Intelligibility of Low German to speakers of Dutch

Charlotte Gooskens
Sebastian Kürschner
Renée van Bezooijen

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Low German dialect continuum
Research questions

› Are Dutchmen from the Dutch-German border area better at understanding Low German than Dutchmen from other parts of the Netherlands?

› If so, which factors explain the difference?
1. **Contact**

We assume that people from the border area have more contact with Low German than people from other parts of the country.
2. Linguistic distance

We assume that the linguistic distance between the border varieties and Low German is smaller than between non-border varieties and Low German.
Factors determining intelligibility

Linguistic distances

› 289 frequent cognates
› recordings of Low German (Bremen), Standard Dutch, border dialect (Bedum)
› phonemic transcriptions
› Levenshtein algorithm
Introduction

Recordings of 289 cognates

- Bedum
- Bremen

Standard Dutch
Linguistic distances

[Map showing the locations of Bedum, Bremen, and Standard Dutch]
Factors determining intelligibility

Linguistic distances

<table>
<thead>
<tr>
<th>Linguistic Distance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low German – border dialect</td>
<td>39 %</td>
</tr>
<tr>
<td>Low German – Standard Dutch</td>
<td>41 %</td>
</tr>
</tbody>
</table>

diff. non-sign. \( (p>.05) \)

n.b.
› listeners from the border also know Standard Dutch
› can use information from both varieties when listening to Low German
› smallest distances per word pair 36 % \( \rightarrow \) diff. sign. \( (p<.01) \)
Hypothesis I

Cognates (historically related words)

› More contact with Low German in border area than in other parts of the country

› More linguistic advantage in border area than in other parts of the country

Prediction: Low German intelligibility higher in border area than in non-border area
Hypothesis II

Non-cognates (historically unrelated words)

› Linguistic distance plays no role

› More contact with Low German in border area than in other parts of the country

Prediction: Low German intelligibility higher in border area than in non-border area
Intelligibility experiment

Material

369 Low German nouns
• randomly selected from a list of 2575 highly frequent spoken words
• 292 Standard Dutch and 289 border dialect cognates
• 77 Standard Dutch and 80 border dialect non-cognates
• read aloud by a Low German speaker from Bremen
Material

eamples cognates

<table>
<thead>
<tr>
<th>Low German</th>
<th>Dutch border dialect</th>
<th>Standard Dutch</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[hɔnt]</td>
<td>[hɔnt]</td>
<td>[hɔnt]</td>
<td>‘dog’</td>
</tr>
<tr>
<td>[politsaj]</td>
<td>[politsi]</td>
<td>[politsi]</td>
<td>‘police’</td>
</tr>
</tbody>
</table>
## Material

examples non-cognates

<table>
<thead>
<tr>
<th>Low German</th>
<th>Dutch border dialect</th>
<th>Standard Dutch</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[fəudl]</td>
<td>[vYrl]</td>
<td>[kuvart]</td>
<td>‘quarter’</td>
</tr>
<tr>
<td>[vo:l]</td>
<td>[bos]</td>
<td>[bos]</td>
<td>‘forest’</td>
</tr>
<tr>
<td>[de:n]</td>
<td>[vixja]</td>
<td>[mejsə]</td>
<td>‘girl’</td>
</tr>
</tbody>
</table>
Listeners

› 65 from border area
  • 15-19 years (mean 16.5)
  • high schools in Groningen and Drenthe (northern part of Low Saxon area)
  • familiar with local dialect

› 27 from non-border area
  • 15-19 years (mean 16.1)
  • high schools in Zeeland and Flevoland
Introduction

Listeners

Non-border group

Border group

Bremen
Intelligibility experiment

Procedure

› Internet-based
› via head phones
› translations into Dutch

› [http://www.let.rug.nl/lrs](http://www.let.rug.nl/lrs)
login: germanic
password: guest
Calculations

Percentage correctly translated words

› Corrected for spelling mistakes
  ex. *kultuur* instead of *cultuur* ‘culture’

› Sometimes several possible translations
  ex. *winkel* or *boetiek* for Low German *Laden* ‘shop’
Intelligibility results

Cognates

% correctly translated words

border group 67%
non-border group 62%

diff. sign. ($p < .01$)
Intelligibility results

- Correlation between linguistic distance and intelligibility is significant at the .01 level for both groups ($r = .33$ for border group and .47 for non-border group)

- Linguistic distance may play a role

- Contact?
Intelligibility results

In 68 word pairs border dialect is more similar to Low German, for example:

<table>
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<th>Standard Dutch</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[kneːj]</td>
<td>[kneːj]</td>
<td>[kni]</td>
<td>‘knee’</td>
</tr>
<tr>
<td>[buːtnlant]</td>
<td>[butə nlant]</td>
<td>[bœjt nlant]</td>
<td>‘abroad’</td>
</tr>
<tr>
<td>[viːn]</td>
<td>[viːn]</td>
<td>[vej n]</td>
<td>‘wine’</td>
</tr>
<tr>
<td>[mɑnt]</td>
<td>[mɑnt]</td>
<td>[maːnt]</td>
<td>‘month’</td>
</tr>
</tbody>
</table>

Prediction:
If linguistic distance plays a role, intelligibility of these words will be higher for the border group.
Intelligibility results

% correct translations of 68 word pairs where border dialect is more similar to Low German

<table>
<thead>
<tr>
<th>border group 47%</th>
<th>non-border group 38%</th>
</tr>
</thead>
<tbody>
<tr>
<td>diff. sign. ($p&lt;.01$)</td>
<td></td>
</tr>
</tbody>
</table>

Linguistic distance plays a role
Intelligibility

In 55 word pairs Standard Dutch is more similar to Low German, for example:

<table>
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<th>Dutch border dialect</th>
<th>Standard Dutch</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[bet]</td>
<td>[be:r]</td>
<td>[bet]</td>
<td>‘bed’</td>
</tr>
<tr>
<td>[bibliote:k]</td>
<td>[biblæltajk]</td>
<td>[bibliote:k]</td>
<td>‘library’</td>
</tr>
</tbody>
</table>

Predictions:
› If only linguistic distance plays a role there will be no difference in intelligibility
› If contact plays a role the intelligibility will be better for the border group
Intelligibility results

% correct translations of 55 word pairs where Standard Dutch is more similar to Low German

border group 74%
non-border group 72%
diff. non-sign. ($p > .05$)

Contact plays no role
In 166 word pairs linguistic distance to Low German is the same for border dialect and Standard Dutch, for example:

<table>
<thead>
<tr>
<th>Low German</th>
<th>Dutch border dialect</th>
<th>Standard Dutch</th>
<th>translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[bɪlt]</td>
<td>[bɛ:lɛt]</td>
<td>[bɛ:lɛt]</td>
<td>‘picture’</td>
</tr>
<tr>
<td>[mɒdɛl]</td>
<td>[mɒdɛl]</td>
<td>[mɒdɛl]</td>
<td>‘model’</td>
</tr>
</tbody>
</table>

Predictions:
› If only linguistic distance plays a role there will be no difference in intelligibility
› If contact plays a role the intelligibility will be better for the border group
Intelligibility results

% correct translations of 166 word pairs where linguistic distance is the same for border dialect and Standard Dutch

border group 70%
non-border group 68%
diff. non-sign. (p>.05)

Contact plays no role
non-cognates

% correctly translated

| border group 12% |
| non-border group 8% |

diff. non-sign. ($p > .05$)

contact nor linguistic distance play a role
non-cognates

› Sometimes translated correctly via High German, for example

Low German [dɪʃ] ‘table’, Dutch [taːfəl]
= High German [tɪʃ]

Low German [kriːç] ‘war’, Dutch [ɔːrɛx]
= High German [kʁiːk]
Conclusions

› People from the Dutch-German border area are better at understanding Low German cognates than people from other parts of the Netherlands

› Linguistic distance most important factor

› No evidence that contact plays a role