Are Friendship Choices of Immigrants and Natives Affected by Immigrants’ Host Country Identification?

The Role of Relative Group Size

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Introduction
Well-known Pattern:

- immigrant youth with many native friends identify more strongly with their host country than those with less native friends, and vice versa

- but how come?
  - do friends influence immigrants’ national identification?
  - or does identification affect youth’ friendship selection?
Theory and Previous Research
Schematic Theoretical Overview

Selection

Immigrants Befriending Natives

Influence

Immigrants’ National Identification

Natives Befriending Immigrants
Schematic Theoretical Overview

Selection

Immigrants Befriending Natives

Natives Befriending Immigrants

Influence

Immigrants’ National Identification

Percentage of Native Friends

Friends’ National Identification
Findings of Leszczensky et al. (2016, Social Networks)

Selection

- Immigrants Befriending Natives
- Natives Befriending Immigrants

Influence

- Percentage of Native Friends
- Friends’ National Identification

Immigrants’ National Identification
**A: General Merit of Replication**

- particularly applies to network analysis, as many network studies are case studies with limited generalizability
- also, key shortcomings of Leszczensky et al. (2016)
  - rough (one-item) measure of national identification
  - (only) two waves of data/short period of observation
  - relatively small (classroom) friendship networks

**B: Why Relative Group Size May Affect Selection Effects**

- Leszczensky et al. (2016) used sample with 25% immigrants
- share of immigrants in school might affect whether identity-based friendship preferences can be realized
Examine the Role of *Relative Group Size*

- should matter for *immigrants’* friendship choices:
  - if there are few immigrants (as in Leszczensky et al. 2016), irrespective of their identification-based preferences, immigrants “have” to befriend (some) natives anyways
  - if there are many immigrants, by contrast, immigrants’ can be picky about befriending natives

- should not matter, though, for *natives’* friendship choices
  - if there are few immigrants, natives can afford to befriend those with strong rather than weak national identification (or not befriend immigrants at all)
  - if there are many immigrants, natives also can pick those with strong rather than weak national identification
Data
Data

Project: Friendship and Identity in School

- 9 schools, 26 grades (5/6/7), 82 classrooms ($\text{age} = 12,8$)
- data collection in North Rhine-Westphalia, Germany
- stratified random sample: lower secondary, intermediate secondary, and comprehensive schools with *high shares of immigrant students*
  - 64% immigrants (including 1st & 2nd generation)
- three waves (w1=04/2013; w2=02/2014; w3=10/2014)
- response rate (w1=76.5%; w2=83.3%; w3=86.6%)
- Sample selection: >77% response in all waves
  → 10 grades with 1,059 students
## Overview of Networks

<table>
<thead>
<tr>
<th>Grade</th>
<th>Students (W1)</th>
<th>Immigrants (W1)</th>
<th>Jaccard Index W1→W2</th>
<th>Jaccard Index W2→W3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>83</td>
<td>80.1%</td>
<td>0.40</td>
<td>0.38</td>
</tr>
<tr>
<td>2</td>
<td>74</td>
<td>50.1%</td>
<td>0.42</td>
<td>0.38</td>
</tr>
<tr>
<td>3</td>
<td>72</td>
<td>49.3%</td>
<td>0.33</td>
<td>0.38</td>
</tr>
<tr>
<td>4</td>
<td>93</td>
<td>83.5%</td>
<td>0.32</td>
<td>0.46</td>
</tr>
<tr>
<td>5</td>
<td>120</td>
<td>66.7%</td>
<td>0.38</td>
<td>0.41</td>
</tr>
<tr>
<td>6</td>
<td>138</td>
<td>48.9%</td>
<td>0.37</td>
<td>0.34</td>
</tr>
<tr>
<td>7</td>
<td>126</td>
<td>55.7%</td>
<td>0.44</td>
<td>0.44</td>
</tr>
<tr>
<td>8</td>
<td>121</td>
<td>77.2%</td>
<td>0.41</td>
<td>0.40</td>
</tr>
<tr>
<td>9</td>
<td>119</td>
<td>64.1%</td>
<td>0.39</td>
<td>0.42</td>
</tr>
<tr>
<td>10</td>
<td>113</td>
<td>63.6%</td>
<td>0.39</td>
<td>0.42</td>
</tr>
<tr>
<td>All</td>
<td>105.9</td>
<td>63.9%</td>
<td>0.38</td>
<td>0.40</td>
</tr>
</tbody>
</table>
Friendship within Grade-Level Networks

- “Who are your best friends?” (directed ties)
- up to ten nominations based on a roster of students from the same as well as from parallel classrooms

Host Country (National) Identification

- captured by four items (mean index)
  - e.g., “I feel strongly attached to Germans”; “I feel like I am part of Germany”
- 5-point scale from 1 “does not apply at all” to 5 “applies completely”
- extensively tested (both qualitatively and quantitatively)
Model
Analytical Strategy

Step I: Stochastic Actor-Oriented Models for the Co-Evolution of Networks and Behavior (SAOM)

- *agent-based model* that allows to disentangle *selection* and *influence* mechanisms by simulating both processes simultaneously (Snijders et al. 2010; Steglich & Snijders 2010)
- single networks combined in fixed-effects *meta-analysis*

Step II: Meta-Regression

- *meta-regression*
- using *share of immigrants* to predict how the effect of immigrants’ national identification on friendship choices varies with respect to relative group size
The Key Idea Behind SAOM

Microsteps:
Stochastically chosen myopic actor decides to
- maintain status quo
- change one tie
- create
- dissolve

Selection

$X_{t=0}$ $X_{t=1}$
The Key Idea Behind SAOM

Microsteps:
Stochastically chosen myopic actor decides to
- maintain status quo
- change behavior
  - one unit increase
  - one unit decrease
- create one tie
- dissolve one tie

Selection
Influence
Selection

1. Are immigrants who strongly identify with the host country more willing to befriend natives than immigrants with weak national identification?
   - Immigrant_{Ego} \times \text{Native}_{Alter} \times \text{National Identification}_{Ego}

2. Do natives prefer to befriend immigrants with strong national identification rather than immigrants with weak national identification?
   - \text{Native}_{Ego} \times \text{Immigrant}_{Alter} \times \text{National Identification}_{Alter}
Implementation of Research Questions in SAOM

Influence

1. Does having more *native friends* increase immigrants’ identification with the host country?
   - Immigrant$_{Ego}$ * AltsAvAlt (proportion of native friends)

2. Do immigrants adjust their own national identification *towards those of their friends*, irrespective of whether or not these friends are natives?
   - Immigrant$_{Ego}$ * totSim
Further Effects in the Model

Controls

- structural effects (reciprocity, transitive triplets)
- classroom dummy, indicating whether students attend the same classroom
- sex homophily (ego, alter, same effects)

Main effects/constitutive terms of interaction effects

- e.g., Immigrant\textsubscript{Ego}, Native\textsubscript{Alter}, National Identification\textsubscript{Ego}
- e.g., Immigrant\textsubscript{Ego} * Native\textsubscript{Alter}
Results
Association between Native Friends and Immigrants’ National Identification

![Graph showing the association between Native Friends and Immigrants’ National Identification across different waves.](image-url)
Selection: *Immigrants* Befriending Natives (Meta-Regression)

![Graph showing the contribution of immigrants' objective function to their national identification.](image-url)

- **Share of Immigrants**:
  - 80%
  - 70%
  - 60%
  - 50%

- **Ego's (i.e., Immigrants') National Identification**

The graph illustrates the relationship between the share of immigrants and the contribution to their objective function, indicating how the national identification changes with varying shares.
Selection: *Natives* Befriending Immigrants (Meta-Analysis)
Selection: *Natives* Befriending Immigrants (Meta-Regression)

- Contribution to Natives' Objective Function by Alter's (i.e., Immigrants') National Identification

- Share of Immigrants: 80%, 70%, 60%, 50%

Graph shows the relationship between the contribution to the natives' objective function and the national identification of the alter (immigrants) at different shares of immigrants (80%, 70%, 60%, 50%).
**Influence**

<table>
<thead>
<tr>
<th>Effect</th>
<th>par.</th>
<th>(s.e.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network dynamics</strong> (Controls included)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National identification dynamics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National identification linear shape</td>
<td>0.04</td>
<td>(0.18)</td>
</tr>
<tr>
<td>National identification quadratic shape</td>
<td>0.01</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Immigrant</td>
<td>−0.24</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Native friends</td>
<td>−0.04</td>
<td>(0.33)</td>
</tr>
<tr>
<td>Immigrant x native friends</td>
<td>0.01</td>
<td>(0.39)</td>
</tr>
<tr>
<td>National identification total similarity</td>
<td>0.21*</td>
<td>(0.11)</td>
</tr>
<tr>
<td>Immigrant x national identification total similarity</td>
<td>0.02</td>
<td>(0.10)</td>
</tr>
</tbody>
</table>

\[ p < 0.1; \ast p < 0.05; \ast\ast p < 0.01; \ast\ast\ast p < 0.001 \]

Covariates are not centered.
Conclusion
If Immigrants Are the *Minority* (Leszczensky et al. 2016)

**Selection**
- Immigrants Befriending Natives
- Natives Befriending Immigrants

**Influence**
- Percentage of Native Friends
- Friends’ National Identification

Immigrants’ National Identification
If Immigrants Are the *Majority* (Today’s Results)

Selection

- Immigrants Befriending Natives

Influence

- Percentage of Native Friends

Immigrants’ National Identification

- Natives Befriending Immigrants
- Friends’ National Identification
Opportunity Structure & Identity-Based Friendship Choices

- from the perspective of *immigrants*:
  - if there are *few* immigrants, their identification doesn’t matter, for they “have” to befriend natives (Leszczensky et al. 2016)
  - if there are *many* immigrants, only those with strong national identification befriend natives, since those with weak identification don’t have to (today’s results)

- from the perspective of *natives*:
  - if there are *few* immigrants, natives can afford to befriend those with strong national identification (Leszczensky et al. 2016)
  - if there are *many* immigrants, however, immigrants’ identification does *not* seem to matter for natives’ friendship choices (today’s results)