Hypercorrect hen ‘them’ and dan ‘than’ in Dutch: an experimental study

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Abstract

According to prescriptive rules in Dutch, *hun* ‘them’ should be used when it has the function of an indirect object and *hen* ‘them’ should be used when it has the function of a direct object, or after a preposition. This difference is artificial, which results in difficulties when using the prescriptive rule. This may lead to hypercorrection, with people changing every object *hun* to *hen*, even in the case of an indirect object.

Something similar can happen with regard to the use of *dan* ‘than’ in comparatives. When people learn to use *dan* in comparatives, they may overgeneralize this rule and use it in equatives as well, in which *als* is the correct form.

This study shows that hypercorrection massively occurs in both the *hun* – *hen* experiment and the *als* – *dan* experiment. Educational levels showed no difference: all participants showed hypercorrection. It is clear that all participants had difficulties with the prescriptive rules dictating the use of *hen* as an object and the use of *dan* in comparatives of equality in Dutch. This begs the question whether or not the prescriptive rules should still be taught at schools.
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1. Introduction

(1) *Probeert u het eens bij [concurrent], misschien kunt u daar slaan.*

‘You could try at [other company], maybe you can hit there.’

(1) is an example from Sassen (1963, p. 10), who actually heard a shop assistant in Dutch city Groningen say this to a customer. The shop assistant told the customer that he did not have the product the customer wanted, and (1) followed. Of course, the shop assistant did not wish to encourage the customer to hit an employee of the other company. He actually meant to use the Dutch word *slagen* ‘to succeed’ instead of *slaan* ‘to hit’.

Sassen explains this situation via two language systems, Dutch and the Dutch dialect Gronings. Sassen assumes that the shop assistant is most familiar with Gronings, as the language he grew up with and speaks most spontaneously. He calls this the *endogenous* language system. Dutch, the language the shop assistant consciously learned at school, is the *exogenous* language system according to Sassen.

Dutch is the standard language in the Netherlands, and therefore has more prestige than Gronings, which is a dialect. Therefore, the shop assistant wants to speak Dutch to his customers instead of Gronings. He knows that, to speak Dutch correctly, he has to make some corrections to his endogenous language. This may lead to overgeneralisation, as in (1). Gronings *draagn* ‘to carry’ is easily transposed to Dutch *dragen* ‘to carry’, but this transposition is not systematic: Gronings *sloagn* ‘to hit’ should be *slaan* ‘to hit’ in Dutch, and not *slagen*, which means ‘to succeed’. It may be that the shop assistant blocked the form *slagen* ‘to succeed’ completely because of the unsystematic transposition, causing him to not use the form *slagen* anymore. This may result in him replacing *slagen* ‘to succeed’ by *slaan* ‘to hit’, even when *slagen* was actually correct, as in (1). This phenomenon is referred to as *hypercorrection*.

Hypercorrection can occur between two languages, e.g. Dutch and Gronings, and it can occur within one language, e.g. Dutch. In this study, the focus will be on occurrence of hypercorrection within one language, Dutch. More specifically, the focal point will be on hypercorrection of *hun* ‘them’ to *hen* ‘them’ and on hypercorrection of *als* ‘as’ to *dan* ‘than’. *Hun* should be used as an indirect object, *hen* as a direct object. *Als* should be used in an equative sentence, *dan* in a comparative sentence. Hubers and de Hoop (2013) found a difference in education concerning the use of *als* and *dan* in comparisons: lower educated people use *als* more often than highly educated people. In spoken
Dutch, there is a strong tendency to use *als* and *hun*. This can be called the endogenous language system. Actively learning to use *dan* and *hen* in ‘proper’ Dutch can be called the exogenous language system. The difference in the endogenous and exogenous language system may result in hypercorrection, as will be explained in Chapter 2. In sentences (2) and (3) examples are given of hypercorrection of *hun* to *hen* and of *als* to *dan*.

(2) *Ik geef hen een boek.*
    ‘I give them a book.’

(3) *Hij is twee keer zo groot dan ik.*
    ‘He is twice as big as I am.’

To find out if there are differences between educational levels regarding hypercorrection, students from multiple high schools took part in an online experiment. Students had to choose between *hun* and *hen* or between *als* and *dan* in a variety of constructions. The educational level of students is expected to be an important predictor for which decision they will make. Prestige of a certain form may influence a decision as well. This will be explained in Chapter 2.

In the next chapter of this thesis, Chapter 2, definitions of prestige and hypercorrection are given, as well as an explanation of the prescriptive rules dictating when to use *hun*, *hen*, *als* and *dan* and how hypercorrection can occur. In Chapter 3, the experiment is discussed, via a methodology section, a results section and a discussion section. Chapter 4 concludes.
2. Theoretical framework

In this chapter I will first give a definition of prestige, since hypercorrection cannot exist without prestige. In Section 2.2 I will discuss what hypercorrection is and what its relationship to prestige is. In Section 2.3, Dutch prescriptive rules of the use of *hun* ‘them’ and *hen* ‘them’ and *als* ‘as’ and *dan* ‘than’ will be explained, as well as the occurrence of hypercorrection as the result of these rules. The research question can be found in Section 2.4.

2.1 What is prestige?

When a person or an object has prestige, they are respected and admired because of their social position. This social position is based on success and achievement: more success means a higher social position, which means more prestige. Prestige is thus a positive status a person or an object can have. Barack Obama, for example, has a lot of prestige, since he became president of the United States of America. However, this is an extreme example, since prestige differences can be found everywhere. Everybody has a social status and thus prestige, but some people have more prestige than others. For example, a manager of a store has more prestige than a subordinate, since the manager has authority (Treiman, 1977, p. 9) whereas the subordinate has no authority. This leads to the manager gaining more respect than the subordinate.

People with a lower status, and thus less prestige, might sometimes try to act like they have more prestige than they actually do. An example would be if the subordinate, discussed above, would act as if he were the manager of the store. He might want to impress someone by acting as if he has more prestige than he actually has.

Prestige is not limited to people or objects only: language also has prestige. The standard language is most often the language with the most prestige within a country. According to Mesthrie et al. (2009, p. 20), a standard language is actually the dialect with the highest prestige, since it is mostly spoken by educated people and/or people with high status. It is also the language that is used in education, on radio and on television. People who normally do not speak the most prestigious language or language variety may try to speak this language (variety) when trying to impress someone. In the process, they might “overshoot the mark” (Eckman et al. 2013), which results in an ‘incorrect’ form, or hypercorrection.
However, prestige can occur within a language as well. Sassen’s (1963) endogenous and exogenous language system help to explain this. People spontaneously acquire a language at home, called the endogenous language system. Later in life, when they go to school, they are taught prescriptive rules for the language they acquired at home. The active learning of new rules for a native language can be called the exogenous language system. People have to adjust their endogenous language system under influence of the exogenous language system. Here, the exogenous language system is the language system with the most prestige, since it is the language that is used in i.a. education, while the endogenous language system is used spontaneously, without application of the prescriptive rules. Therefore, it might not be seen as the correct use of a native language.

2.2 What is hypercorrection and how is it related to prestige?

Hypercorrection can be explained as the overuse of a linguistic form, resulting in incorrect production. Hypercorrection occurs when people think they are correcting a linguistic error, but instead they are overcorrecting: the linguistic ‘error’ is not an error, but the correct form. A historical example is the Dutch word kade ‘quay’, which used to be kaai, originating from old-French kay or kai ‘loading and unloading quay in a port’ (Philippa & Debrabandere, 2005). In Dutch, there are various words with two forms, one form with a d and one form without a d, due to d-syncope (van Bree, 1996, p. 226). An example is the word rode ‘red’, which has the two forms rode and rooie. According to van Bree, this difference is stylistic: rode is written language and formally spoken language, whereas rooie is informal spoken language. He also states that the basic form will be d-less for many Dutch people, since they acquired it that way at home, whereas the forms with d are learned consciously at school. The replacement rule is ‘Ø → d / in certain words’. These ‘certain words’ are words that need a d when this d is written as well, which makes the occurrence of hypercorrection more likely, since people do not always know when a word needs a d in written form. Kade ‘quay’ is an example of this: the word used to be kaai and did not have a d. However, hypercorrection of the replacement rule occurred so often, that kade became the basic form of the word. Kaai ‘quay’ is no longer used in Dutch, except for compounds such as (vechten tegen de) bierkaai ‘to fight a losing battle’. Thus, kaai ‘quay’ is an example where hypercorrection of the prescriptive rule turned the hypercorrected form into an accepted basic form.

Hypercorrection might occur when one uses a linguistic form in scenarios where this form is not needed, but believes this form to be right in the most prestigious language (variety).
According to previous literature, there are two possible occurrences of hypercorrection: Labov (1963) distinguishes statistical and structural hypercorrection, whereas Janda and Auger (1992) distinguish quantitative and qualitative hypercorrection. Statistical and quantitative are roughly the same kind of hypercorrection, and so are structural and qualitative hypercorrection.

Statistical or quantitative hypercorrection occurs when people, who do not speak the most prestigious language variety, use an element from the prestigious variety more often than speakers from the prestigious variety themselves. An example from Labov (1963) is the use of post-vocalic /r/ in New York English. The lower middle class attempted to mirror the upper middle class known for its great use of post-vocalic /r/. However, in their ambition to speak like the upper middle class, the lower middle class ended up producing the post-vocalic /r/ much more frequently than the upper middle class actually used it themselves.

Structural or qualitative hypercorrection occurs when people who speak a less prestigious language variety try to speak a more prestigious language variety, but end up producing utterances that are not possible for speakers of the more prestigious language variety. The speakers of the less prestigious language variety try to exclude a speech element that they always use in their speech, since they think this element is less prestigious. They replace this element by an element that they feel is more prestigious. Now they speak a new phrase with a more prestigious element included. However, in the more prestigious language variety the substituted element is actually out of place in this phrase. The substituted element is used by speakers of the more prestigious language variety, but in other situations, i.e., in other phrases. Therefore, the phrase as it is used by speakers of the less prestigious language variety is not possible in speech of speakers of the more prestigious language variety (Janda & Auger, 1992). Another example from Labov (1972, pp. 292, n. 17) shows this. People from the lower middle class who learned the use of post-vocalic /r/ never achieved consistency, resulting in hypercorrection. They uttered words as idear, lawr and order and even Gard for God, whereas the upper middle class speakers would never use post-vocalic /r/ in these words, since they see this as wrong.

Hypercorrection, whether it is statistical or structural, quantitative or qualitative, is connected with prestige. Language and language varieties all have status, and thus prestige. Some languages, often standard languages, have more prestige than others, like dialects (Mesthrie et al., 2009). The explanations of statistical and structural or quantitative and qualitative hypercorrection show that these kinds of hypercorrection are connected to prestige: New York’s lower middle class tries to speak like New York’s upper middle class. Hypercorrection only occurs one way, in the social direction: it only occurs when an attempt is made to speak a more prestigious language variety. Thus,
the occurrence of hypercorrection indicates prestige of the language (variety) that is spoken, or linguistic form that is used. Examples of phonological hypercorrection can be found in Decamp (1972), Janda and Auger (1992) and Eckman et al. (2013). An example of syntactical hypercorrection can be found in Pfaff (1976).

Decamp (1972, pp. 88-89) gives an example of phonological hypercorrection. Decamp states that in San Francisco, r-dropping is highly disapproved, since it is (mistakenly) seen as a southern trait. Decamp once met a gentleman who was talking about the *parm* of his hand and wondered how the gentleman came to use this form. The r-dropping rule clearly carries strong negative prestige, but according to Decamp the rule is not “dropped from the grammar or [...] skipped over in the derivation” (p. 88). Instead, a new rule may be added to the grammar, a rule that restores the r in words where it had been dropped. The only question was how to identify the words where r was dropped, since r was dropped after, for example, an /a/, which resulted in a long /a:/ But this does not mean that every word with a long /a:/ used to have an /a/ followed by an r. Thus the new rule, which can be called the r-reinsertion rule, might be applied not only to words that used to have an r but lost it due to r-dropping, it might also be applied to words that never had an r, such as the word *palm*, where you only hear a long /a:/ and no l. The overuse of the r-reinsertion rule thus leads to hypercorrection, changing the utterance ‘*palm* of my hand’ to ‘*parm* of my hand’.

Another example of phonological hypercorrection is German *Ich gab es Goseph* ‘I gave it to Goseph’, which should be *Ich gab es Joseph* ‘I gave it to Joseph’. German is divided into High German or ‘modern German’ and Low German or ‘German dialects’. The names already indicate that High German is more prestigious than Low German. The latter underwent a sound change long ago, whereby g- became j- in initial positions (Janda & Auger, 1992, p. 202). Therefore, a High German sentence as *Eine gute gebratene Gans ist eine gute Gabe Gottes* ‘A good roast goose is a good gift of God’ becomes *Eene jute jebratne Jans is eene jute Jabe Jottes* in Low German. When a speaker of Low German tries to speak High German, he makes great effort to replace his initial j- with g-. However, initial j- still appears in High German, and this is where hypercorrection occurs: trying to change their initial j- to g-, a speaker of Low German might apply this rule too extensively, resulting in a name as *Joseph* to be pronounced as *Goseph*.

A last example of phonological hypercorrection can be found in Eckman, Iverson and Song (2013). They propose that, within second language learning, hypercorrection “constitutes a near-final, if not the final, state of acquisition” (p. 258), but only when the native language has an equivalent to a sound in the target language. The native language thus influences the learning of the target language, which is the more prestigious language. An example is Korean people learning the English
/s/-/š/ contrast, as in Korean, [s] and [š] are allophones of the same phoneme. In Korean, there is a rule sibilant → palatoalveolar / __ high front vocoid (p. 262), but this rule cannot be applied to English, since the word sip would be pronounced as *[šIp]. The Korean learners of English should suppress this rule when learning English, to make sure they pronounce English words correctly. However, suppressing this rule may lead to hypercorrection. There are English words that do have sibilants that become palatoalveolar before a high front vocoid, such as ship and show. When Korean speakers are learning English, they might suppress the rule for every word that has a sibilant before a high front vocoid, resulting in hypercorrection: ship becomes sip and show becomes sow. The second language learners learned that the Korean rule sibilant → palatoalveolar / __ high front vocoid should not be used in English, but they have not learned yet that there are exceptions to this suppression, leading to hypercorrection.

Pfaff (1976) gives an example of syntactical hypercorrection. She reports on 81 low- and middle-income first-grade black children who had to answer questions about a set of pictures and who had to tell the story of Goldilocks and the three bears. Answers included “a number of third person singular present-tense verb forms: -s inflection of regular verbs, auxiliary and main verb be, auxiliary and main verb have, auxiliary do and possessive marking on nouns” (p. 105). The results showed 37 occurrences of hypercorrection. Of these 37 occurrences, only 12 were produced with any instance of have, whether it was standard (somebody has been eating my porridge) or nonstandard (somebody been eating my porridge). The rest of the occurrences were produced with null forms, as can be seen in Table 1. This strongly suggests that the informants’ grammar lacks auxiliary have. When telling Goldilocks and the three Bears, the informants had to reproduce the model as closely as possible, resulting in attempts to use auxiliary have. However, this led to hypercorrections as somebody’s was eating my porridge, somebody’s has been eating my porridge and somebody was been eating my porridge. The correct form would be somebody’s been eating my porridge or somebody has been eating my porridge. The informants’ grammar lacked auxiliary have, but when telling a children’s story they tried to use auxiliary have. However, they clearly did not know when and how to use auxiliary have, resulting in hypercorrection.
Table 1. Realization of 3 sq. auxiliary ‘have’ by low- and middle-income Black children (per cent). Adopted from Pfaff (1976, p. 106).

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<tr>
<th></th>
<th>Standard</th>
<th>Nonstandard</th>
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<tbody>
<tr>
<td></td>
<td>Has</td>
<td>‘s</td>
</tr>
<tr>
<td>Low-Income</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Middle-Income</td>
<td>1</td>
<td>19</td>
</tr>
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2.3 Dutch prescriptive rules and hypercorrection of these rules

In this section, Dutch prescriptive rules dictating when to use *hun* ‘them’ and *hen* ‘them’ will be discussed (2.3.1) and how hypercorrection of *hen* can occur (2.3.2), as well as Dutch prescriptive rules dictating when to use *als* ‘as’ and *dan* ‘than’ (2.3.3) and how hypercorrection of *dan* can occur (2.3.4).

2.3.1 *Hun and hen*

Recently, Hubers and de Hoop (in prep.) asked 400 readers of the Dutch magazine *Onze Taal* ‘Our Language’, a popular magazine that writes about all aspects of language, to judge the sentence in (4). No less than twenty percent of highly educated speakers of Dutch incorrectly judged the sentence to be wrong.

(4) *Hij gaf hun een boek.*

‘He gave them a book.’

In Dutch, the prescriptive rules of when to use *hen* ‘them’ and when to use *hun* ‘them’ state that *hen* should be used when it has the function of a direct object, as in (5), or after a preposition, as in (6). *Hun* should be used when it has the function of an indirect object, as in (7) or, indeed, (4). In spoken Dutch there is a strong tendency to use *hun* instead of *hen* for all objects, including direct objects (Algemene Nederlandse Spraakkunst, 1997). *Hun* instead of *hen* in (5) and (6) is fine in spoken Dutch. *Hun* is also frequently used as a subject, as in (8), although many speakers of Dutch have a strong negative attitude towards it (van Bergen et al., 2011).
Hen moet je niet uitnodigen voor het feest.
‘You should not invite them for the party.’

We hebben al jaren geen contact meer met hen.
‘For years, we have not had contact with them.’

Veel Amerikanen zijn afhankelijk van de overheid en kunnen zich er niet van losmaken omdat de overheid hun dit belet.
‘Many Americans are dependent on the government and cannot detach because the government prevents them from this.’

Ik zal even vragen welke boeken hun gebruiken.
‘I will ask which books they use.’

The history of the prescriptive rule for using *hen* and *hun* goes back to *De Nederduytsche Grammatica ofte Spraek-konst* (1625) ‘The Nederduytsche grammar’ by Christiaen van Heule. Van Heule extensively described the grammar of Nederduytsch, as Dutch was called in the seventeenth century. At this time, Dutch already lost many of its cases and this trend continued (Stroop, 2011). Van Heule thought this was impoverishment of the language. He tried to stop the trend and, inspired by Latin grammar, prescribed six Dutch cases which were all based on Latin cases: the *noemer* ‘nominative’, *bearer* ‘genitive’, *giver* ‘dative’, *aenklager* ‘accusative’, *rouper* ‘vocative’ and *ofnemer* ‘ablative’. Since the cases *vocative* and *ablative* are very similar to *nominative* and *dative*, they did not catch on. The other four cases did catch on and were maintained in Dutch for quite some time. Together they are called ‘the system-Van Heule’. An example of the use of these cases in Dutch was the inflection of the adjective: when a word was masculine, an –*n* was added, as in *goeden man* ‘good man’; when a word was feminine, no –*n* was added, as in *goede vrouw* ‘good female’. The system-Van Heule also prescribes that in third person plural the personal pronouns *zij* ‘they’, *hun* ‘their’, *hun* ‘them’ and *hen* ‘them’ should be used for nominative, genitive, dative and accusative, respectively.

The use of the four cases was imposed by van Heule. In present day Dutch, van Heule’s influence can still be witnessed. In present day Dutch personal pronouns, there is a difference between nominative, accusative/dative and genitive, as for example *ik* ‘I’, *mij* ‘me’ and *mijn* ‘my’, or *jij* ‘you’, *jou* ‘you’ and *jouw* ‘your’. That is, there is only one form for accusative and dative. However, this is where van Heule’s influence can be retrieved: there is an artificial difference between a dative
indirect object and an accusative direct object in the third person plural, whereas this difference cannot be found in any other personal pronoun. This artificial difference can cause hypercorrection, mainly in written language, as will be explained in the next section.

### 2.3.2 How hypercorrection of *hen* can occur

Mesthrie et al. (2009, p. 20) state that the standard form of a language has specific functions serving the community, it is for example the language used in writing, used by the government and for administration and that is spoken on radio and television, but more importantly here: it is the language that is used for education. They also state that “successful standardization involves the creation (or acceptance) of a variety as the most prestigious one […]” (p. 21). This can be translated to the Dutch situation: the language that people learn at school, and that is used by the government, on radio and television is the most prestigious language. The language that people learned at home is less prestigious than the one learned at school. This also applies when someone is monolingual – an example is the use of *hen* ‘them’ and *hun* ‘them’. At home, children acquire language spontaneously. There is a strong tendency to use *hun* in spoken Dutch for all objects, so the children’s parents will use it in their spoken language as well. Children acquire a language from their parents, and will therefore use *hun* for all objects as well.

When these children go to school, and have to write texts, their teachers will (try to) teach the children that they should use *hen* instead for objects. The teachers will probably focus on the use of *hen*, and will pay less to no attention to when *hun* is used correctly in written language. This may lead to problems for children, who learn to use *hen* for objects in written language, but not to maintain *hun* for indirect objects. Therefore, they might change every *hun* to *hen*, even when this change is incorrect. The form *hen* gains more prestige than the form *hun*, which might lead to overuse of *hen*. An example of this kind of hypercorrection can be found in (9), which is an example of the Dutch newspaper *de Volkskrant* (May 31\(^{st}\), 2014). Here, *hun* should be used, since it is an indirect object. However, the writer of this sentence hypercorrected *hun* to the more prestigious *hen*.

(9) *Hen wordt nu samenzwering ten laste gelegd.*

‘They are now accused of conspiracy.’
2.3.3  *Als* and *dan*

In comparatives, as in (10), *dan* ‘than’ should be used, according to Dutch prescriptive rules. *Als* ‘as’ should be used in an equative, as in (11).

(10) *Zijn mannen slimmer dan vrouwen omdat ze grotere hersenen hebben?*  
‘Are men smarter than woman because they have bigger brains?’

(11) *Wetenschappers hebben een nieuw materiaal gemaakt van grafeen dat heel dun is, maar toch tien keer zo sterk als staal.*  
‘Scientists created a new material out of graphene that is very thin, yet ten times as strong as steel.’

Stroop (2011) describes the history of the use of *dan* and *als*. At first, *dan* was used in a comparative, *als* in an equative. In the second half of the sixteenth century, however, the use of *als* in a comparative increased. Even influential Dutch writers such as Vondel, Hooft and Huygens used *als* in a comparative. This increasing use of *als* in a comparative eventually led to a strong decrease of *dan* in comparatives.

However, in the second half of the seventeenth century, a countermovement arose. Vondel returned to using *dan* more often than *als* in comparatives in his *Statenvertaling* ‘States translation’ from 1637. In this work, he used *dan* 92% of the time and *als* only 8% of the time for comparatives (van der Sijs & Verhoeff, 2004). The countermovement of using *dan* rather than *als* in comparatives was led by Balthazar Huydecoper, who strongly opposed the use of *als* and dictated the use of *dan* in comparatives. His influence was so big, that it led to the prescriptive rules that *dan* should be used in a comparative, while *als* should be restricted to equatives (Stroop, 2011, p. 139). To this day, Huydecoper’s rules are still taught in Dutch.

Hubers and de Hoop (2013) examined the use of *dan* and *als* in modern Dutch using the Corpus Gesproken Nederlands ‘Spoken Dutch Corpus’. They found that *als* can only be used as a complementizer or as a preposition, not only in equatives and comparatives but also in other contexts. *Dan*, however, is only used as a complementizer or a preposition in comparatives. In other contexts it has the function of a temporal or modal adverb or particle. Hubers and de Hoop searched half of the Spoken Dutch Corpus and found that “in about 40,000 cases *dan* was used as an adverb or particle, whereas only in about 2,000 cases it was used in comparative contexts. By contrast, *als* is always a preposition or a complementizer, and therefore its use in comparatives seems more natural than the use of *dan*” (2013, p. 95).
Furthermore, Hubers and de Hoop found a difference in region and education concerning the use of als and dan in comparisons. Speakers from the south of the Netherlands (Limburg, Northern-Brabant and Zeeland) use als more frequently in comparisons than speakers from other Dutch regions, even though it is still used less than dan. Speakers from the south use als in comparatives 40.2% of the time, whereas speakers from north Netherlands (Friesland, Groningen, Drenthe, Overijssel and Noord-Holland) and speakers from middle Netherlands (Zuid-Holland, Utrecht, Gelderland) use als in comparatives 13.5% and 13.8% of the time, respectively.

Als in comparatives is also used more often by lower educated people in spoken Dutch; they even use it more often than they use dan. They use als in comparatives in 62.2% of the time, whereas middle educated people use it in 36% of the time and highly educated people use als in comparatives only in 10.3% of the time. From this, Hubers and de Hoop conclude that teaching the prescriptive rule at school must have had a major impact on the use of dan, since the use of dan increases in accordance with the educational level.

2.3.3 How hypercorrection of dan can occur

The use of als ‘as’ and dan ‘than’ in comparatives and equatives varies between people, as Hubers and de Hoop (2013) showed. Sometimes, using dan might be hypercorrection.

Using als in comparatives and equatives is natural: for many speakers of Dutch it belongs to what Sassen (1963) calls the endogenous language system. Children acquire language via their parents, who may also use als in comparatives and equatives. The use of dan in comparatives is often used in spoken Dutch as well. When children go to school, their teachers do not have to actively teach them when to use als and dan exactly, but might focus on the use of dan in sentences that contain the comparative morpheme –er, such as (12), and pay little to no attention to the use of als in sentences that lack the comparative morpheme –er, such as (13).

Children may have problems when they have to choose between als and dan, since they have learned to use dan in comparatives, but not when als is used correctly. Therefore, they might change als to dan, even when this change is incorrect, so they might change als to dan in equatives as well. Another cause for hypercorrection can be found in (14), where the construction is an equative from a grammatical point of view, yet semantically denotes inequality. Therefore, people might use dan instead of als. Other examples of this kind of hypercorrection can be found in (15), which is extracted from Dutch newspaper NRC Handelsblad (April 6th, 2013) and in (16), which has been heard at the six o’clock news of the Nederlandse Omroep Stichting ‘Dutch Broadcast Foundation’ (May 7th, 2015).
(12) *Hij is groter dan ik.*
‘He is bigger *than* I am.’

(13) *Hij is even groot als ik.*
‘He is as big *as* I am.’

(14) *Hij is twee keer zo groot als ik.*
‘He is twice as big *as* I am.’

(15) (...) *en methaan is een 25 keer zo sterk broeikasgas dan CO2.*
‘(...) and methane is a 25 times stronger greenhouse gas *than* CO2.’

(16) *In Nepal zijn twee keer zoveel huizen verwoest dan verwacht.*
‘In Nepal, twice as many houses were destroyed *than* expected.’

2.4 Research question

As mentioned before in this chapter, differences between educational levels were found concerning the application or prescriptive rules and hypercorrection. Hubers and de Hoop (2013) examined the use of *als* ‘as’ and *dan* ‘than’ in the Spoken Dutch Corpus, and found that lower educated speakers and speakers from the South of the Netherlands used *als* in comparatives more often than higher educated speakers and speakers from the rest of the Netherlands. Hubers and de Hoop concluded that teaching the prescriptive rules at school must have a major impact on the use of *dan* in comparatives, since it increases in accordance with the educational level.

Hubers and de Hoop (in prep.) also found, in a pre-test, that twenty percent of 400 highly educated speakers of Dutch incorrectly judged sentence (17) to be wrong. This is a high percentage, indicating a frequent occurrence of hypercorrection.

(17) *Hij gaf hun een boek.*
‘He gave *them* a book.’

This raises the question whether there is a difference in the occurrence of hypercorrection in the use of *hun* ‘them’ and *hen* ‘them’ and the use of *als* and *dan* as a result of educational level. To find an answer to this question, an experiment was conducted at high schools, in classes with different
educational levels. The main goal of the experiment was to investigate whether hypercorrection occurs or not, to find out whether differences are present between educational levels, and ultimately, to answer the research question:

“Can we find experimental evidence for hypercorrection as a result of the prescriptive rules dictating the use of *hen* and *dan* in Dutch, and if so, what are the differences between educational levels in the prevalence of hypercorrection?”
3. The experiment

In this chapter, I will discuss the experiment via a methodology section (Section 3.1), a results section (Section 3.2) and a discussion section (Section 3.3). High school students were asked to participate in an online experiment. The experiment consisted of 60 sentences which all had a gap. Participants were asked to choose between two words which word was best to fill the gap.

3.1 Methodology

In this section, at first the hypotheses belonging to the research question as mentioned in Chapter 2 will be discussed. In Section 3.1.2 I will discuss the stimuli and design of the experiment. Section 3.1.3 discusses participants and procedure of the experiment.

3.1.1 Hypotheses

As mentioned in Chapter 2, the main research question in this thesis is: “Can we find experimental evidence for hypercorrection as a result of the prescriptive rules dictating the use of hen and dan in Dutch, and if so, what are the differences between educational levels in the prevalence of hypercorrection?”

I will first discuss the expected findings of hun ‘them’ and hen ‘them’. Then I will discuss the expected findings of als ‘as’ and dan ‘than’. Finally, all hypotheses will be summarized.

Expected findings of hun and hen

At home, children acquire a language by carefully listening to their parents and copying them (Gillis & Schaerlaeken, 2000). Since there is a strong tendency to use hun ‘them’ in spoken language, the parents are expected to frequently use hun. Children copy this and therefore frequently use hun in spoken language as well. When these children go to school and have to write texts, they are instructed by their teachers not to use hun anymore, but to use hen ‘them’. The children are taught to use hen, but not when hun is used correctly. This may lead to hypercorrection, due to insecurity
about when to use *hun* correctly and due to *hen* having more prestige, since it is the form that is taught at school.

Differences in educational level are expected here. The prescriptive rule of when to use *hen* and when to use *hun* is difficult to acquire, since the difference between *hen* and *hun* is artificial, as explained in Section 2.3.1. When people with a lower educational level have to choose between *hen* and *hun*, they are expected to make a decision based on their endogenous language system, which most frequently uses *hun*. People with a lower educational level might make mistakes in the application of the prescriptive rule, but these mistakes do not necessarily involve hypercorrection.

People with a higher educational level, however, are expected to sometimes show hypercorrection here. These people do have knowledge of the prescriptive rule, but might not have completely mastered the prescriptive rule. This may be caused by the insufficient explanation of the rule at school, since a lot of effort is put into explaining when to use *hen* correctly, but little effort is put into explaining when *hun* is used correctly. Therefore, people might use *hen* for all objects, even for indirect objects. They are expected to show this in the experiment by choosing *hen* even in sentences where *hun* would be the correct form to fill the gap. This would then be a case of hypercorrection.

Also, *hen* is the form that is taught at school, and therefore has more prestige than *hun*, which is spontaneously learned when acquiring language. This can be derived from Mesthrie et al. (2009), who state that the standard form of a language has specific functions serving the community, i.a. it is the language that is used in education. They also state that the standard form of a language is the most prestigious form of a language in a country. Therefore, using *hen*, as taught at school, is more prestigious than using *hun*. This prestige may also lead to choosing *hen* in the experiment, especially when people are uncertain whether to use *hen* or *hun*.

*Expected findings of als and dan*

As with *hun* ‘them’, in spoken Dutch there is also a strong tendency to use *als* ‘as’ in comparatives. Parents may use *als* in comparatives, and children will copy this, resulting in them using *als* in comparatives as well. However, *dan* ‘than’ is often used in spoken Dutch as well, so children will copy using *dan* as well. When these children go to school and have to write texts, they will be taught by their teachers that they should use *dan* in comparatives. The focus will be on teaching when to use *dan* correctly, but little to no effort will be put in teaching when to use *als* correctly.
Here, differences in educational level are expected as well. Participants with a higher educational level are expected to have mastered the rule that *dan* should be used in a comparative, and thus have internalized this rule. This expectation is based on Hubers and de Hoop (2013), who found that, in spontaneous speech, highly educated people use *als* in comparatives only in 10.3% of the time. Since participants with a higher educational level are expected to have mastered the rule, they are expected to choose the correct form, and thus will not apply hypercorrection.

Participants with a lower educational level, however, are expected to apply hypercorrection. This expectation is also based on Hubers and de Hoop (2013), who found that, in spontaneous speech, lower educated people used *als* in comparatives even more often than they use *dan* in a comparative: in 62.2% of the time, lower educated people use *als* in a comparative. This shows that lower educated people have a strong tendency to use *als* in comparatives. This may lead to problems in written language. Lower educated people are taught at school when they should use *dan* correctly, but have had little to no explanation of when to use *als* correctly. In addition, *dan*, the form taught in school, is more prestigious than *als*, the form spontaneously acquired at home, according to Mesthrie et al. (2009). Therefore, when they have to choose between *dan* and *als*, lower educated participants might choose *dan* if they are unsure which form is correct. This may lead to hypercorrection. The probability of hypercorrection is expected to be highest when an equative construction conceptually involves a comparison of inequality, as in (18).

(18) *Hij is twee keer zo groot als ik.*

‘He is twice as big as I am.’

Another possible form of hypercorrection is ‘double hypercorrection’, which might be applied by participants with a higher educational level. They might have internalized the rule that *dan* should be used in a comparative and use it correctly in simple comparisons as *groter dan* ‘bigger than’, but might still apply hypercorrection in sentences such as (19). Maybe higher educated participants still have to think whether to use *dan* or *als* in a sentence such as (18), since it is an equative construction which conceptually involves a comparison of inequality. In the end, the higher educated participants will probably choose the correct form, *als*. However, in a sentence such as (19), they might have some difficulties.

(19) *Hij is twee keer groter als ik.*

‘He is twice bigger than I am.’

It is possible that higher educated participants focus on the *twee keer* ‘two times’ part instead of the comparative element –*er* (*groter* ‘bigger’). Therefore, they might think (19) is also an equative
construction which conceptually involves a comparison of inequality, which results in choosing *als* instead of *dan*. If so, this could be called ‘double hypercorrection’: the endogenous *twee keer groter als* ‘two times bigger as’ is corrected to the exogenous *twee keer groter dan* ‘two times bigger than’, but is corrected again to *twee keer groter als* ‘two times bigger as’, due to the focus on the *twee keer* ‘two times’.

It is uncertain if this ‘double hypercorrection’ will occur, but it would be very interesting if it does, since this would show that the prescriptive *dan* rule is a consciously learned rule, that is not part of the endogenous language system of Dutch.

*Summary of all hypotheses*

Summarized, the hypotheses are:

1. People with a higher educational level will sometimes hypercorrect *hun* ‘them’ to *hen* ‘them’, due to insecurity about the prescriptive rule and prestige of *hen*. Therefore, in contexts that require *hun* they might use the prestigious *hen* instead.

2. People with a lower educational level are not expected to hypercorrect *hun* to *hen*, since they have not mastered the prescriptive rule. They will use their endogenous language system, causing them to make mistakes in using *hen*, but not in using *hun*.

3. People with a lower educational level will sometimes hypercorrect *als* ‘as’ to *dan* ‘than’ in equatives due to insecurity about the prescriptive rule and prestige of *dan*. Therefore, in contexts that require *als* they might use the prestigious *dan* instead.

4. People with a higher educational level, who use *dan* in simple comparatives as *groter dan* ‘bigger than’ correctly, might apply a ‘double hypercorrection’ in comparatives that look similar to equatives which conceptually involve a comparison of inequality. Therefore, higher educated participants might use *als* in these comparatives instead of *dan*. I call this ‘double hypercorrection’ since the endogenous form *twee keer groter als* ‘two times bigger as’ is corrected to the exogenous form *twee keer groter dan* ‘two times bigger than’, and is ‘corrected’ again to *twee keer groter als* ‘two times bigger as’ influenced by the *twee keer* ‘two times’, which makes the comparative look similar to equatives which conceptually involve a comparison of inequality.
3.1.2 Participants

In this section, I will first discuss the educational level. Next, the participating high schools are discussed.

Educational level

The decision was made to test third grade high school students, for multiple reasons. At first, all high school students take the subject Nederlands ‘Dutch’, which is obligatory for all educational levels. Therefore, they are conscious about Dutch prescriptive rules, since they are taught in class. Thus, they will probably have knowledge of when to use *hen* ‘them’ and *dan* ‘than’. Someone who left school many years ago is probably less conscious about prescriptive rules and may be more inclined to answer based on intuition, and thus based on the endogenous language system, instead of based on knowledge of the rules, which is the exogenous language system. Another reason to test high school students is that different educational levels can be found in one high school, which makes it easier to test all educational levels.

In the Netherlands, there are three tracks of education: vmbo, havo and vwo. Vmbo stands for *voorbereidend middelbaar beroepsonderwijs* ‘lower secondary professional education’. It is the lowest educational level in the Netherlands. This track takes four years to finish. Havo stands for *hoger algemeen voortgezet onderwijs* ‘higher general secondary education’. It is the middle educational level in the Netherlands. This track takes five years to finish. Vwo stands for *voorbereidend wetenschappelijk onderwijs* ‘pre-university secondary education’ and is the highest educational level in the Netherlands. Vwo can be divided into atheneum and gymnasium. Students who do the gymnasium track follow the same courses as atheneum students, except that they have two extra subjects, Latin and Greek. Vwo takes six years to finish.

In schoolyear 2008 – 2009, 55 percent of all third graders attended vmbo, 20 percent attended havo and 22 percent attended vwo (Centraal Bureau voor de Statistiek, 2009, p. 33).

Every year, the final exams to finish an educational track take place in May. The experiment would be conducted at the end of April, in May and in the beginning of June, so it would coincide with the final exams. Therefore, students from vmbo four classes, havo five classes and vwo six classes could not be tested. Instead, third graders from all educational levels were tested.
Participating high schools

Four high schools were found willing to participate in the experiment: the Rodenborch College in Rosmalen, Northern-Brabant, the Olympus College in Arnhem, Gelderland, the Blariacum College in Blerick, Limburg and AOC Oost in Twello, Gelderland.

At the Rodenborch College, four classes participated in the experiment: one vmbo class, one havo class, one vwo class and one Jenaplan class. The latter is a type of education which gives students more freedom to express and develop themselves than a ‘normal’ schooltype would. At the Rodenborch College, a Jenaplan class includes both havo and vwo students. In total, 101 students participated at the Rodenborch College: 24 vmbo students, 36 havo students and 41 vwo students. At the Olympus College, two classes participated in the experiment. Both classes were vwo classes with highly gifted students. In total, 24 students participated at the Olympus College.

At the Blariacum college, one vmbo class participated in the experiment. In total, 13 vmbo students participated at the Blariacum College. At AOC Oost, one vmbo class participated in the experiment as well. In total, 28 vmbo students participated at AOC Oost.

A general overview of participating students and their educational level can be found in Table 2.

In total, 168 students participated in the experiment. They were between 13 and 16 years old (mean: 14.6). 92 participants were male, 76 participants were female.

Table 2. A general overview of participating students and their educational level.

<table>
<thead>
<tr>
<th>High school →</th>
<th>Rodenborch College</th>
<th>Olympus College</th>
<th>Blariacum College</th>
<th>AOC Oost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edu level ↓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vmbo</td>
<td>24</td>
<td>0</td>
<td>13</td>
<td>28</td>
<td>65</td>
</tr>
<tr>
<td>Havo</td>
<td>36</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>Vwo</td>
<td>41</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>26</td>
<td>13</td>
<td>28</td>
<td>168</td>
</tr>
</tbody>
</table>

3.1.3 Stimuli

For the experiment, two lists of stimuli are made. One list contains 48 stimuli sentences with hun ‘them’ and hen ‘them’, the other list contains 48 stimuli sentences with als ‘as’ and dan ‘than’. Both lists also contain 12 fillers. In total, each list contains 60 sentences. The stimuli sentences in both lists
have four different conditions. Each condition contains 12 sentences. Every sentence has a gap somewhere, where participants have to choose between two words which one fits best.

**Stimuli for the hun – hen experiment**

The *hun* ‘them’ – *hen* ‘them’ list contains the following four conditions: A) prepositional phrase (PP), B) indirect object, C) subject *hun* and D) possessive *hun*.

**A) Prepositional phrase**

This condition is chosen to test whether or not participants master the rule when to use *hen*, since *hen* is always used after a preposition. In this condition, sentences such as (20) occur. At school, higher educated participants have learned to use *hen* after a preposition. Therefore, they will probably use *hen* correctly here. Lower educated participants were taught the same rule, but might not have mastered this rule. If they make a decision based on their endogenous language system, this will result in mistakes.

(20) *Deense onderzoekers beginnen dinsdag een expeditie om te bewijzen dat de Noordpool officieel van hen is.*

‘Danish researchers start an expedition on Tuesday to prove that the North pole is officially *theirs.*’

All sentences belonging to the prepositional phrase condition can be found in Appendix A, section 1.

**B) Indirect object**

This condition is chosen to elicit hypercorrection. For an indirect object, according to prescriptive rules, *hun* is the correct form. Sentences such as (21) occur in this condition. Here, hypercorrection is expected to be applied by higher educated participants. At school, they have learned to use *hen*, but not when to use *hun* correctly. This may lead to the use of *hen* for all objects, even when it is an indirect object and the correct form is *hun*. Another reason for hypercorrection might be that *hen* is the form learned at school, where the standard language is taught. Therefore, *hen* has more prestige than *hun*, which is spontaneously acquired at home.
Lower educated participants are not expected to apply hypercorrection here. They have difficulties acquiring the rule, since it is artificial, as explained in Section 2.3.1. The lower educated participants are expected to make a decision between *hen* and *hun* based on their endogenous language system, and hence use the correct form *hun* in this condition.

(21) *De spreektijd is beperkt en personen krijgen pas het woord nadat hun een vraag wordt gesteld door een commissielid.*

‘The speaking time is limited and people are only allowed to speak after they are asked a question by a committee member.’

All sentences belonging to the indirect object condition can be found in Appendix A, section 2.

C) Subject *hun*

In this condition, participants have to choose between *zij* ‘they’ and *hun* as a subject in a sentence, for example a sentence such as (22). *Hun* as a subject is fairly common in spoken, but not in written Dutch. Despite some explanations for the success of *hun* as a subject (e.g. van Bergen et al. 2011), there is a very negative attitude towards it, as Janssen (2004) showed. This strong negative attitude will probably result in all participants, irrespective of their educational level, choosing *zij* when they are forced to choose between *zij* and *hun* as a subject.

This condition was chosen to prevent participants from always choosing *hun* as a tactic. In this condition, *zij* is always the correct answer. There is such a negative attitude towards *hun* that no participant is expected to choose *hun* as the best possible answer. Therefore, the participants are expected to be certain that *zij* is the correct answer.

(22) *Mensen hebben minder geld in hun portemonnee en zij vullen die leegte op met pasjes.*

‘People have less money in their wallets and *they* fill that void with cards.’

All sentences belonging to the subject *hun* condition can be found in Appendix A, section 3.

D) Possessive *hun*

In this condition, all participants, irrespective of their educational level, are expected to choose *hun* over *hen* here, since *hen* as a possessive does not occur in spoken nor written Dutch. This condition was chosen to prevent participants from always choosing *hen* as a tactic. In this condition, *hun* is the
correct answer. For this condition, participants can thus be sure that hun is correct. Therefore, they will not automatically choose for hen, which prevents participants to use a tactic.

In this condition, sentences such as (23) occur.

(23) Rijken geven massaal geld aan hun kinderen.

‘Rich people massively give money to their children.’

All sentences belonging to the possessive hun ‘them’ condition can be found in Appendix A, section 4.

Stimuli for the als – dan experiment

The als ‘as’ – dan ‘than’ list contains the following four conditions: A) comparative 1, B) equatives conceptually involving comparisons of inequality, C) comparative 2 and D) moderate als. These conditions are chosen since dan should be used in comparatives and als should be used in equatives conceptually involving comparisons of inequality.

A) Comparative 1

This condition is chosen to test whether or not participants have mastered the dan rule, that dan should be used in comparatives. In this condition, sentences such as (24) occur.

At school, all participants have learned when dan is used correctly, to wit in comparatives. Higher educated participants are expected to have internalised this rule, so they will not make mistakes here. Lower educated participants may not have internalised this rule, but will have mastered it. Therefore, they will choose dan as well when they have to choose between dan and als. The participants will thus put the scroll bar to the far left or right, depending on which side the option dan is.

(24) Apple verkoopt dit kwartaal mogelijk meer iPhones dan marktkenners verwachten, schrijft Business Insider.

‘Apple might sell more iPhones this quarter than market experts expect, Business Insider writes.’

All sentences belonging to the comparative 1 condition can be found in Appendix A, section 5.
B) Equatives conceptually involving comparisons of inequality

This condition is chosen to elicit hypercorrection. When a sentence contains an equative, als should be used, even when the equative conceptually involves a comparison of inequality. Sentences such as (25) occur in this condition.

Participants have learned at school to use dan correctly, but little to no effort was put into teaching when to use als correctly. Still, higher educated participants are expected to have mastered that als should be used in equatives, and are thus not expected to apply hypercorrection. Lower educated participants, however, will probably know that als should be used in an equative, but may have difficulties with a sentence that contains an equative which conceptually involves a comparison of inequality. This conceptual comparison of inequality may lead to choosing dan over als, since they learned at school to use dan in a comparative. If they do so, this would be hypercorrection.

Another reason for hypercorrection might be that participants learned to use dan at school, where the standard language is taught. Therefore, dan has more prestige than als, which is spontaneously acquired at home. Participants who have difficulties choosing thus might choose dan over als due to its prestige.

(25) Chimpansees zijn vier tot vijf keer zo sterk als de sterkste atleet.
‘Chimps are four to five times as strong as the strongest athlete.’

All sentences belonging to the equatives conceptually involving comparisons of inequality condition can be found in Appendix A, section 6.

C) Comparative 2

This condition is chosen to find out whether higher educated participants apply ‘double hypercorrection’. Higher educated participants are expected to have internalized the rule that dan ‘than’ should be used in comparatives. Therefore, they will correctly use dan in simple comparisons as groter dan ‘bigger than’. However, it might be possible that some of the higher educated participants correctly use dan in the comparative 1 condition, but make mistakes in this condition. It may be that these higher educated participants still have to think whether to use dan or als in sentences from the ‘equatives conceptually involving comparisons of inequality’ condition, even though they are expected to correctly use als here.
It may be that in this condition, higher educated participants focus on the measure of comparison, for example the *vijf keer* ‘five times’ in sentence (26) instead of on the comparative element –*er* (*kleiner* ‘smaller’). This may lead to them thinking a sentence such as (26) is also an equative construction which conceptually involves a comparison of inequality, which results in the use of *als* instead of *dan*.

This condition is thus chosen to elicit ‘double hypercorrection’ in higher educated participants, which would result in an otherwise unexpected incorrect use of *als* in comparatives.

(26) *In Nederland is de kans op een dodelijk ongeval met de fiets ongeveer vijf keer kleiner dan in de Verenigde Staten.*

‘In the Netherlands, the risk of a fatal accident by bike is about five times smaller *than* in the United States.’

All sentences belonging to the comparative 2 condition can be found in Appendix A, section 7.

**D) Moderate als**

This condition was chosen to prevent participants from always choosing *dan* as a tactic. As Hubers and de Hoop (2013) show, *dan* can only be used as a conjunction in comparatives. In this condition there are no comparatives, thus the participants can be certain that *als* is the correct answer.

In this condition, sentences such as (27) occur.

(27) *Al enige jaren worden de pensioenen niet meer geïndexeerd en de achteruitgang van de pensioenen zal stijgen als de inflatie toeneemt.*

‘For some years, pensions are not indexed anymore, and the decline of pensions will rise when inflation rises.’

All sentences belonging to the moderate *als* condition can be found in Appendix A, section 8.

**Fillers**

Both the *hen* ‘them’ – *hun* ‘them’ list and the *als* ‘as’ – *dan* ‘than’ list contain 12 filler sentences. These fillers are unrelated to *hen* and *hun* or *als* and *dan*. Participants have to choose between two possible verb conjugations, one that ends with a -*t* and one that ends with a -*d*. Dutch prescriptive rules state that, in present tense, a –*t* should be added to a verb stem when the subject is *jij/je* ‘you
informal’ and the subject is in front of the verb, when the subject is u ‘you formal’ or when the subject is a third person as hij/zij ‘he/she’. In past tense or in past participle, both –te or –de can be added to a verb stem. Which one should be added depends on the ‘t kofschip-rule: –te is added to a verb which stem ends on a ‘t kofschip-consonant (t, k, f, s, ch, p), –de is added to a verb which stem ends on all consonants that are not in ‘t kofschip.’ t kofschip is a mnemonic for many people to remind when –te or –de should be added to a verb stem.

However, many people have difficulties with this rule. That is the reason these fillers were chosen: participants have to think of the prescriptive spelling rules they have actively learned at school. Sentences such as (28) occur as fillers. As said, participants have to choose between two possible verb conjugations, one that ends with a –t and one that ends with a –d. Both forms exist in Dutch, but only one is correct in the given context.

After conducting the experiment, one filler was found to be wrong. Here, the verb that should be conjugated was the verb gebeuren ‘to happen’, as in (29) but in the experiment another verb was questioned, to wit verdwijnen ‘to disappear’, as in (30). Participants had to choose between the conjugations verdwijnt ‘disappears’ or verdwijn ‘disappears’. The latter form, however, does not occur in Dutch, since the participle of the verb is verdwenen ‘disappeared’ and not verdwijn.

(28) De reactor in Petten is volgens Zijlstra ‘outdated’ en moet worden vernieuwd.
‘The reactor in Petten is outdated according to Zijlstra and has to be renewed.’

(29) Wat gebeurt er met het landschap als het boerenbedrijf verdwijnt?
‘What happens to the landscape if farming disappears?’

(30) Wat gebeurt er met het landschap als het boerenbedrijf verdwijnt?
‘What happens to the landscape if farming disappears?’

All filler sentences can be found in Appendix A, section 9.

3.1.4 Design and procedure of the experiment

In this section, I will first discuss the design of the experiment. Next, the procedure of the experiment is explained. Finally, excluded participants are discussed.
Design

As mentioned before, the experiment contained twelve sentences per condition and twelve fillers. There were four conditions per experiment, resulting in 60 sentences in total. Both lists, for the hun ‘them’ – hen ‘them’ experiment and the als ‘as’ – dan ‘than’ experiment, were randomised. There was one restriction: a maximum of two sentences of a specific condition could occur consecutively. The randomised lists were checked manually and were adjusted by slightly changing the distribution of sentences and conditions, for example when four of six consecutive sentences belonged to the condition ‘comparative 1’. Another adjustment that was made was that every list had to start and end with a filler, so that participants could have some practice in the beginning. Ultimately, there were two randomised lists per experiment. These lists were reversed, resulting in four lists per experiment. The lists can be found in Appendix B.

These eight lists were put online, so that the experiment could be conducted via the Internet. Every list had its own link, thus participants received one of eight links. When going to the website, the participants had to read and accept the conditions before they could continue. The conditions can be found in Appendix C. Next, the participants had to read the instruction, before starting the experiment. The instruction can be found in Appendix D.

The experiment consisted of 60 sentences that all had a gap where a word was missing. Beneath the sentence were a scrollbar and two words that could possibly fill the void. Depending on the condition, the participant could either choose between zij ‘they’ and hun, hun and hen, als and dan or a verb that ends with a –d or a –t. The participants had to choose the word they thought fits best in the gap and could do so by scrolling the bar to the left word or to the right word. A scrollbar was chosen so that participants could give any answer they like, from the complete left to the complete right and all possible answers in between. This way, participants were not forced to choose one answer that they thought was correct, but they could also put the scrollbar somewhere in between the two answers when they were unsure which answer was correct. Answers were randomly assigned to the right or to the left, so that for one condition not all possibilities were constantly in the same place, as for example in condition ‘comparative 1’ all dan would be on the left and all als would be on the right. Putting these answers randomly to the left or to the right made sure that participants did not automatically put the scrollbar to the far right because the option als is always there.

When participants were sure the right word was correct, they could scroll the bar to the far right. When they thought both words could be correct, participants could leave the scrollbar in the middle.
When they thought the right word was more correct than the left word, but were not completely sure about it, they could leave the scrollbar somewhere between the middle and the right. Examples can be found in Appendix E.

Answers given by participants were saved as a number. The word that was correct according to prescriptive rules automatically received the number 100, the word that was incorrect according to these rules automatically received the number 0. If participants chose the word that is correct according to prescriptive rules, the answer would thus be saved as ‘100’, whereas it would be saved as ‘0’ when they chose the answer that is wrong according to prescriptive rules. When participants left the scrollbar in the middle, indicating they thought both words were equally correct, the answer was saved as ‘50’. All other numbers between 0 and 100 were possible as well. This way, it was possible to see how certain participants were when choosing a word to fill the void in the sentence.

At the end of the experiment, background questions were asked, such as about age and gender. These questions can be found in Appendix F. All answers, of both the experiment and background questions, were automatically saved in a JSON-file when the participants were done.

Procedure of the experiment

Conducting the experiment took fifteen to twenty minutes per class. All students were seated at a computer and logged in with their personal user name and password. They then received two pieces of paper, one with a website on it and one with contact information on it. They were told they could keep the latter, but had to return the first paper. They were also told that they were supposed to participate in the experiment on their own, so they were not allowed to talk. Extra instructions were given that they should use Google Chrome to get to the website, and that they could place the scrollbar everywhere they would like. When they finished the experiment, they could leave the classroom (at the Rodenborch College and AOC Oost) or silently make some exercises (at the Olympus College and Blariacumcollege). After these announcements, they could start the experiment. Most students finished the experiment after approximately fifteen minutes, some finished it a couple of minutes earlier, some a couple of minutes later.

Excluded participants

At the end, two participants were excluded from the data set. One student answered all questions with value ‘50’. He clearly did not wish to participate, so he was removed from the dataset.
Another student had too many values: he answered 61 questions instead of 60. It may be that he answered a question and went on to the next question, but then realized that the answer on the previous question was wrong, so he went back to the previous page. Since it is not possible to find out which question he answered twice, he was removed from the dataset.

3.2 Results

This section is divided in two subsections. In the first subsection, Section 3.2.1, the results of the *hun* ‘them’ – *hen* ‘them’ experiment will be discussed. In the second subsection, Section 3.2.2, the results of the *als* ‘as’ – *dan* ‘than’ experiment will be discussed.

3.2.1 Results of the *hun* – *hen* experiment

The participants were divided in two groups, one group participated in the *hun* ‘them’ – *hen* ‘them’ experiment, the other group participated in the *als* ‘as’ – *dan* ‘than’ experiment. In total, 84 high school students participated in the *hun* – *hen* experiment. In Table 3, an overview is given of these students by school and educational level. In total, 11 out of 84 participants spoke a dialect. An overview of which dialect is spoken can be found in Table 4.

Table 3. An overview of students participating in the *hun* – *hen* experiment by school and educational level.

<table>
<thead>
<tr>
<th>Edu level</th>
<th>Rodenborch College</th>
<th>Olympuscollege</th>
<th>Blariacumcollege</th>
<th>AOC Oost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vmbo</td>
<td>12</td>
<td>0</td>
<td>7</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Havo</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Vwo</td>
<td>20</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>12</td>
<td>7</td>
<td>14</td>
<td>84</td>
</tr>
</tbody>
</table>
Table 4. An overview of dialects spoken by participants in the *hun* – *hen* experiment.

<table>
<thead>
<tr>
<th>Dialect spoken</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>73</td>
</tr>
<tr>
<td>Brabantic</td>
<td>5</td>
</tr>
<tr>
<td>Limburgian</td>
<td>3</td>
</tr>
<tr>
<td>Gelders</td>
<td>2</td>
</tr>
<tr>
<td>Zealandish</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
</tr>
</tbody>
</table>

In Figure 1 the percentage correct per condition per educational level can be found. In Table 5 an overview is given of the percentage correct per condition per educational level.

**Percentage correct (according to prescriptive rules) on the *hun* - *hen* experiment per condition per educational level.**

![Figure 1. Percentage correct on the *hun* – *hen* experiment per condition per educational level.](image-url)
Table 5. Percentage correct on the hun – hen experiment per condition per educational level, rounded to one decimal (n = 84).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Prepositional Phrase</th>
<th>Indirect Object</th>
<th>Subject hun</th>
<th>Possessive hun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edu level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vmbo</td>
<td>58.1</td>
<td>51.1</td>
<td>78.0</td>
<td>87.9</td>
</tr>
<tr>
<td>Havo</td>
<td>58.4</td>
<td>39.4</td>
<td>81.5</td>
<td>83.8</td>
</tr>
<tr>
<td>Vwo</td>
<td>66.2</td>
<td>37.5</td>
<td>85.3</td>
<td>89.6</td>
</tr>
</tbody>
</table>

What should be noted immediately is that the percentages correct for the Indirect Object condition are very low, varying between 37.5 and 51.1. These low percentages clearly show that hypercorrection occurs for all educational levels. It should be noted as well that the percentages correct for the Prepositional Phrase condition are low as well, varying between 58.1 and 66.2. This means that participants had difficulties choosing the correct form, which indicates that the prescriptive rule when to use hen is difficult to learn. This applies to all educational levels.

It is also interesting that Vwo participants had a higher percentage correct for all conditions except the Indirect Object condition. In the latter condition, they had the lowest percentage correct of all educational levels. This indicates that higher educated participants have more difficulties with the Indirect Object condition than participants of other educational levels.

In the Possessive hun condition, participants were expected to have a 100% correct score, since hun is the only possible answer. The mean percentages correct vary between 83.8 and 89.6, which probably indicates that some participants across educational levels may have made a mistake, or unfortunately did not take the experiment seriously.

To find out if there are significant differences, a repeated measures test was used on the data. First, Mauchly’s test indicated that the assumption of sphericity has been violated, χ² (5) = 101.9, p < .05. Therefore, degrees of freedom are corrected using Huynh-Feldt estimates of sphericity (ε = .62). The repeated measures test shows that the differences between conditions are significant, F(1.9, 132) = 12.4, p < .05, that there is a main effect of school, F(2,70) = 4.0, p < .05 and that there is an interaction effect of condition and school, F(3.8, 132) = 2.9, p < .05. There is no effect of educational level (F(3.8, 132) = 1.3, p = .29), type of school (F(1.9, 132) = .41, p = .86) or speaking a dialect (F(7.5, 132) = .86, p = .54).

The interaction effect of school is further analysed with a MANOVA. This shows that the effect of school can be found in the Possessive hun condition, F(3, 80) = 3, p < .05. A post hoc Tukey test
shows that the Blariacumcollege and the AOC Oost displayed a trendwise significance at \( p = .051 \). The other schools did not differ significantly from each other in the Possessive *hun* condition.

The MANOVA did not show an interaction effect of school in the other conditions, Prepositional Phrase (\( F(3, 80) = 2.5, p = .06 \)), Indirect Object (\( F(3, 80) = 2.4, p = .08 \)) and Subject *hun* (\( F(3, 80) = 2.2, p = .09 \)). A post hoc Tukey test did show some trends towards significance, though. In the Prepositional Phrase condition, the Blariacumcollege and the AOC Oost displayed trendwise significance at \( p = .054 \). This trend was also observed in the Indirect Object condition at the Rodenborch College and Blariacumcollege at \( p = .058 \).

As Figure 1 made clear, hypercorrection definitely occurs in the Indirect Object condition, since vwo participants had a percentage correct of 37.5, havo participants had a percentage correct of 39.4 and vmbo participants had a percentage correct of 51.1. The participants apparently chose the ‘wrong’ answer more often, leading to a low score as an answer, which results in a low percentage correct. This applies for all educational levels, albeit to a lesser extent for lower educated participants. The differences between educational level were not significant, but in general, there is a trend towards significance.

These low scores for all educational levels on the Indirect Object condition, and the low scores for all educational levels on the Prepositional Phrase condition, indicate that all participants have difficulties with the prescriptive rule when to use *hen*, irrespective of their educational level. Statistics support this by showing the percentage correct of all conditions to differ significantly from each other, which means that the percentage correct differed a lot between conditions.

Statistics also showed there was an interaction effect of school, meaning that participants of the Blariacumcollege and AOC Oost answered differently on the Possessive *hun* condition. A trend towards significance was found between answers of participants of the Blariacumcollege and the AOC Oost on the Prepositional Phrase condition and of participants of the Rodenborch College and the Blariacumcollege on the Indirect Object condition. Thus, the Limburgian school differed, with a trend towards significance, from one school in Gelderland and one school in Northern-Brabant, in different conditions.

For type of school, no significant differences were found. It did not matter what type of school participants attended. Most of the participants attended a normal type of school, but some attended a Jenaplan school and others attended a school for highly gifted students. All participants gave
approximately the same answers, irrespective of their type of school.

Speaking a dialect did not influence the percentage correct significantly either. Participants who speak a dialect did not differ significantly from participants who do not speak a dialect. It also did not matter what dialect participants speak.

### 3.2.2 Results of the *als* – *dan* experiment

As mentioned before, participants were divided in two groups. Half of the participants participated in the *als* ‘as’ – *dan* ‘than’ experiment. In total, 82 high school students participated in the *als* – *dan* experiment. In Table 6, an overview is given of all participants by school and educational level. In total, 8 out of 82 participants spoke a dialect. An overview of which dialect is spoken can be found in Table 7.

<table>
<thead>
<tr>
<th>High school → Edu level ↓</th>
<th>Rodenburg College</th>
<th>Olympuscollege</th>
<th>Blariacumcollege</th>
<th>AOC Oost</th>
<th>Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vmbo</td>
<td>12</td>
<td>0</td>
<td>6</td>
<td>14</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>Havo</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Vwo</td>
<td>20</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>12</td>
<td>6</td>
<td>14</td>
<td>1</td>
<td>82</td>
</tr>
</tbody>
</table>

Table 6. An overview of students participating in the *als* – *dan* experiment by school and educational level.

<table>
<thead>
<tr>
<th>Dialect spoken</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>74</td>
</tr>
<tr>
<td>Brabantic</td>
<td>5</td>
</tr>
<tr>
<td>Limburgian</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
</tr>
</tbody>
</table>

Table 7. An overview of dialects spoken by participants in the *als* – *dan* experiment.

In Figure 3 the percentage correct per condition per educational level can be found. In Table 8 an overview is given of the percentage correct per condition per educational level.
Figure 3. Percentage correct to the *als* – *dan* experiment per condition per educational level.

Table 8. Percentage correct to the *als* – *dan* experiment per condition per educational level, rounded to two decimals ($n = 82$).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Comparative 1</th>
<th>Equatives</th>
<th>Comparative 2</th>
<th>Moderate <em>als</em> ‘as’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edu level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vmbo</td>
<td>77.5</td>
<td>59.6</td>
<td>72.9</td>
<td>92.0</td>
</tr>
<tr>
<td>Havo</td>
<td>74.5</td>
<td>57.2</td>
<td>73.0</td>
<td>90.6</td>
</tr>
<tr>
<td>Vwo</td>
<td>89.0</td>
<td>60.5</td>
<td>85.0</td>
<td>95.3</td>
</tr>
</tbody>
</table>
What should be noted is that none of the conditions have extremely low percentages correct, unlike the hun ‘them’ – hen ‘them’ experiment. However, the Equatives conceptually involving comparisons of inequality condition clearly has lower percentages correct than the other conditions, with percentages correct of 59.6 for vmbo, 57.2 for havo and 60.5 for vwo. This shows that hypercorrection occurs in this condition at all educational levels, since the participants chose the ‘wrong’ answer in approximately 40 percent of the time. It appears as if the Equative conceptually involving comparisons of inequality condition is more difficult than the other conditions, indicating that participants from all educational levels have difficulties with this prescriptive rule.

It should also be noted that all educational levels have a higher percentage correct in Comparative 1 than in Comparative 2 (vmbo 77.5/72.9 respectively, havo 74.5/73.0 respectively, vwo 89.0/85.0 respectively). These differences are only slight, but may indicate that ‘double hypercorrection’ does exist. Participants who apply ‘double hypercorrection’ are expected to have mastered the simple rule that dan should be used in a comparative, which is tested with the Comparative 1 condition. The Comparative 2 condition is a comparative that includes a measure of comparison, e.g. twee keer ‘two times’ in twee keer groter ... ‘two times bigger...’. Participants might focus on the measure of comparison instead of on the comparative element –er, resulting in participants believing they are dealing with an equative construction which conceptually involves a comparison of inequality. If so, they will choose als instead of dan, which would result in a lower percentage correct on the Comparative 2 condition. Indeed, participants from all educational levels show a lower percentage correct on the Comparative 2 condition, albeit only slightly.

To find out if there are significant differences, a repeated measures test was used on the data. First, Mauchly’s test indicated that the assumption of sphericity has been violated, $\chi^2 (5) = 88.9, p < .05$. Therefore, degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ($\varepsilon = .64$). The repeated measures test reveals a main effect of condition, $F(1.9, 133) = 14.8, p < .05$. There are no effects of educational level ($F(3.8, 133) = 1, p = .39$), school ($F(5.7, 133) = .93, p = .48$), type of school ($F(1.9, 133) = 1.4, p = .24$) or speaking a dialect ($F(3.8, 133) = 1.2, p = .31$).

These results show that participants answered significantly differently to all conditions of the als – dan experiment, which means that the percentages correct differed significantly for all conditions. This is clearest for the Moderate als condition and the Equatives conceptually involving comparisons of inequality condition. In the Moderate als condition, only one answer was possible: als. Dan was impossible to fill the gap in the sentences. Therefore, a percentage correct of 100 was expected. The percentages correct are near to 100 (varying between 90.6 and 95.3). The Equatives conceptually
Participants of all educational levels answered approximately the same in all conditions. There were clear differences in percentages correct, but these differences were not significant. Participants from all educational levels clearly had difficulties with the Equatives conceptually involving comparisons of inequality condition, and hypercorrected als to dan in about 40 percent of the time. Higher educated participants seemed to perform better on this condition than lower educated participants, but this difference was not significant. No evidence was found for the occurrence of ‘double hypercorrection’, but percentages correct differed slightly between the Comparative 1 and Comparative 2 condition, indicating that ‘double hypercorrection’ might occur.

School and type of school did not show any significant differences either. This means that no differences were found between schools and school types. Thus, participants who attend a school in one place (e.g. Northern-Brabant) perform similar to participants who attend a school in another place (e.g. Limburg or Gelderland). The same applies to type of school: participants who attend a normal school have similar percentages correct as participants from other schooltypes like Jenaplan or a school for highly gifted students.

Speaking a dialect did not show a significant difference either. Participants who speak a dialect at home, regardless of the dialect they speak, did not perform any better or worse than participants who did not speak a dialect. However, only few participants spoke a dialect.

### 3.3 Discussion

In both the hun ‘them’ – hen ‘them’ experiment and the als ‘as’ – dan ‘than’ experiment, hypercorrection clearly occurred. In the hun – hen experiment, the participants showed hypercorrection on average 57 percent of the time in the Indirect Object condition. In the als – dan experiment, the participants showed hypercorrection approximately 40 percent of the time in the Equatives conceptually involving comparisons of inequality condition. Hypercorrection in both experiments was expected, but not to this extent. This massive occurrence of hypercorrection in
both conditions shows that participants have difficulties with the prescriptive rules of when to use *hun* rather than *hen* and when to use *als* instead of *dan*.

For the *hun – hen* experiment, the hypotheses were:

1. People with a higher educational level will sometimes hypercorrect *hun* to *hen*, due to insecurity about the prescriptive rule and prestige of *hen*. Therefore, in contexts that require *hun* they might use the prestigious *hen* instead.

2. People with a lower educational level are not expected to hypercorrect *hun* to *hen*, since they have not mastered the prescriptive rule. They will use their endogenous language system, causing them to make mistakes in using *hen*, but not in using *hun*.

Both hypotheses relate to expected hypercorrection in the Indirect Object condition. In this condition, hypercorrection clearly occurred, with percentages correct of 51.5 for vmbo participants, 39.4 for havo participants and 37.5 for vwo participants. What is striking is that vwo participants have the lowest percentage correct of all educational levels, while they have the highest percentages correct of all educational levels in all other conditions. Even though all educational levels show hypercorrection, vwo participants therefore seem to have the most difficulties with the Indirect Object condition, and thus show most hypercorrection in this condition.

In addition to the difficulties all educational levels have in the Indirect Object condition, they also appear to have difficulties in the Prepositional Phrase condition. This condition was used to find out if participants know the prescriptive rule that *hen* ‘them’ should be used after a preposition. The percentages correct were 58.1, 58.4 and 66.2 for vmbo, havo and vwo respectively. These low percentages show that all participants have difficulties with this condition, and thus with the prescriptive rules.

Altogether, it should be concluded that hypothesis 1 has been verified. Higher educated participants show hypercorrection, not just ‘sometimes’, but quite often, 60 percent of the time. They also have difficulties with the Prepositional Phrase condition, which was used to find out if they know the prescriptive rules when to use *hen*. The higher educated participants had a percentage correct of only 66.2. This indicates that they have not completely mastered the prescriptive rules, and may therefore be insecure about the rules.

No evidence was found for hypothesis 2. People with a lower educational level were not expected to hypercorrect *hun* to *hen*, but to use *hun* for all objects. However, 48.5 percent of the time, they chose the ‘wrong’ answer in the Indirect Object condition. This is less often than the vwo participants
did, but it is still a massive occurrence of hypercorrection.

The Prepositional Phrase condition shows that vmbo participants also have difficulties with the prescriptive rules, since they only choose the correct answer in 58.1 percent of the time. These difficulties may lead to insecurity about the prescriptive rules.

Summarized, in the *hun – hen* experiment, hypercorrection massively occurs at all educational levels. Participants show to have difficulties with the prescriptive rules, which is also shown by their percentages correct in the Prepositional Phrase condition. Both results indicate that the prescriptive *hen* rule is difficult to master, and it is not part of the endogenous language system of Dutch. The question is whether or not the prescriptive rule when to use *hen* instead of *hun* should be maintained in Dutch. It might be better if the prescriptive rule is not maintained. A lot of time and effort is put into teaching students to use *hen*, but in the end, many students, irrespective of their educational level, show to have great difficulties applying the prescriptive rules correctly. One of the reasons for these difficulties is that the difference between *hun* and *hen* is artificial, and thus unnatural. My suggestion therefore is to let go of this prescriptive rule and to let people freely use *hun* or *hen* for objects in written Dutch, as well as in spoken Dutch.

For the *als – dan* experiment, the hypotheses were:

3. People with a lower educational level will sometimes hypercorrect *als* to *dan* in equatives due to insecurity about the prescriptive rule and prestige of *dan*. Therefore, in contexts that require *als* they might use the prestigious *dan* instead.

4. People with a higher educational level, who use *dan* in simple comparatives as *groter dan* ‘bigger than’ correctly, might apply a ‘double hypercorrection’ in comparatives that look similar to equatives which conceptually involve a comparison of inequality. Therefore, higher educated participants might use *als* in these comparatives instead of *dan*. I call this ‘double hypercorrection’ since the endogenous form *twee keer groter als* ‘two times bigger as’ is corrected to the exogenous form *twee keer groter dan* ‘two times bigger than’, and is ‘corrected’ again to *twee keer groter als* ‘two times bigger as’ influenced by the *twee keer* ‘two times’, which makes the comparative look similar to equatives which conceptually involve a comparison of inequality.

As mentioned before, a main effect of condition was found (F(1.9, 133) = 14.8, p < .05). Participants answered significantly different to all conditions of the *als – dan* experiment. Percentages correct thus differed significantly for all conditions.
Hypothesis 3 relates to expected hypercorrection in the Equatives conceptually involving comparisons of inequality condition. The Equatives conceptually involving comparisons of inequality condition clearly shows this hypercorrection, with a percentage correct of 59.6 for vmbo participants, 57.2 for havo participants and 60.5 for vwo participants. Participants thus had difficulties with the Equatives conceptually involving comparisons of inequality condition. It might be that at school, participants were taught to use *dan*, but received little to no explanation on how to use *als*. Therefore, they might be insecure about the prescriptive rules, leading to hypercorrection in the Equatives conceptually involving comparisons of inequality condition. Thus, hypothesis 3 can be accepted, but it should be added that participants, at all educational levels, show hypercorrection.

Hypothesis 4 relates to expected ‘double hypercorrection’ in the Comparative 2 condition. This hypothesis is not verified. If ‘double hypercorrection’ would occur, vwo participants would have a lower percentage correct in the Comparative 2 condition than in the Comparative 1 condition. Indeed, this was the case, but the difference was only slight. The percentage correct for the Comparative 1 condition was 89.0, whereas the percentage correct for the Comparative 2 condition was 85.0. Vmbo and havo participants also showed a lower percentage correct in the Comparative 2 condition than in the Comparative 1 condition, but like the vwo participants, these differences were only slight (77.5/72.9 for vmbo respectively, 74.5/73.0 for havo respectively). Altogether, there are slight differences between percentages correct in the Comparative 1 and Comparative 2 condition for all educational levels. This means that there is at most a trend towards ‘double hypercorrection’.

Summarized, in the *als* – *dan* experiment, all educational levels show very clear hypercorrection in the Equatives conceptually involving comparisons of inequality condition.

The question is whether or not the prescriptive rule when to use *dan* should be maintained in Dutch. If the prescriptive rule will be maintained, an addition has to be made. Students should not only be taught to use *dan* correctly, they also have to be taught to use *als* correctly, thus they have to be taught the prescriptive rule for *als* as well. The hypercorrection that was found in this experiment showed great difficulties with equatives that conceptually involve a comparison of inequality, a phenomenon that is probably not discussed by teachers. If they will discuss this phenomenon, and when to use *dan* correctly, hypercorrection in this condition may decrease.

The results for the *als* – *dan* experiment also show no clear difference between educational levels for all conditions. This is unexpected, since Hubers and de Hoop (2013) found a clear difference between educational levels in use of *als* in comparatives. They found that lower educated people use *als* in comparatives 62.2% of the time, whereas middle educated people use it 36% of the time and highly educated people use *als* in comparatives only 10.3% of the time. This study shows no clear
distinction between educational levels in the Comparative 1 or Comparative 2 condition. One explanation might be that Hubers and de Hoop used the Spoken Dutch Corpus, whereas in this study written Dutch is examined. If the difference between spoken and written Dutch is really so great, that would indicate that teaching the prescriptive rule at school has a major impact on the use of *dan* in written language for all educational levels. It would also have a major impact on the use of *dan* in spoken language, but only for higher educated people, who apply the prescriptive *dan* rule in spoken language as well. This indicates that lower educated people are aware they should use *dan* in comparatives and apply this rule in written language, but use *als* in spoken language. Thus, *als* in comparatives would be the endogenous form and *dan* in comparatives would be the exogenous form for lower educated participants, whereas for higher educated participants *dan* in comparatives would be both the endogenous and exogenous form.

Another explanation for the differences found between Hubers and de Hoop (2013) and this study is that Hubers and de Hoop’s data is based on an education that is finished, i.e. after four, five or six years of studying, whereas the data in this study is based on a half-finished education. The third-graders were chosen specifically, since they would all be approximately the same age, and therefore had the same amount of education.

Results might have been different with more participants. The havo students were taken into account using statistics, even though there were not enough participants, with only 19 havo participants for the *hun – hen* experiment and 17 for the *als – dan* experiment. There were enough vmbo and vwo participants, though.

What should be taken into account as well is that all participants were from three areas in the Netherlands: the provinces Northern-Brabant, Gelderland and Limburg. The results of the *hun – hen* experiment show that there is some influence of area of origin, since the Blariacumcollege in Limburg differed, with trend towards significance, from the AOC Oost in Gelderland and the Rodenborch College in Northern-Brabant. However, there were not enough havo participants, and participants from all educational levels were not equally distributed over schools: only 13 students of the Blariacumcollege participated in the experiment, and all of them were vmbo students. At the AOC Oost in Gelderland, 28 vmbo students participated, and at the Rodenborch College 100 students from all educational levels participated. The differences in number of participating students and educational level may explain why there was an effect of school in the *hun – hen* experiment.

In further research, the study would benefit from a more even distribution of schools across the Netherlands. In this study, there were 100 Northern-Brabantic participants, 13 Limburgian participants and 52 participants from Gelderland. The first two groups both belong to the Southern
region, whereas Gelderland is the only group belonging to the Mid region. It may also be true that participants from other Mid or Northern regions than Gelderland alone give other answers than the participants in this study.

In addition to a better distribution over regions, participants should be better distributed over schools as well, as mentioned before. Ideally one class per educational level should be tested per school, i.e. three classes per school in total. In this study, one school provided four classes, one of each educational level plus one class that had both havo and vwo students. Another school provided two vwo classes, and the last two schools both provided one vmbo class. It would have been better if all schools provided one vmbo, one havo and one vwo class with approximately the same amount of students per class. That way, it would be easier to say if there is an effect of school, and if this effect is genuine. Now, there was no effect of school, but the schools were not really comparable either and there were not enough havo participants. An effect of school might be found when schools are comparable.

What might also be interesting is to do these experiments with older participants as well, since Hubers and de Hoop (2013) had different outcomes in their CGN study than I had in this study. These participants would have finished their high school quite some time ago, i.e. ten years. It would be interesting to see if they still apply the rules, and if they apply them correctly or not. Can the prescriptive rules become, and remain, internalized? This experiment would show whether prescriptive rules are taught and mastered at school and still used later in life, or not. It may be that older participants start using their intuition after a while, when there is little to no attention to prescriptive rules anymore. This way, the development of the use of prescriptive rules, and of hypercorrection, can be studied.

When almost all participants had taken part in the study, one error was found in the experiment: the wrong verb was deleted in a filler sentence. This led to one of the possible answers being a nonexistent written form in Dutch.

I also received some tips and complaints about the experiment. One participant did not understand that the bar between the two possible words to fill the gap in the sentence was a scrollbar. The participant thought there were only three options: to the far right, to the far left or to the middle. After that, before they started the experiment, participants were informed that the bar was a scrollbar that could be placed anywhere, depending on their certainty.

Another student complained that the experimental sentences were too difficult. This particular participant followed the vmbo track and had difficulties with some unfamiliar words, resulting in an incomprehensible sentence. This participant was told to try to simplify the sentence, by looking only
at the part of the sentence that was relevant for making the choice which word to fill the gap with. One teacher’s tip was to enlarge the text in the experiment, so that a visually impaired student could read the text as well.
4. Conclusion

The research question of this thesis was:

“Can we find experimental evidence for hypercorrection as a result of the prescriptive rules dictating the use of *hen* and *dan* in Dutch, and if so, what are the differences between educational levels in the prevalence of hypercorrection?”

In this study, a massive occurrence of hypercorrection was found in both the *hun* ‘them’ – *hen* ‘them’ experiment and the *als* ‘as’ – *dan* ‘than’ experiment was found. Even though hypercorrection was expected, the degree to which it was attested here is surprising.

In the *hun* – *hen* experiment, participants showed hypercorrection in 50 to 62 percent of the time in the Indirect Object condition. Educational level was not a factor. All participants thus showed hypercorrection. In the Prepositional Phrase condition, a condition that was used to find out if participants know the prescriptive rule, participants had a percentage correct between 58 and 66. Educational level was not a factor here, either. This shows that all educational levels had difficulties with the prescriptive rules dictating the use of *hen* as an object.

In the *als* – *dan* experiment, participants showed hypercorrection in approximately 40 percent of the time in the Equatives conceptually involving comparisons of inequality condition. Educational level was not a factor. This means that participants incorrectly chose *dan* to be the best possibility to fill the gap in a sentence that contained an equative which conceptually involved a comparison of inequality. ‘Double hypercorrection’, which would correct *dan* to *als* in a comparative such as *twee keer groter* ‘two times bigger’, was not found.

Summarizing, yes, experimental evidence was found for hypercorrection as a result of the prescriptive rules dictating the use of *hen* and *dan* in Dutch. The degree to which hypercorrection was attested was surprising. However, no differences between educational levels were found. It is very clear, though, that participants from all educational levels had difficulties with the prescriptive rule dictating the use of *hen* as an object and the use of *dan* in comparatives in Dutch.
References

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