl. indef.:	Pl. def.:
	<i>10 classes</i>	<i>5 suffix variants</i>	<i>5 suffix variants</i>	<i>7 classes</i>	<i>3 suffix variants</i>	<i>3,5 suffix variants</i>
Masc. st. -ar	Masc. st. -ar	-a	-aɲ	Masc. st.	-a	-aɲ
Masc. st. -er	Masc. st. -er	-e	-iɲ	Masc. w. 1		
Masc. w. 1	Masc. w. 1	-a	-aɲ	Masc. w. 2	-Ø	-ɲ
Masc. w. 2	Masc. w. 2					
Fem. st. -er	Fem. st. -er	-e	-iɲ	Fem. st.	-e	-iɲ/aɲ
Fem. st. -ar	Fem. st. -ar	-a	-aɲ			
Fem. w. 1	Fem. w. 1	-ʊ	-ɔɲ			
Fem. w. 2	Fem. w. 2	-ɥ	-ɥɲ	Fem. w.	-a	-aɲ
Neut. 0	Neut. 0			Neut. 0	-Ø	
Neut. w.	Neut. w.	-Ø	-a	Neut. w.		-a

^aThe dialects of Sunndalen have also maintained dative marking (as opposed to both written standards of Norwegian and most spoken varieties today), but the table here only shows the non-dative form. See Jenstad (1982) for a complete description, and Sandøy (1998: 100) for a more complete schematic overview of noun declension in Sunndal (including singular forms in nominative and dative and plural forms in dative case), which illustrates the ten distinct declension classes using the noun examples for masc. st.-ar: fisk (Eng. 'fish'), masc. st. -er: benk (Eng. 'bench'), masc. w. 1: slange (Eng. 'hose(-pipe)'), masc. w. 2 hage: (Eng. 'garden'), fem. st.-er: sag (Eng. 'saw'), fem. st. -ar: helg (Eng. 'weekend'), fem. w. 1: gryte (Eng. pan/pot), fem. w. 2: fluge (Eng. 'fly'), neut. 0: tak (Eng. 'roof'), neut. w.: merke ('mark).

merger between the two weak masculine classes as well as a merger between the two neuter classes. The urban dialect of Sunndalsøra contains a further merger between the three masculine classes as well as a merger between the two strong feminine classes. The urban dialect in this pair has one fewer distinct inflectional suffix than the rural one does. Therefore, this shows that the urban dialect in this pair, with a total of seven classes and three distinct suffixes in the definite plural, is also a relatively complex system.

A paradigmatically less complex pair is the urban-rural pair of Tromsø and Senja (both documented in Elstad 1979; see also Iversen 1913). The Tromsø dialect illustrates one of the more common patterns in urban varieties in Norway. The rural variety of Senja has six classes and two distinct suffixes in definite plural, while the urban Tromsø variety has merged the two masculine classes as well as the feminine classes but maintains separate conjugations for the two neuter classes.

Our final example is an urban-rural pair from the Southern coast of Norway, presented in Table 4 (based on Røsstad 2008). This is a typical example of a pair with no difference in number of declension cases (though there is a difference in morphophonological form). This seems to be the rule: When rural dialects have a high degree of simplification, the urban match will have an equal number in its system, though not necessarily in the same linguistic form.

3.3 Computation of the dataset and statistical analyses

In our statistical analyses, complexity in noun inflection was measured by a simple count based on the methodology of Sandøy (1998). This method involved setting up a declension paradigm for the noun inflections in the traditional dialect based on a trustworthy dialect description. The model does not include nouns with irregular declension patterns or loanwords that are not fully integrated into the dialect's declension paradigm. Sandøy's model then counts declension classes as well as inflectional suffixes in Norwegian dialects to compare complexity in the morphology. Examples of such paradigms, including the number of classes and suffixes, are given in Tables 1–4. Suffix forms that could be used alongside other suffix forms within the same declension class (such as the suffix -Ø used in the 'neut. 0' class in Søgne and Kristiansand in Table 4), were counted as 0.5 suffix. This comparative analysis was performed on three dependent variables for each spoken variety:

- i) The number of regular noun declension classes
- ii) The number of different inflectional suffixes in the plural indefinite form

Table 3: Senja and Tromsø, noun declension classes and plural suffixes

Maximal current Norwegian regular noun declension classes (excluding umlaut)	Senja <i>Rural</i> Northern Norway			Tromsø <i>Urban</i> Northern Norway		
	6 classes	Pl. indef.: 3 suffix variants	Pl. def.: 2 suffix variants	4 classes	Pl. indef.: 3 suffix variants	Pl. def.: 2 suffix variants
Masc. st. -ar	Masc. st. -ar	-a	-an	Masc.	-a	-an
Masc. st. -er	Masc. st. -er	-e	-en			
Masc. w. 1	Masc. w.	-a	-an			
Masc. w. 2						
Fem. st. -er	Fem.	-e	-en	Fem.	-e	-en
Fem. st. -ar						
Fem. w. 1						
Fem. w. 2						
Neut. 0	Neut. 0	-Ø	-an	Neut. 0	-Ø	-an
Neut. w.	Neut. w.	-a		Neut. w.	-a	

Table 4: Søgne and Kristiansand, noun declension classes and plural suffixes.

Maximal current Norwegian regular noun declension classes (excluding umlaut class)	Søgne <i>Rural</i> Southern coast of Norway			Kristiansand <i>Urban</i> Southern coast of Norway		
	4 classes	Pl. indef.: 1,5 suffix variants	Pl. def.: 1 suffix variant	4 classes	Pl. indef.: 1,5 suffix variants	Pl. def.: 1 suffix variant
Masc. st. -ar	Masc.	-e	-an	Masc.	-ør	-ane
Masc. st. -er						
Masc. w. 1						
Masc. w. 2						
Fem. st. -er	Fem.	-e	-an	Fem.	-ør	-ane
Fem. st. -ar						
Fem. w. 1						
Fem. w. 2						
Neut. 0	Neut. 0	-Ø/-e	-an	Neut. 0	-Ø/-ør	-ane
Neut. w.	Neut. w.	-e		Neut. w.	-ør	

- iii) The number of different inflectional suffixes in the plural definite form
For each of the urban-rural pairs we computed three more dependent variables, reflecting:
- iv) The difference between the urban variety and the rural neighbour variety in the number of regular noun declension classes
- v) The difference between the urban variety and the rural neighbour variety in the number of different inflectional suffixes in plural indefinite form
- vi) The difference between the urban variety and the rural neighbour variety in the number of different inflectional suffixes in plural definite form

For each urban settlement we also collected available historical data on macro social factors including census data on population size and growth (from 1875, 1890, 1900, 1910, 1920, 1930, 1946 and 1950), data on industrialization and employment structure in 1950, and historical data on the age and founding period of the town as an urban center. This data was used to test explanatory factors that might have contributed to the variation in the degree of grammatical simplification present between Norwegian towns and to explore the relationship between societal typology and grammatical complexity. We plotted the data in SPSS and performed a series of multiple hierarchical linear regression analyses, one for each of the six dependent variables, each of which included six potential explanatory variables based on the historical macro social data (see Section 4).

4 Results

The most interesting results were found in the simple descriptives procedures for variables iv, v and vi, providing the range (minimum–maximum value) and mean value of the dependent variables that show the differences between urban varieties and their rural neighbours. The results for 42 of the 43 dialects spoken in urban Norwegian settlements can be summed up as follows: though there is great variation between the urban varieties with regards to paradigmatic complexity in the noun system (cf. variables i–iii), urban varieties do not have a more complex system than their own rural neighbouring varieties (cf. variables iv–vi). This means that even in cases in which an urban variety has more complex noun inflections than the majority of the rural and urban varieties in the rest of Norway, such as the example of Sunndalsøra, it will still have a simpler noun morphology than that of its closest neighbouring rural variety. On average, the urban varieties had 1 fewer declension class, 0.6 fewer plural indefinite suffix variants, and 0.55 fewer plural definite suffix variants than their rural neighbour varieties. If the rural dialect had a more highly simplified noun system, the rural-urban pair may have had an equal

number of classes and suffixes, but the urban system was not more complex than the simplified rural one. There was one single exception to this rule (i.e., our 43rd town): Kirkenes, in Norway's far north, where the rural dialect is a variety that has developed out of the long-standing and intensive language contact environment between Sámi languages, Kven, and Norwegian, followed more recently by a shift to Norwegian due to the forced linguistic and cultural assimilation of Sámi and Kven speakers during the Norwegianization⁷ period (Paulsen 1971).⁸ Hence, this rural dialect has a highly simplified noun morphology, and the Kirkenes urban variety contains a higher number of declension classes than the rural contact variety (Paulsen 1971). Because the rural variety here is a product of intensive language contact, we believe it is invalid as counter-evidence to the generalization given above.

As described above, there was a consistent pattern of complexity in urban-rural pairs across the data set and across the varying degrees of paradigmatic complexity present in the noun systems of urban varieties. To explore the variation in the data set further, we performed a series of multiple hierarchical linear regression analyses, one for each of the six dependent variables, in which we included potential explanatory variables based on historical macro social data: (a) The regional location of the urban settlement, (b) the founding period of the urban settlement, (c) industrial and employment structure in 1950, (d and e) population development and growth, and (f) population size in 1950 (see discussion in Neteland and Bugge 2015). Only two of these factors, namely (a) and (f), were found to contribute significantly to the explanatory power of one or more of the models, and thus the variation in one or more of the dependent variables.

Upon analysis, factor (f), population size, only turned out to significantly contribute to the explanatory power of the model of the first of our six variables, with a medium to low estimated effect of R^2 0.099 ($p < 0.05$). Explanatory factor (a), regional location, on the other hand, was found to contribute to the explanatory power of the models only for dependent variables i–iii, all of which reflect variation in morphological complexity between urban varieties regardless of their relative distance to rural neighbours. Regional location is estimated to improve an explanatory model with an effect size of R^2 0.322 ($p < 0.01$) for variable i (the number of regular noun declension classes), an effect size of R^2 0.524 ($p < 0.001$) for variable ii (the number of different inflectional suffixes in plural indefinite form)

⁷ Note also that Nesse and Sollid (2010: 152) as well as Bull (2015) explain the developments of urban vernaculars in Northern Norway as a reflection of urban speakers' desire to avoid stigmatized linguistic features associated with Norwegian as it is spoken by Sámi and Kven speakers.

⁸ Our sample includes only the rural variety of Norwegian and not the far more complex Sámi or Kven morphologies.

and an effect size of R^2 0.439 ($p < 0.001$) for variable iii (the number of different inflectional suffixes in plural definite form). Regional location, in other words, appeared to be a significant determinant of differences in complexity between urban varieties in our first three linguistic variables, with a high estimated effect size. The most complex urban varieties were found in Trøndelag and North-West Norway, and the simplest were found on the South coast of Norway. The regional difference between regional groups of urban varieties (variables i–iii) is illustrated in Figure 2.

Variables iv–vi in Figure 2 illustrate the differences between urban and rural pairs for number of declension classes and number of suffixes in definite and indefinite form. As these calculations were based on the formula *urban minus rural*, the numbers are reported as *negative*. Region was only found to be a significant explanatory factor (R^2 0.267 ($p < 0.05$)) for one dependent variable for the relative distance in urban-rural pairs, namely variable iv. This may be interpreted as a further indication that differences between regions in the complexity of *urban* varieties correspond to differences between regions in the complexity of *rural* varieties.

The regions with the greatest degree of difference in urban-rural pairs were found in Southwest and Southeast Norway; these are also the regions with relatively more complex urban varieties and, as previously demonstrated, even more complex rural varieties. The varieties along the southern coast of Norway were characterized by a pattern in which the rural neighbouring varieties of each urban varieties had already, historically, been simplified (see the example from Søgne in Table 4 above), and these urban-rural pairs, therefore, showed no difference with

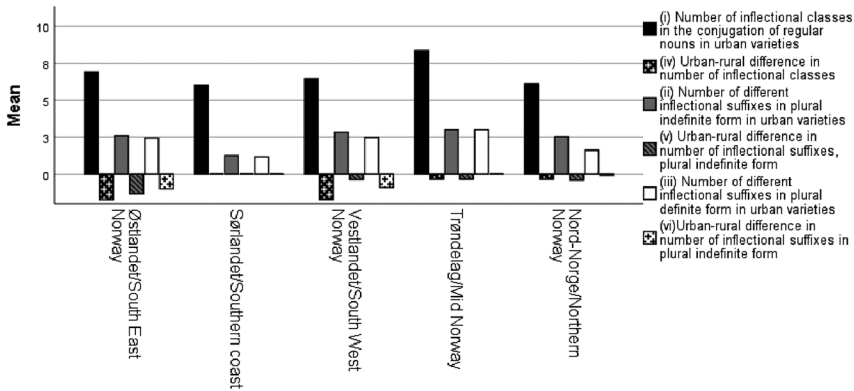


Figure 2: Regional differences in variable i–vi for 43 urban Norwegian varieties and 43 urban-rural pairs.

regards to variables iv–vi. In these cases, it is important to notice that the urban Norwegian dialects included in our survey, with the exception of Kirkenes, *did not display any signs of linguistic complication*. The standard spoken Bokmål is actually more complex than some of these rural and historically simplified varieties, as seen in the comparison of Bokmål 2 in Table 1 with Søgne in Table 4. Furthermore, the simplification of the varieties has affected different parts of the system, as can be observed when comparing the loss of grammatical gender in Bokmål 1 with the urban-rural pair from Southern Norway in Table 4.⁹ A vertical levelling process that moves towards the standard variety would show evidence of grammatical complication in these parts of the country, but this is not the case for the urban-rural pairs in our data set. The general noun morphology patterns of the spoken varieties of urban Norwegian in this data set relate regularly to their neighbouring rural varieties.

5 Discussion and concluding remarks

On the basis of our data, we have explored two questions. The first is whether the morphology of urban varieties of Norwegian is consistently more simplified when compared to these varieties' rural neighbours in terms of paradigmatic complexity and repertoire of inflectional suffixes. The results of our investigation show that the urban varieties analysed here have a simplified or equally complex noun system compared to those rural varieties in their local region. On average, the urban varieties have 1 fewer declension class, 0.6 fewer plural indefinite suffixes, and 0.55 fewer plural definite suffixes than the neighbouring rural varieties. This implies that the noun systems in urban varieties in Norway are regular simplifications of the rural varieties in the local region where each urban community is situated. The simplifications found in the present study display a decrease in declension classes (paradigmatic levelling), as well as a decrease in the number of suffixes (allomorphic regularization), both of which point to regularization and reduction of complexity in the noun system. However, these simplifications can usually not be described as maximal simplifications; although the urban dialects are relatively simple in comparison to the rural dialects of their surroundings, most of their noun systems could potentially be simplified further (cf. the Søgne-Kristiansand example typical of the Southern coast in Table 4).

⁹ The only non-upper class urban Norwegian variety which had merged masculine and feminine gender during the period documented in our study was Bergen (Larsen and Stoltz 1912; Nesse 1994). However, the pattern of non-merger of grammatical genders may be changing in contemporary Norwegian urban dialects (Busterud et al. 2019).

When testing factors that could account for the differences between the urban and rural dialects such as town size, population growth rate, or number of incoming migrants within a short period, none of the explanatory factors were found to be significant for the variation patterns as a whole (Neteland and Bugge 2015). Migration, population growth and size are of course important prerequisites for linguistic contact. However, this study was unable to identify any of these social typological factors as significant predictors for grammatical complexity or for the relative distance between urban and rural local varieties. Our survey indicates that even though the social typologies of the urban Norwegian communities fluctuate from one location to another, all these contact environments have resulted in simplified grammar as compared to that of the rural varieties in the region.

Our second question was whether the noun morphology of these urban Norwegian varieties could best be explained as a result of levelling and standardisation processes or as grammatical simplification between dialects in contact. We have concluded that our results support previous investigations and case studies of dialect contact in that the linguistic contact between adult language users that is typical of urban settlement and growth leads to linguistic simplification. However, these simplifications could potentially also be interpreted as changes in the direction of a spoken standard or prestige variety. To delineate between these two explanations, it is necessary to look specifically at the linguistic features used in these urban varieties. Firstly, the noun system and the suffixes used in the towns are closely related to the rural varieties in the region, and appear, to a lesser degree, to either reflect the inflection system of the standard language or to be converging towards a standard language system. Bokmål, the standard Norwegian language, is highly simplified in noun inflection (see Section 3), but many of the town varieties diverge from this morphological system, even in the morphophonological form of the suffixes. The tables in Section 3 illustrate these differences. The urban varieties of Sunndalsøra, Tromsø and Kristiansand differ from each other and from the Bokmål system when it comes to both the degree of complexity and the morphophonological form of the variants that are used. As Auer points out, a vertical levelling process can lead to the use of linguistic features that are not present in the standard language (Auer 2005: 25). This could also be the case in our sample, especially since a standard language similar to the Bokmål system presented in Section 3 was used as a distinct high-prestige variety in many of the largest towns in Norway, existing in variation with the local urban dialect at least up until 1970 (see Section 2). The presence and use of a paradigmatically simpler standard language may have thus increased the potential for simplification in the urban varieties. However, we see few traces of this influence in the suffix forms used in towns. Secondly, although the urban Norwegian varieties share common historical developments, they are acutely local varieties that can be

placed definitively within their region with regards to regional accent, phonology and morphology. This is also true of the noun inflection and suffix forms in question. The suffix variants found in the urban varieties are most often also found in the region's rural dialects alongside rural-only variants in the more complex rural system. Since the variations of the urban varieties are fewer and more regularized, these features also clearly distinguish the town's variety from the rural dialects in their respective region. This might indicate that the urban varieties are the results of a levelling process that is moving along a horizontal axis.

Thus, the diverse local and simplified urban varieties of the 43 examined Norwegian towns appear to distinguish the Norwegian speech community from other speech communities with a more prominent and widespread standard language variety. While urban varieties in Germany, for example, closely relate to the standard language (cf. Auer and Hinskens 1996), it is not so clear that the Norwegian variation pattern can be placed on a scale between traditional rural dialects and the standard language. It is, however, clear that the urban Norwegian varieties share linguistic features with their local neighbouring dialects, although they use fewer variants and have a more simplified system. On the basis of the evidence given above, we conclude that the developments of the noun systems in urban varieties of Norway are best explained as an example of simplification and levelling at the horizontal level, not as evidence of standardisation.

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