

# Comparing professional translators and social scientists: questionnaire translations from scratch vs. based on machine translation output

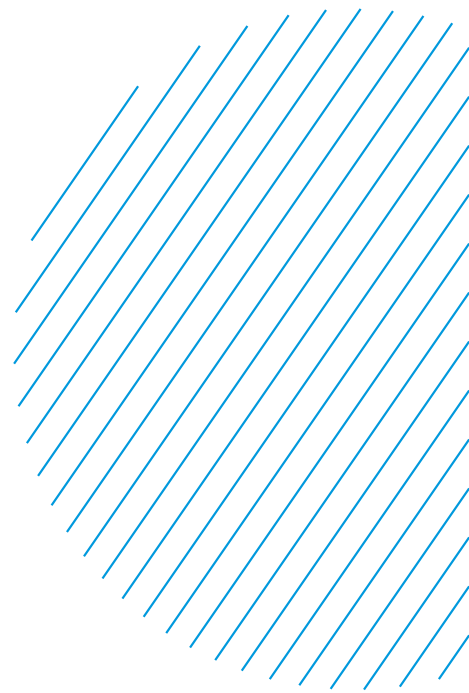
CS3 Meeting on 16 January 2025

Dr. Anke Radinger, Ulrike Efu Nkong, & Dr. Dorothee Behr (all GESIS)



# Outline

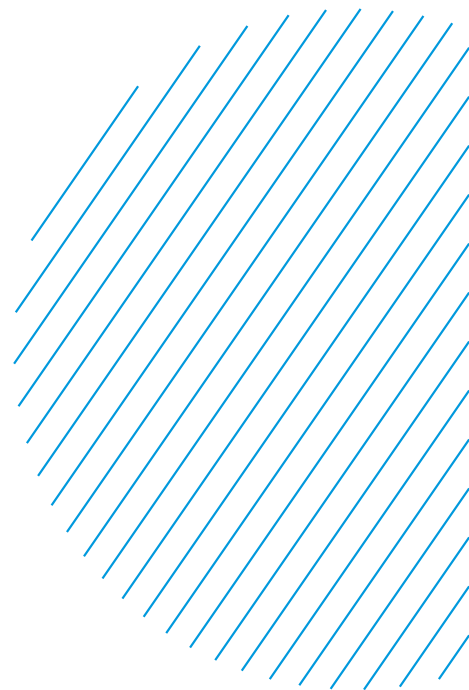
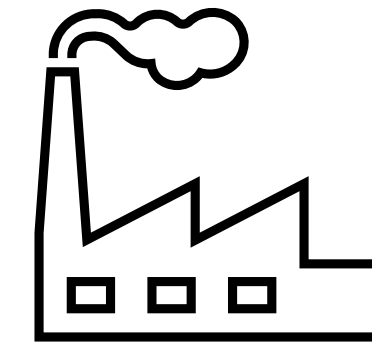
- Background
- The TransBack project
- Explorative survey
- Translation experiment
- First results
- Outlook



Background:

# Cross-cultural survey methodology

- In any production process, it is worth looking at the very beginning of the supply chain
- This is also valid for questionnaire translation in order to achieve **comparability** and **comprehensibility**  
→ data quality!
- We are looking at the very first step – the initial translations – as well as the personnel producing them and the integration of new tools into the process



# What do major guidelines say?



## CSDI - Guidelines for Best Practice in Cross-Cultural Surveys:

- several independent translations to be produced
  - translators should have **training and experience in translation**
  - team review (**TRAPD** – translation, review, adjudication, pretest, documentation)
  - team should contain a **mix of skills and disciplinary expertise**
- 
- no recommendations on the use of translation technologies up to now



*Survey Research Center. (2016). Guidelines for Best Practice in Cross-Cultural Surveys. Ann Arbor, MI: Survey Research Center, Institute for Social Research, University of Michigan. Retrieved March, 14, 2024, from <http://ccsq.isr.umich.edu/>*

## ***“Who is the better survey translator? The impact of translator background and translation technologies on questionnaire translation quality” (Behr & Lechner)***

Funded by the German Research Foundation (DFG)

End 2022 – End 2025

- **Phase I:** Survey amongst national teams of cross-cultural survey programs – Who is selected to translate in cross-cultural studies and why? (done)
- **Phase II:** Translation experiment comparing translation process and products of translators having different backgrounds (analyses ongoing)
- **Phase III:** Data collection with experimental questionnaires (in preparation)

## Status quo – translation procedures in cross-cultural studies

- Explorative web survey early 2023
- Selection of 13 major academic cross-national social science and educational studies: e. g. Afrobarometer, Asian Barometer, Comparative Study of Electoral Systems (CSES), European Social Survey (ESS), PIAAC, World Value Survey (WVS)...
- Unit of analysis: national teams
- N=153 → not representative, but insight into their procedures: background of translators involved, reasons for choosing them, satisfaction with translators, review process, use of machine translation, etc.

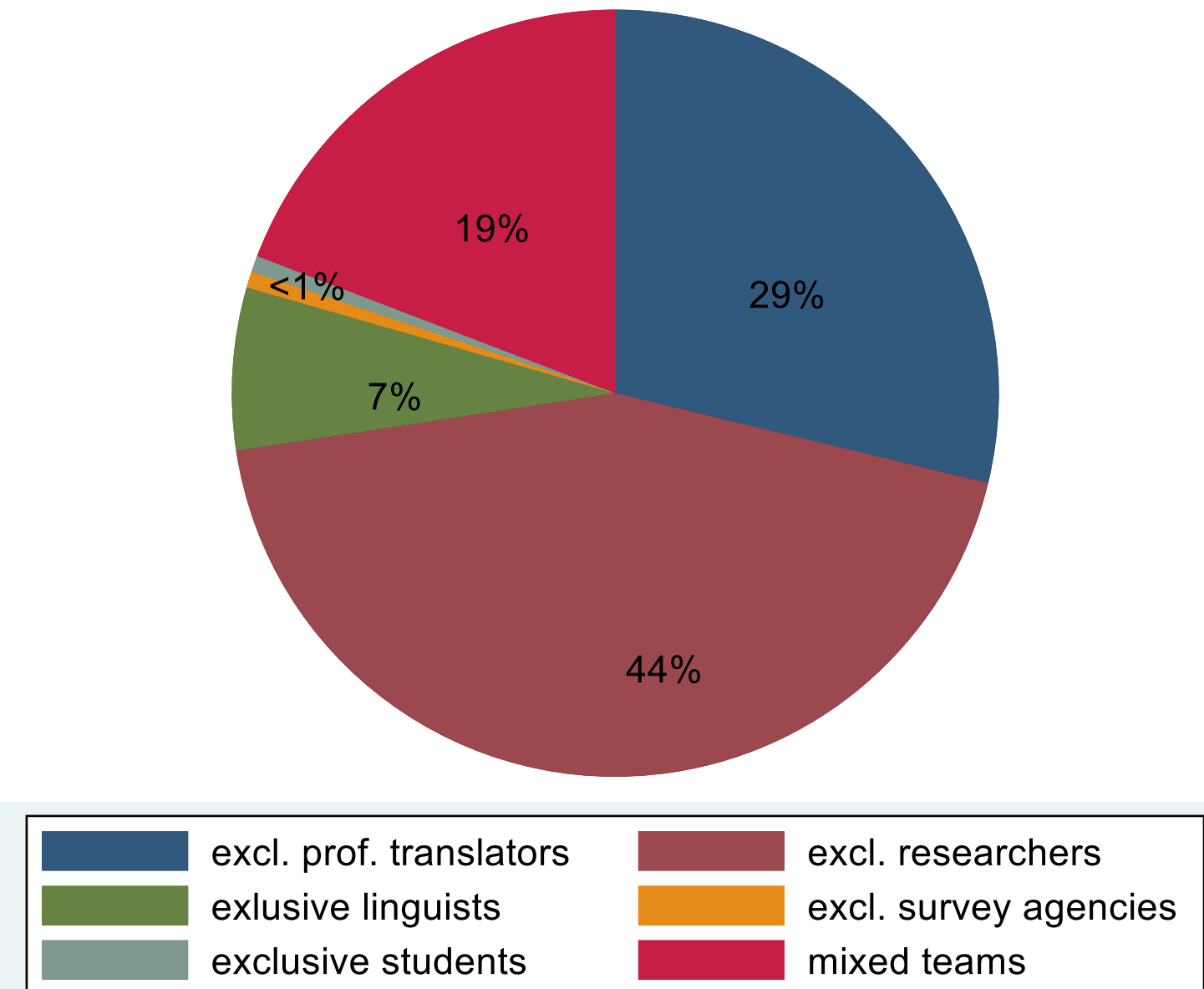
*Efu Nkong, Ulrike (2024): "Questionnaire translation in cross-cultural survey research: Translators, their background, and relevant competencies from the perspective of international research teams." trans-kom. [Link](#)*

*TransBack Survey data: <https://doi.org/10.7802/2693>*

# Initial translations

- 46 teams (32 %) produced only 1 initial translation (in 26 teams, this was done by a team member)
- 100 teams (68 %) produced 2 or more initial translations

Who produces the initial questionnaire translations?



n = 146

# Translation tools used across studies

## Machine (Pre)translation (MT)/Post-Editing

- 17 country teams (from two studies) have recommended/requested the use of MT to their translators
- Mostly not recommended/requested by the international coordination group, but decided on country level

### Reasons given for use:

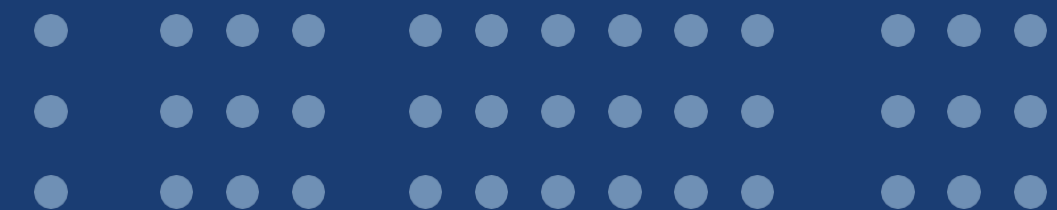
- 1. Quality improvement
  - 2. Facilitation of translation
  - 3. Speeding up process
- 
- **Machine (pre-)translation has not yet established itself for questionnaire translation, but it is entering the field.**

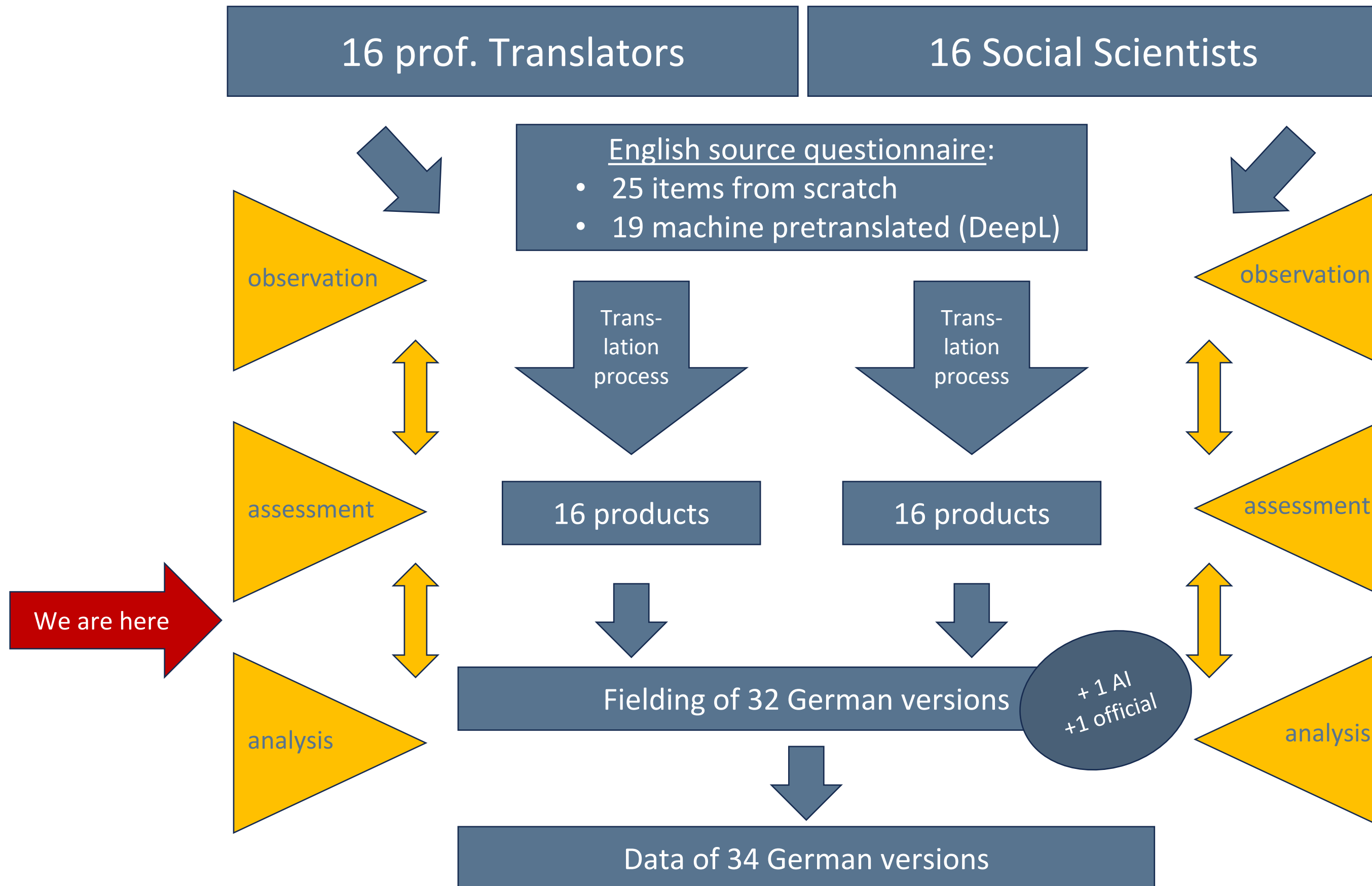




# TransBack Phase II: The translation experiment

(analysis work in progress)





# Participants

- *All* German natives living in Germany, at least 5 years of prof. experience



## 16 Social Scientists

- 12 x master in sociology/social sciences
- 3 x master in political sciences
- 1 x master in psychology

**VS.**

## Questionnaire experience:

- 9 participants: 0 to 5 questionnaires developed and 0 to 2 questionnaires translated
- 7 participants: > 5 questionnaires developed and > 2 questionnaires translated

**5 have used MT for questionnaires before**

## 16 Prof. Translators

- 9 x master in translation
- 4 x master in interpretation
- 3 x state certified translator

## Questionnaire experience:

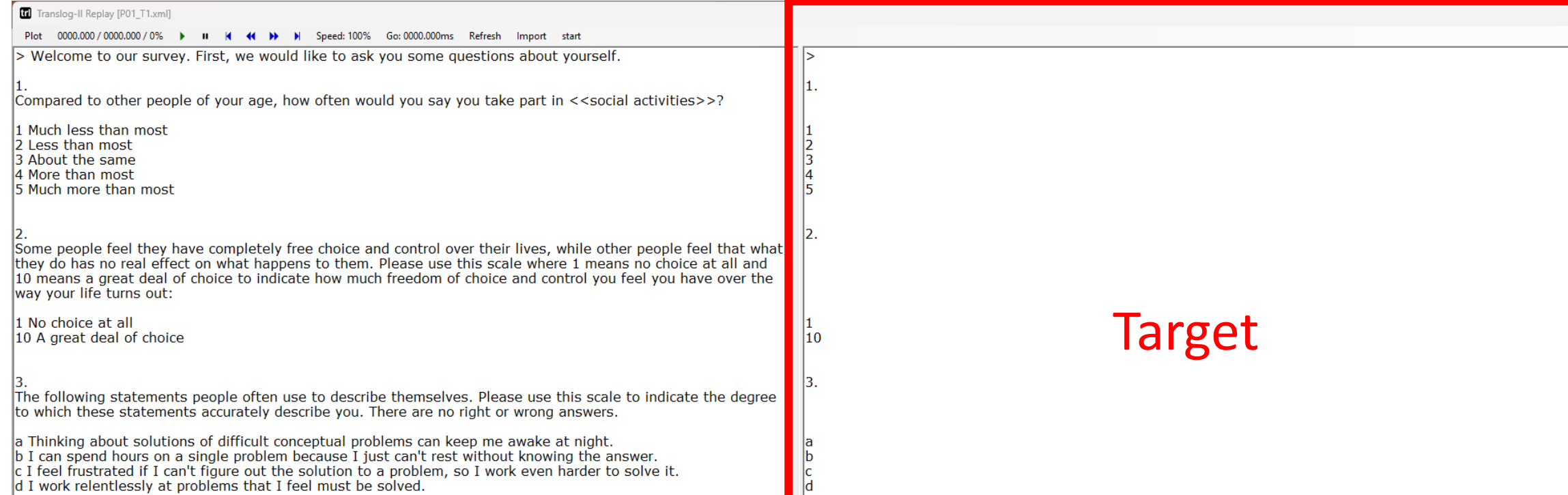
- 7 participants: no experience in quest translation
- 9 participants: between 6-100 questionnaire translations before

**1 has used MT for questionnaires before**

Transback Phase 2: Experiment

# Translation environment: Translog-II & Excel (Reference and comments)

T1:



Translog-II Replay [P01\_T1.xml]

Plot 0000.000 / 0000.000 / 0% Speed: 100% Go: 0000.000ms Refresh Import start

> Welcome to our survey. First, we would like to ask you some questions about yourself.

1. Compared to other people of your age, how often would you say you take part in <<social activities>>?

1 Much less than most  
2 Less than most  
3 About the same  
4 More than most  
5 Much more than most

2. Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means no choice at all and 10 means a great deal of choice to indicate how much freedom of choice and control you feel you have over the way your life turns out:

1 No choice at all  
10 A great deal of choice

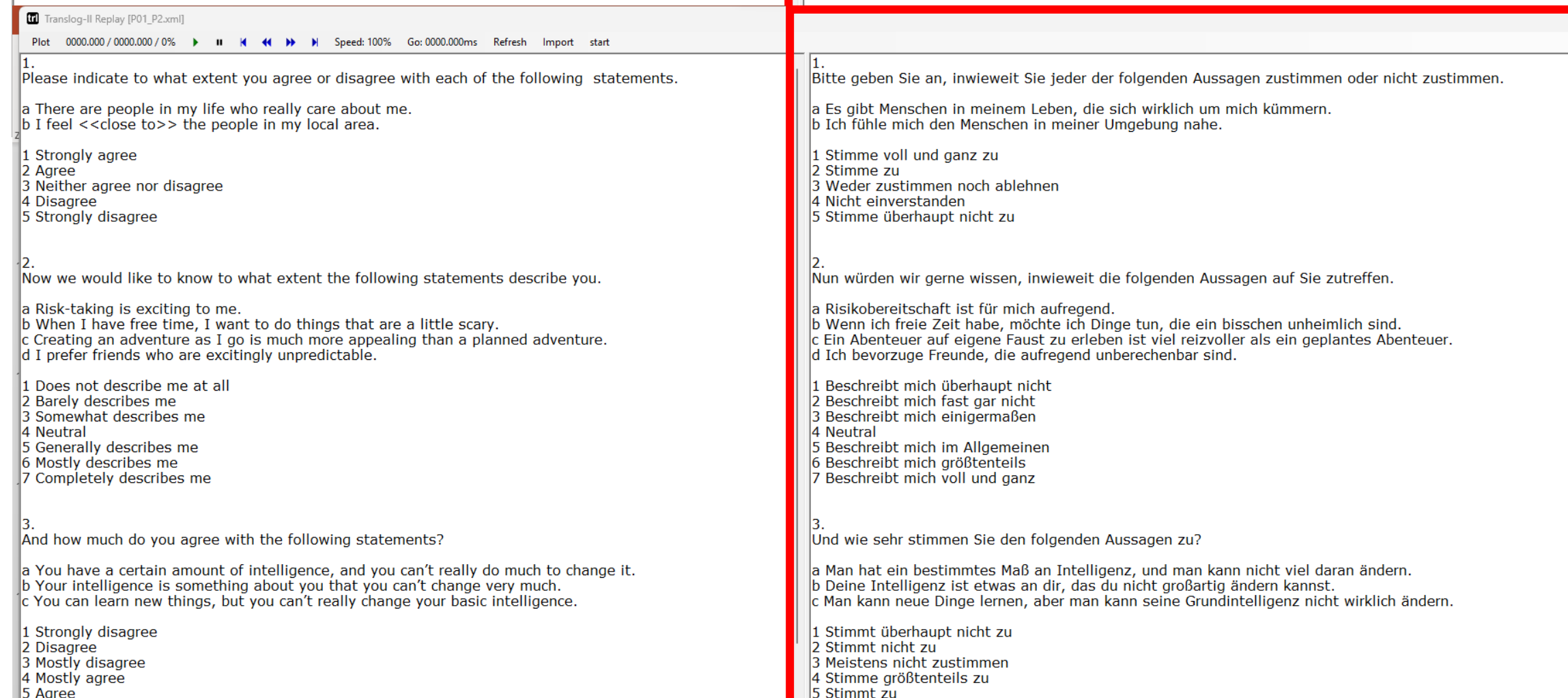
3. The following statements people often use to describe themselves. Please use this scale to indicate the degree to which these statements accurately describe you. There are no right or wrong answers.

a Thinking about solutions of difficult conceptual problems can keep me awake at night.  
b I can spend hours on a single problem because I just can't rest without knowing the answer.  
c I feel frustrated if I can't figure out the solution to a problem, so I work even harder to solve it.  
d I work relentlessly at problems that I feel must be solved.

1. >  
2. >  
3. a  
b  
c  
d

Target

P2:



Translog-II Replay [P01\_P2.xml]

Plot 0000.000 / 0000.000 / 0% Speed: 100% Go: 0000.000ms Refresh Import start

1. Please indicate to what extent you agree or disagree with each of the following statements.

a There are people in my life who really care about me.  
b I feel <<close to>> the people in my local area.

1 Strongly agree  
2 Agree  
3 Neither agree nor disagree  
4 Disagree  
5 Strongly disagree

2. Now we would like to know to what extent the following statements describe you.

a Risk-taking is exciting to me.  
b When I have free time, I want to do things that are a little scary.  
c Creating an adventure as I go is much more appealing than a planned adventure.  
d I prefer friends who are excitingly unpredictable.

1 Does not describe me at all  
2 Barely describes me  
3 Somewhat describes me  
4 Neutral  
5 Generally describes me  
6 Mostly describes me  
7 Completely describes me

3. And how much do you agree with the following statements?

a You have a certain amount of intelligence, and you can't really do much to change it.  
b Your intelligence is something about you that you can't change very much.  
c You can learn new things, but you can't really change your basic intelligence.

1 Strongly disagree  
2 Disagree  
3 Mostly disagree  
4 Mostly agree  
5 Agree

1. Bitte geben Sie an, inwieweit Sie jeder der folgenden Aussagen zustimmen oder nicht zustimmen.  
a Es gibt Menschen in meinem Leben, die sich wirklich um mich kümmern.  
b Ich fühle mich den Menschen in meiner Umgebung nahe.

1 Stimme voll und ganz zu  
2 Stimme zu  
3 Weder zustimmen noch ablehnen  
4 Nicht einverstanden  
5 Stimme überhaupt nicht zu

2. Nun würden wir gerne wissen, inwieweit die folgenden Aussagen auf Sie zutreffen.

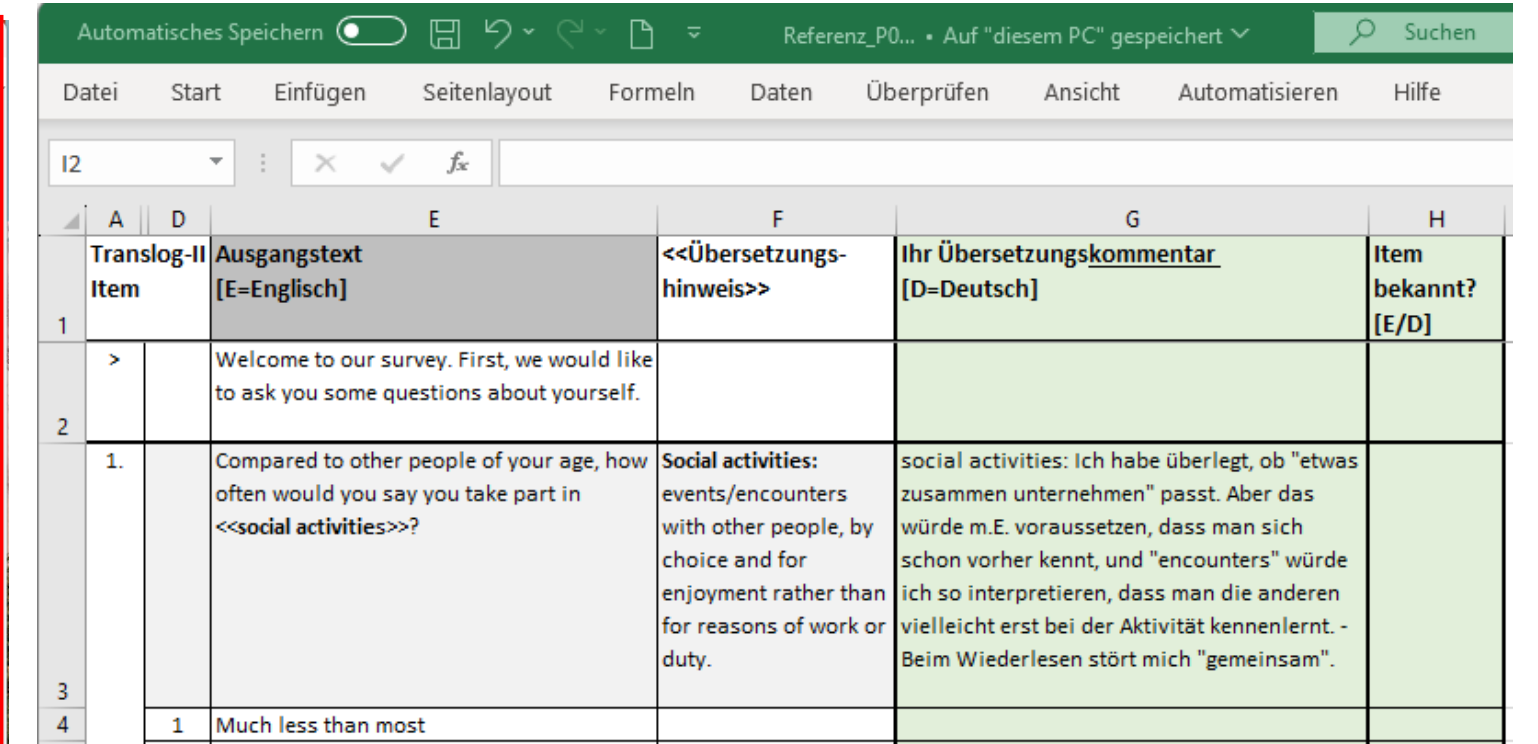
a Risikobereitschaft ist für mich aufregend.  
b Wenn ich freie Zeit habe, möchte ich Dinge tun, die ein bisschen unheimlich sind.  
c Ein Abenteuer auf eigene Faust zu erleben ist viel reizvoller als ein geplantes Abenteuer.  
d Ich bevorzuge Freunde, die aufregend unberechenbar sind.

1 Beschreibt mich überhaupt nicht  
2 Beschreibt mich fast gar nicht  
3 Beschreibt mich einigermaßen  
4 Neutral  
5 Beschreibt mich im Allgemeinen  
6 Beschreibt mich größtenteils  
7 Beschreibt mich voll und ganz

3. Und wie sehr stimmen Sie den folgenden Aussagen zu?

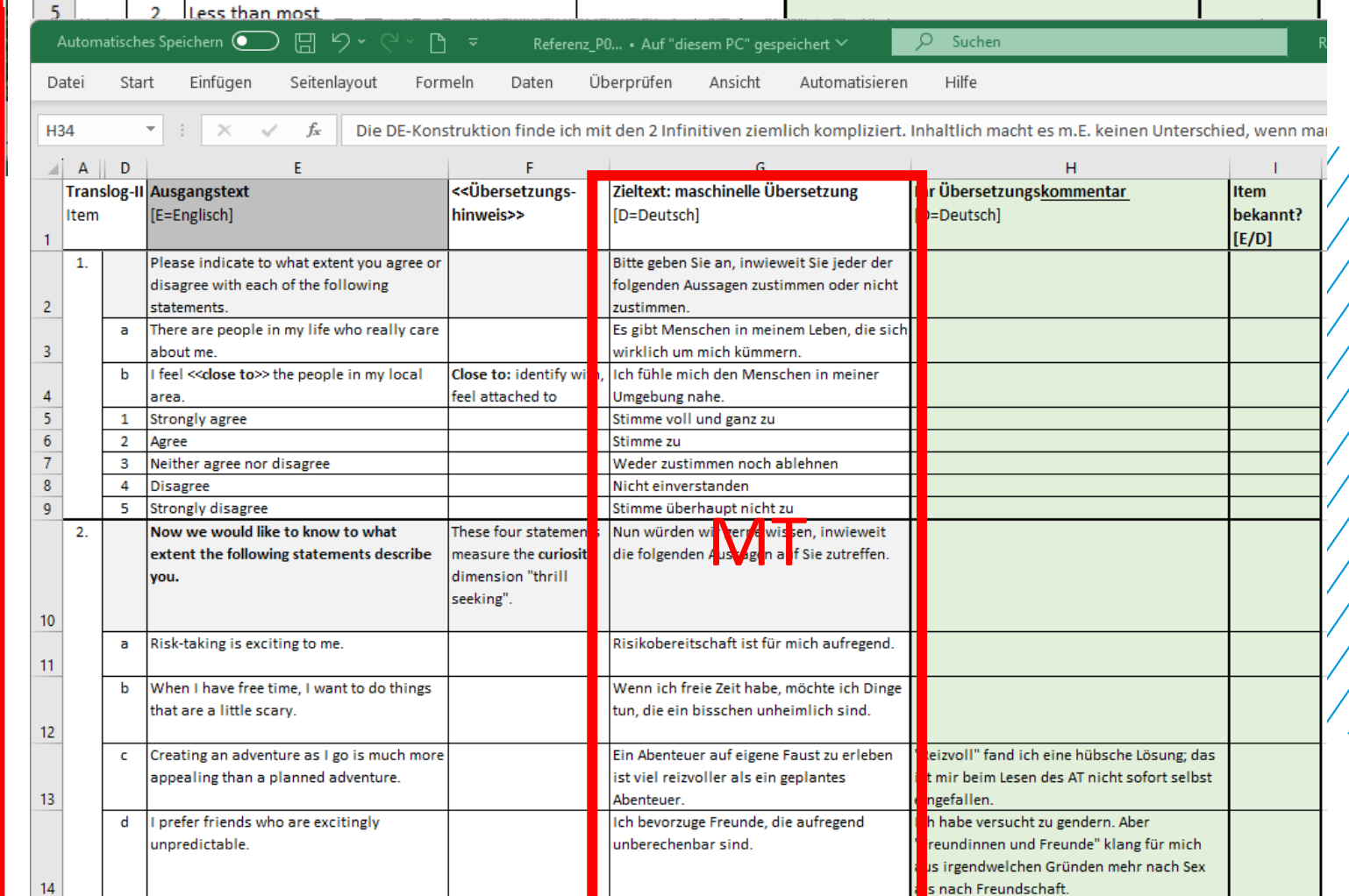
a Man hat ein bestimmtes Maß an Intelligenz, und man kann nicht viel daran ändern.  
b Deine Intelligenz ist etwas an dir, das du nicht großartig ändern kannst.  
c Man kann neue Dinge lernen, aber man kann seine Grundintelligenz nicht wirklich ändern.

1 Stimmt überhaupt nicht zu  
2 Stimmt nicht zu  
3 Meistens nicht zustimmen  
4 Stimme größtenteils zu  
5 Stimmt zu



Automatisches Speichern Referenz\_P0... • Auf "diesem PC" gespeichert Suchen

	A	D	E	F	G	H
	Translog-II Item	Ausgangstext [E=Englisch]	<<Übersetzungshinweis>>	Ihr Übersetzungskommentar [D=Deutsch]	Item bekannt? [E/D]	
1	>	Welcome to our survey. First, we would like to ask you some questions about yourself.				
2	1.	Compared to other people of your age, how often would you say you take part in <<social activities>>?	Social activities: events/encounters with other people, by choice and for enjoyment rather than for reasons of work or duty.	social activities: Ich habe überlegt, ob "etwas zusammen unternehmen" passt. Aber das würde m.E. voraussetzen, dass man sich schon vorher kennt, und "encounters" würde ich so interpretieren, dass man die anderen vielleicht erst bei der Aktivität kennenlernt. - Beim Wiederlesen stört mich "gemeinsam".		
3						
4	1	Much less than most				
5	2	Less than most				



Automatisches Speichern Referenz\_P0... • Auf "diesem PC" gespeichert Suchen

H34 Die DE-Konstruktion finde ich mit den 2 Infinitiven ziemlich kompliziert. Inhaltlich macht es m.E. keinen Unterschied, wenn man

	A	D	E	F	G	H	I
	Translog-II Item	Ausgangstext [E=Englisch]	<<Übersetzungshinweis>>	Zieltext: maschinelle Übersetzung [D=Deutsch]	Ihr Übersetzungskommentar [D=Deutsch]	Item bekannt? [E/D]	
1	1.	Please indicate to what extent you agree or disagree with each of the following statements.		Bitte geben Sie an, inwieweit Sie jeder der folgenden Aussagen zustimmen oder nicht zustimmen.			
2	a	There are people in my life who really care about me.		Es gibt Menschen in meinem Leben, die sich wirklich um mich kümmern.			
3	b	I feel <<close to>> the people in my local area.	Close to: identify with, feel attached to	Ich fühle mich den Menschen in meiner Umgebung nahe.			
4	1	Strongly agree		Stimme voll und ganz zu			
5	2	Agree		Stimme zu			
6	3	Neither agree nor disagree		Weder zustimmen noch ablehnen			
7	4	Disagree		Nicht einverstanden			
8	5	Strongly disagree		Stimme überhaupt nicht zu			
9	2.	Now we would like to know to what extent the following statements describe you.	These four statements measure the curiosity dimension "thrill seeking".	Nun würden wir gerne wissen, inwieweit die folgenden Aussagen auf Sie zutreffen.			
10	a	Risk-taking is exciting to me.		Risikobereitschaft ist für mich aufregend.			
11	b	When I have free time, I want to do things that are a little scary.		Wenn ich freie Zeit habe, möchte ich Dinge tun, die ein bisschen unheimlich sind.			
12	c	Creating an adventure as I go is much more appealing than a planned adventure.		Ein Abenteuer auf eigene Faust zu erleben ist viel reizvoller als ein geplantes Abenteuer.	reizvoll" fand ich eine hübsche Lösung; das hat mir beim Lesen des AT nicht sofort selbst gefallen.		
13	d	I prefer friends who are excitingly unpredictable.		Ich bevorzuge Freunde, die aufregend unberechenbar sind.	habe versucht zu gendern. Aber "Freundinnen und Freunde" klang für mich aus irgendwelchen Gründen mehr nach Sex als nach Freundschaft.		
14							

# Data collected in May – July 2024

## Background of 32 participants:

- qualification, work experience, English knowledge, questionnaire experience, etc. (background questionnaire)

## Process data:

- key-logging data: typing, insertions, deletions, edits, production units, pauses, timing etc. (*Translog-II + Inputlog*)
- research behaviour (*OBS Screenrecording*)
- translators' comments on translation/solution finding (Excel)
- translators' way of proceeding (background questionnaire)
- translators' experience during experiment (background questionnaire)

## Product data:

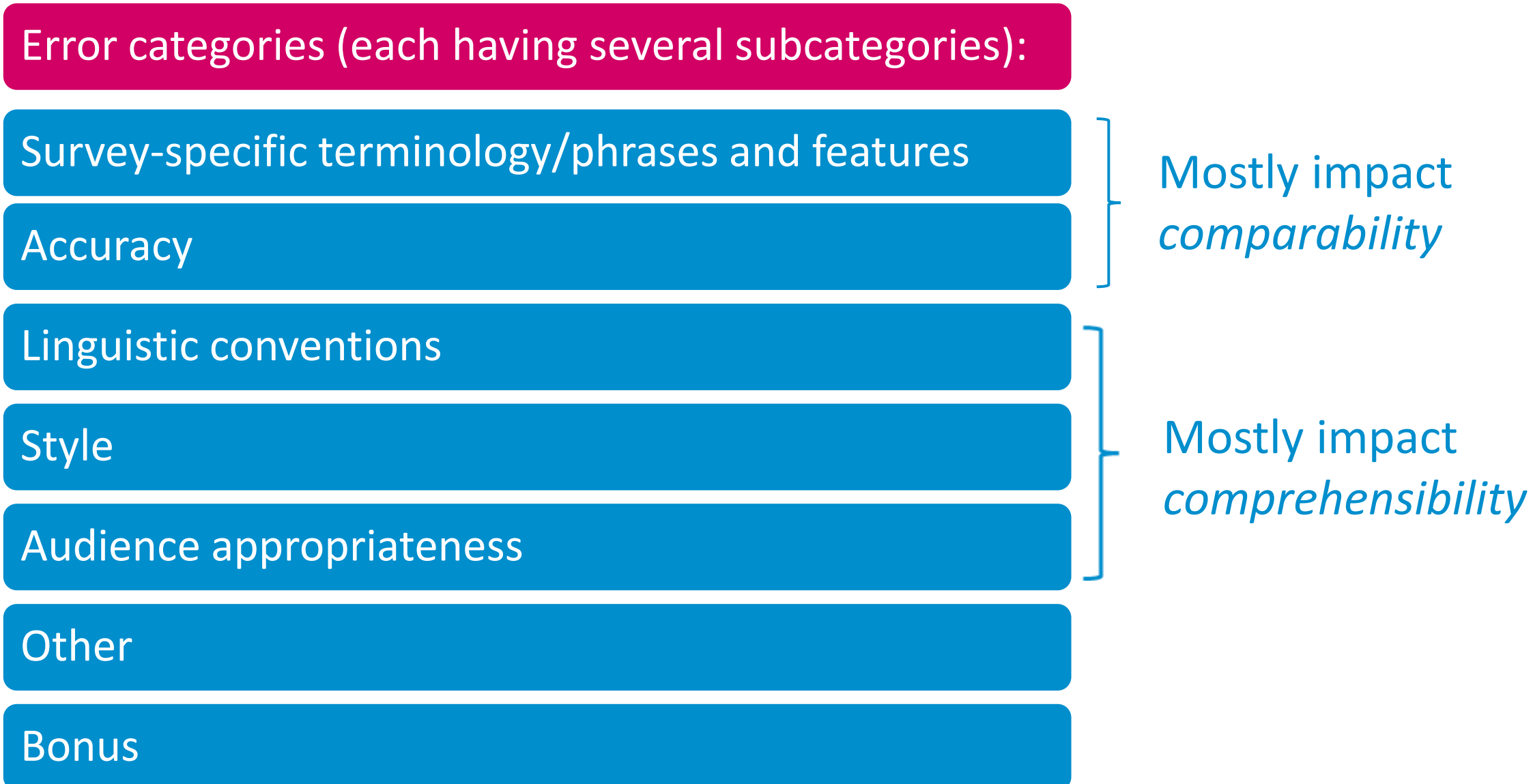
- 32 translated questionnaires (+ 1 raw DeepL and 1 ChatGPT generated version)

## ***Phase 3 (forthcoming), jointly with Chia-Jung Tsai and Clemens Lechner (both GESIS)***

- *Survey data and response quality indicators (data collection using experimental questionnaires, online access panel)*
- *Responses to probe questions*

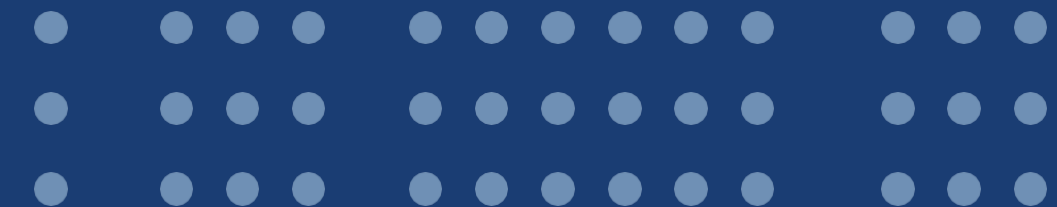
# Ongoing work

1. Error coding of translations by two experts (blind) according to an adapted scheme (MQM TQE - Multidimensional Quality Metric for analytic Translation Quality Evaluation)
2. Programming and fielding of experimental questionnaires





# First results



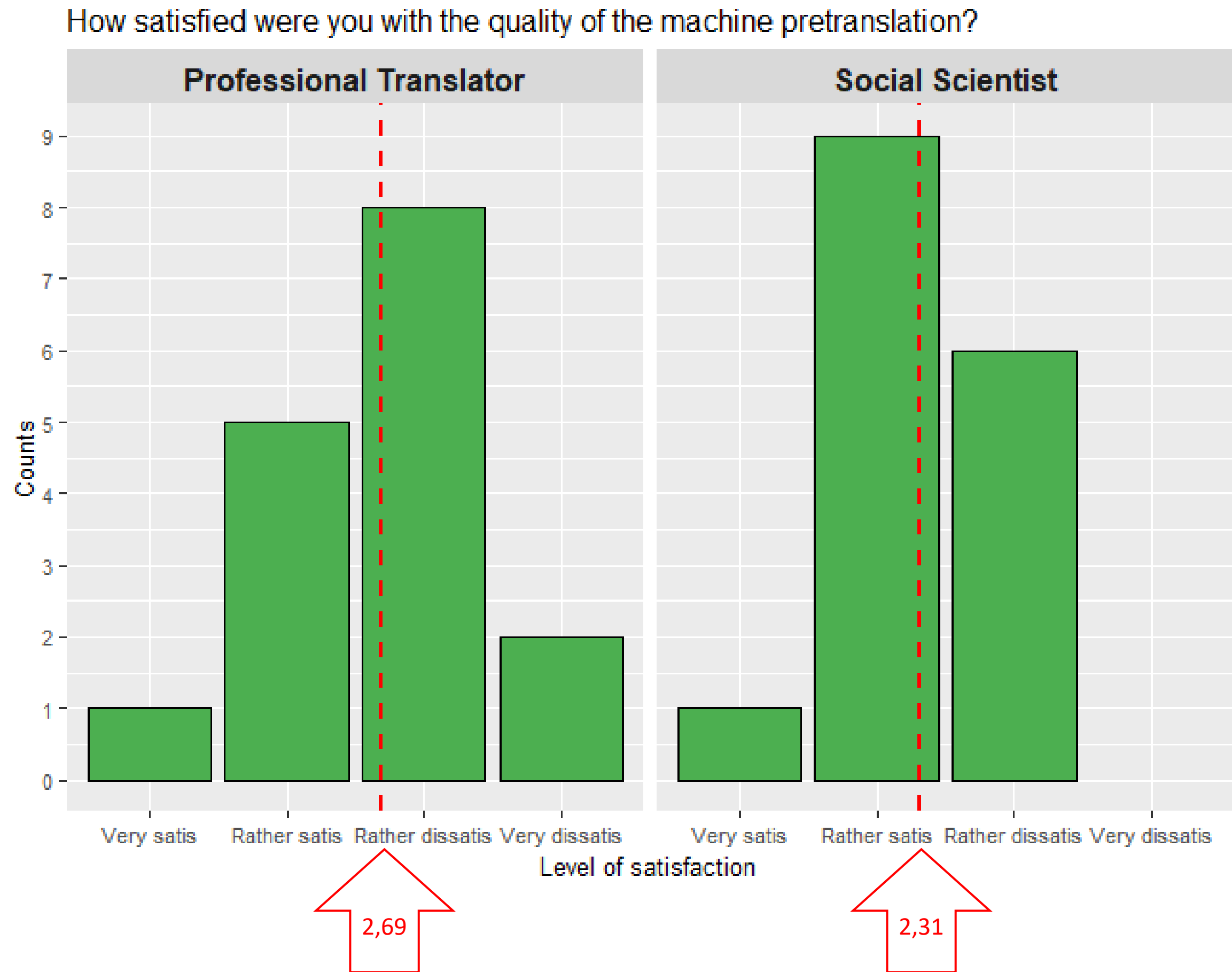
# Quality of MT output for PE (DeepL)

Overall, 42 issues in 63 segments

- **19 x Survey specific**
  - 10 x scale issue
  - 7 x inconsistency
  - 1 x broken stem question destroyed
  - 1 x placeholder not replaced
- **11 x Accuracy (mistranslation)**
- **1 x Linguistic conventions**
- **5 x Style**
  - 4 x awkward language,
  - 1 x low language register
- **6 x Audience appropriateness (non-inclusive language)**





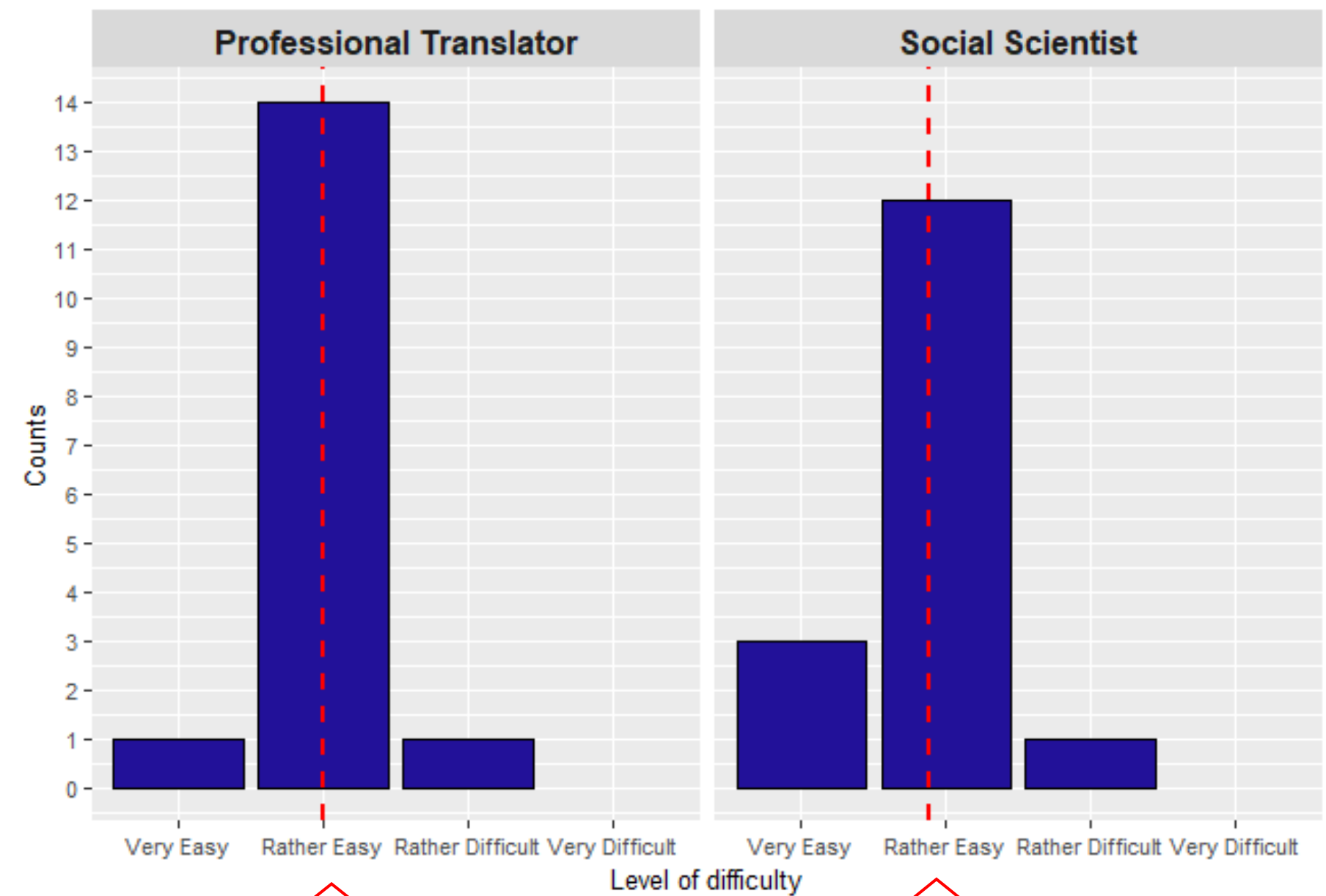
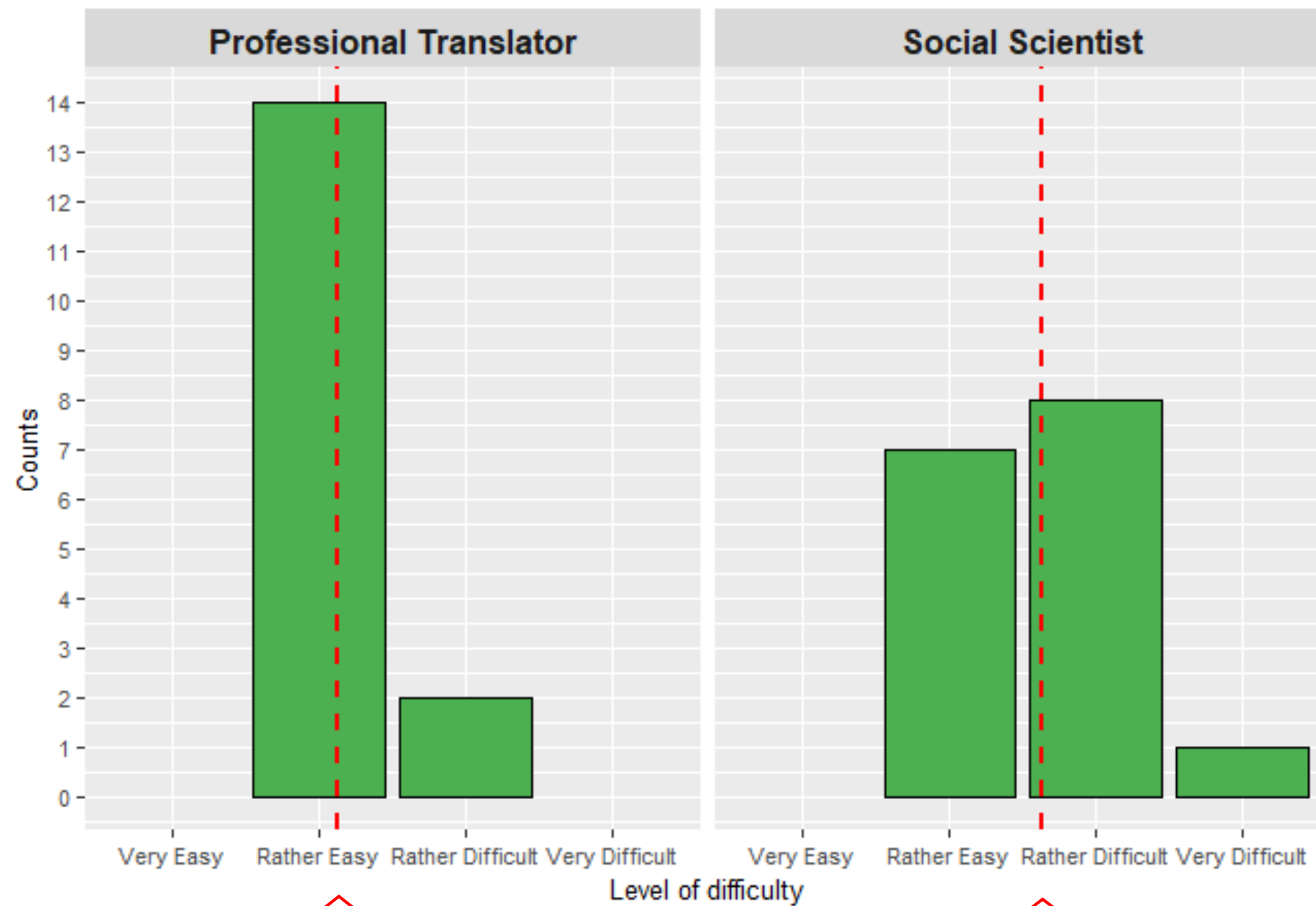


## Translation from scratch

## Post-Editing

Overall, how easy or difficult was the translation from scratch?

Overall, how easy or difficult was post-editing?



2,12

2,62

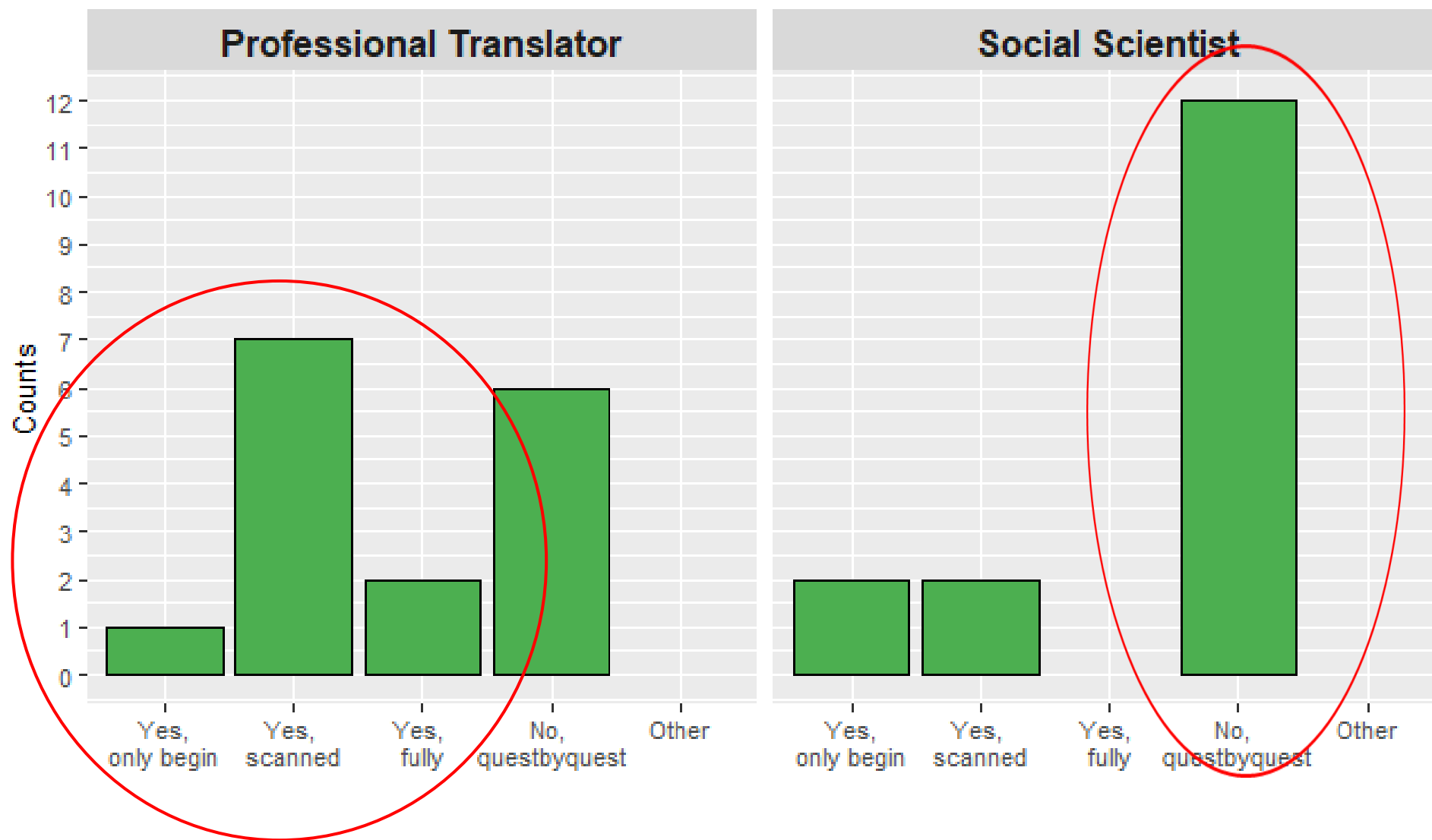
2,0

1,88

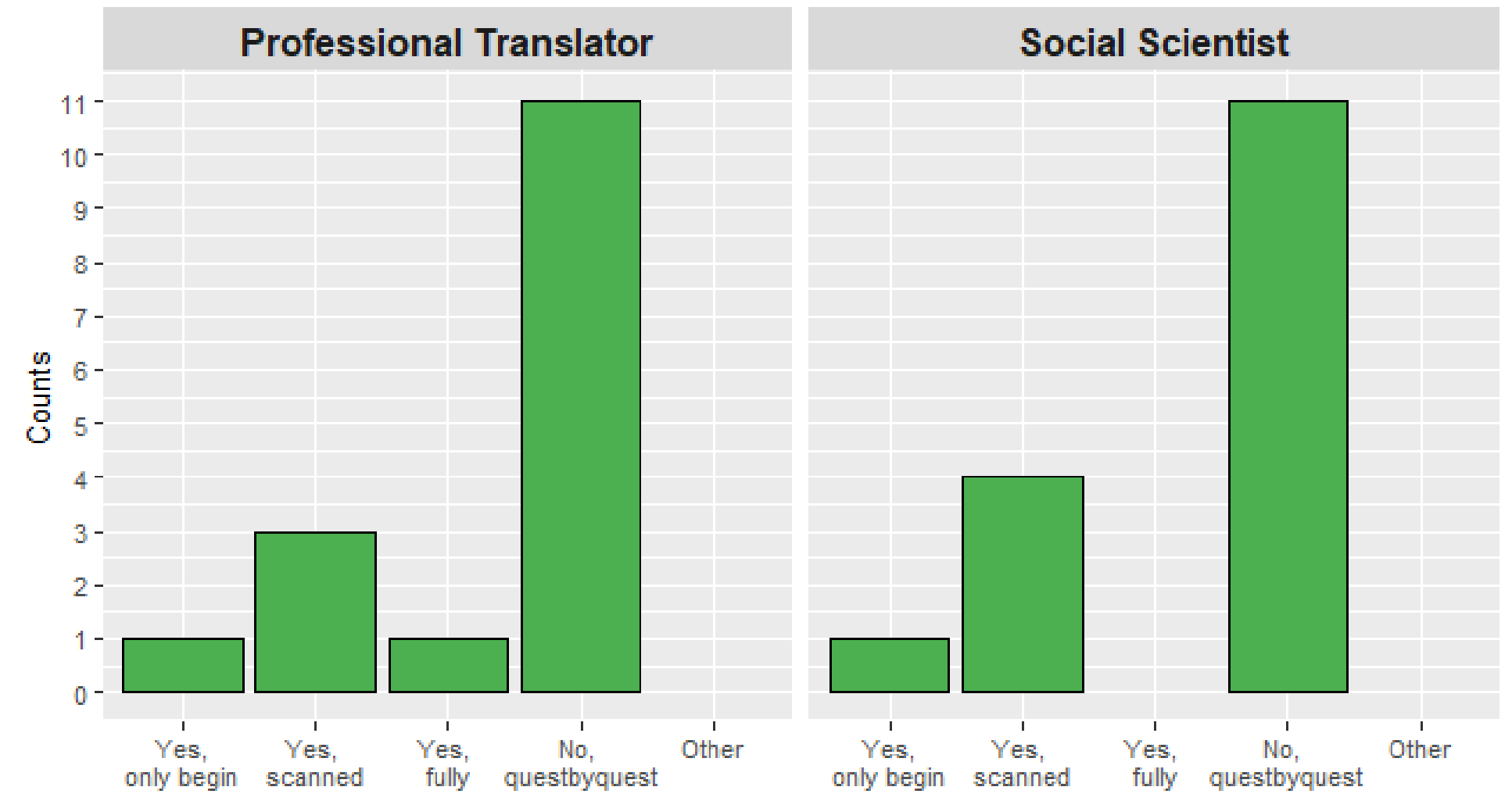
## Translation from scratch

## Post-Editing

Did you read the English source questionnaire before starting the translation?



Did you read the English source questionnaire before starting the translation?

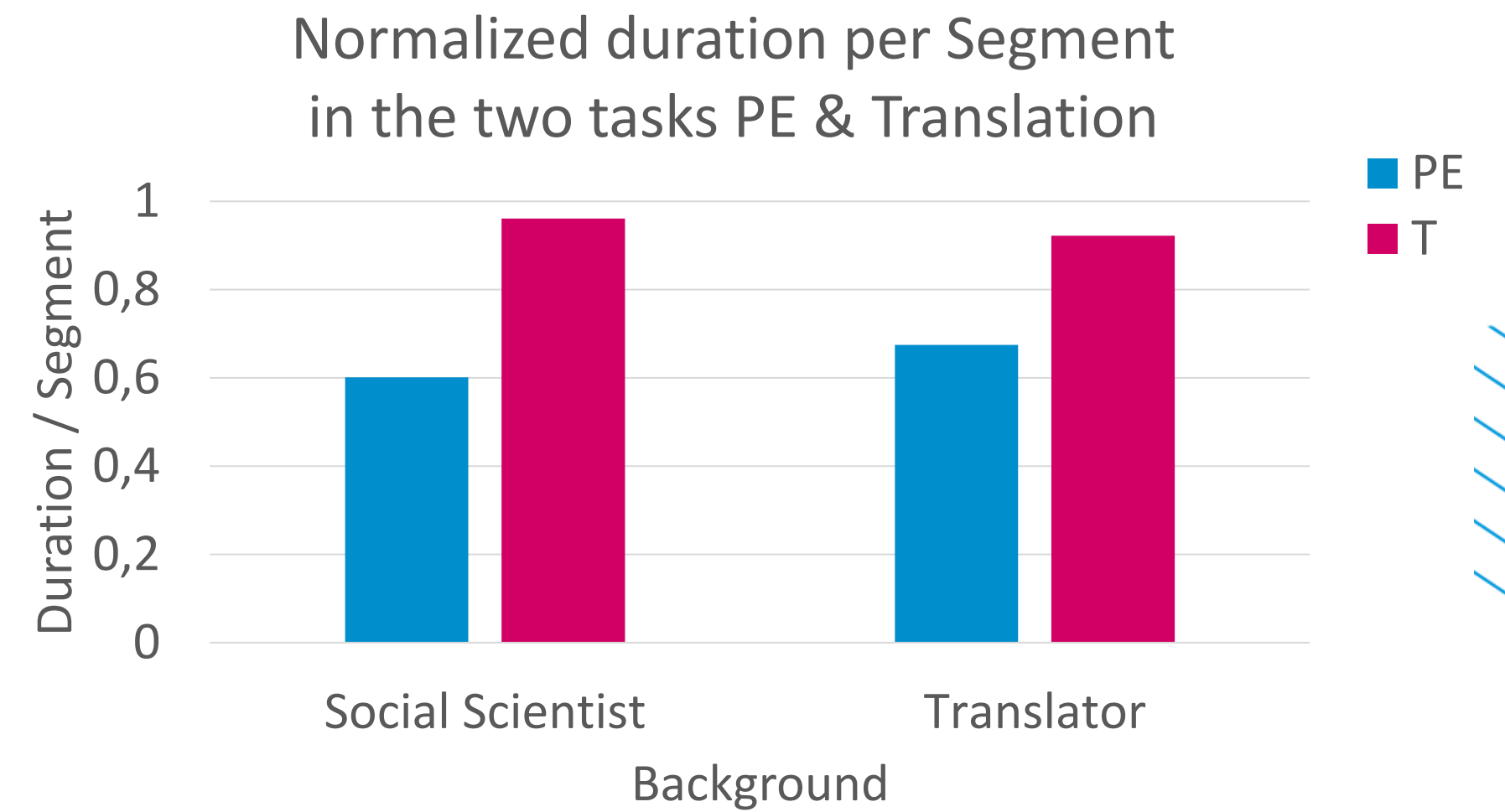


# Temporal Effort per Task & Group

average duration in minutes

Group	Both Tasks	Translation	Post-Editing (PE)	PE %
<b>Social Scientist (N=16)</b>	<u>148 min</u> (2,5 h)	<b>110 min</b> Min: 82 Max: 174 SD: 26	<u>38 min</u> Min: 17 Max: 59 SD: 14	25 %
<b>Translator (N=16)</b>	<u>147 min</u>	<u>105 min</u> Min: 59 Max: 176 SD: 28	<b>42 min</b> Min: 17 Max: 65 SD: 13	<b>29 %</b>
<i>Tokens (words, etc.)</i>	1487	983	504	34 %
<i>Segments</i>	178	115	63	35 %

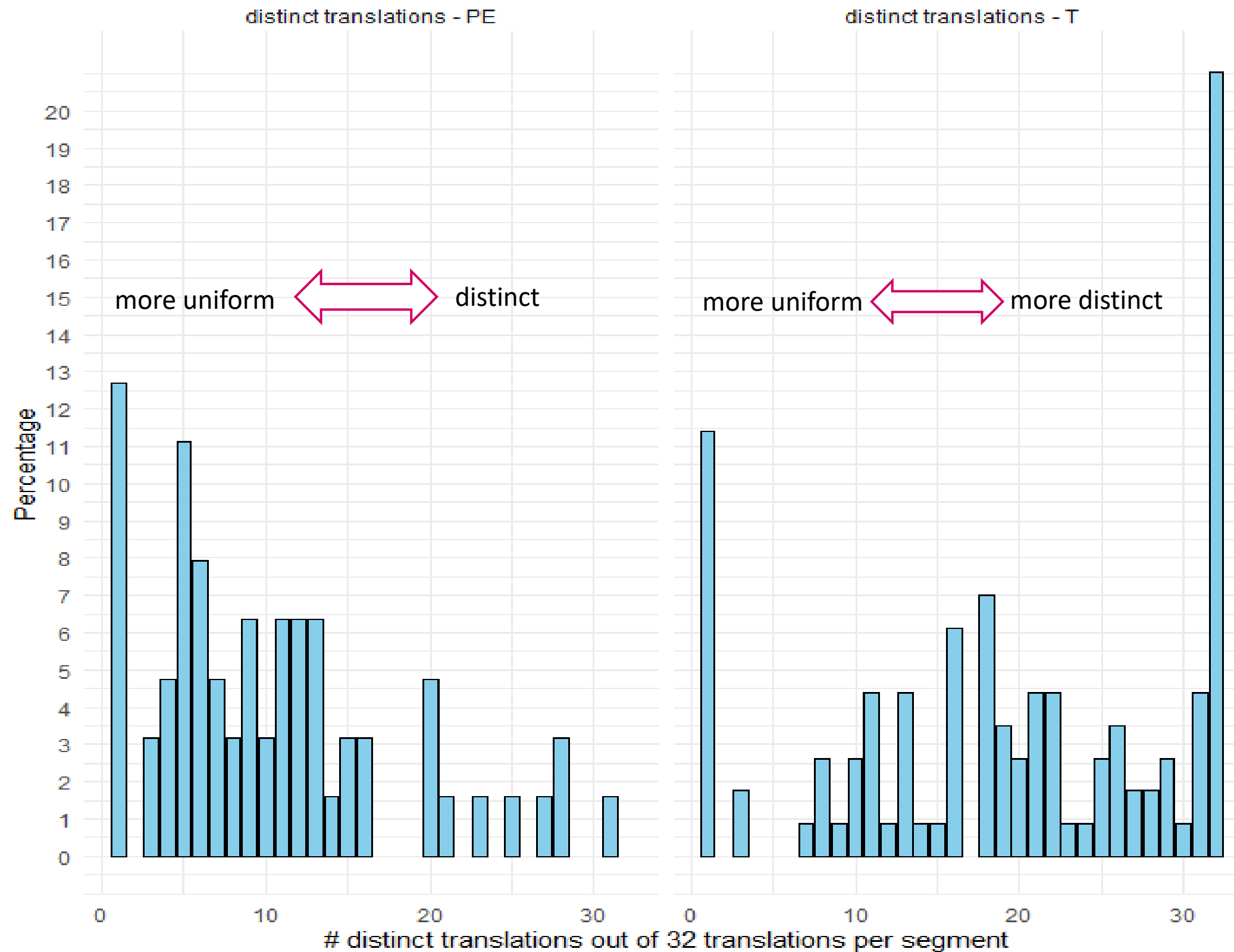
Purely descriptive  
Raw time in Translog-II  
Not cleaned yet: outliers,  
breaks, normalize duration



# Comparison of distinct translations PE vs. T

based on 32 translations for each segment, both groups together

row =  
segment

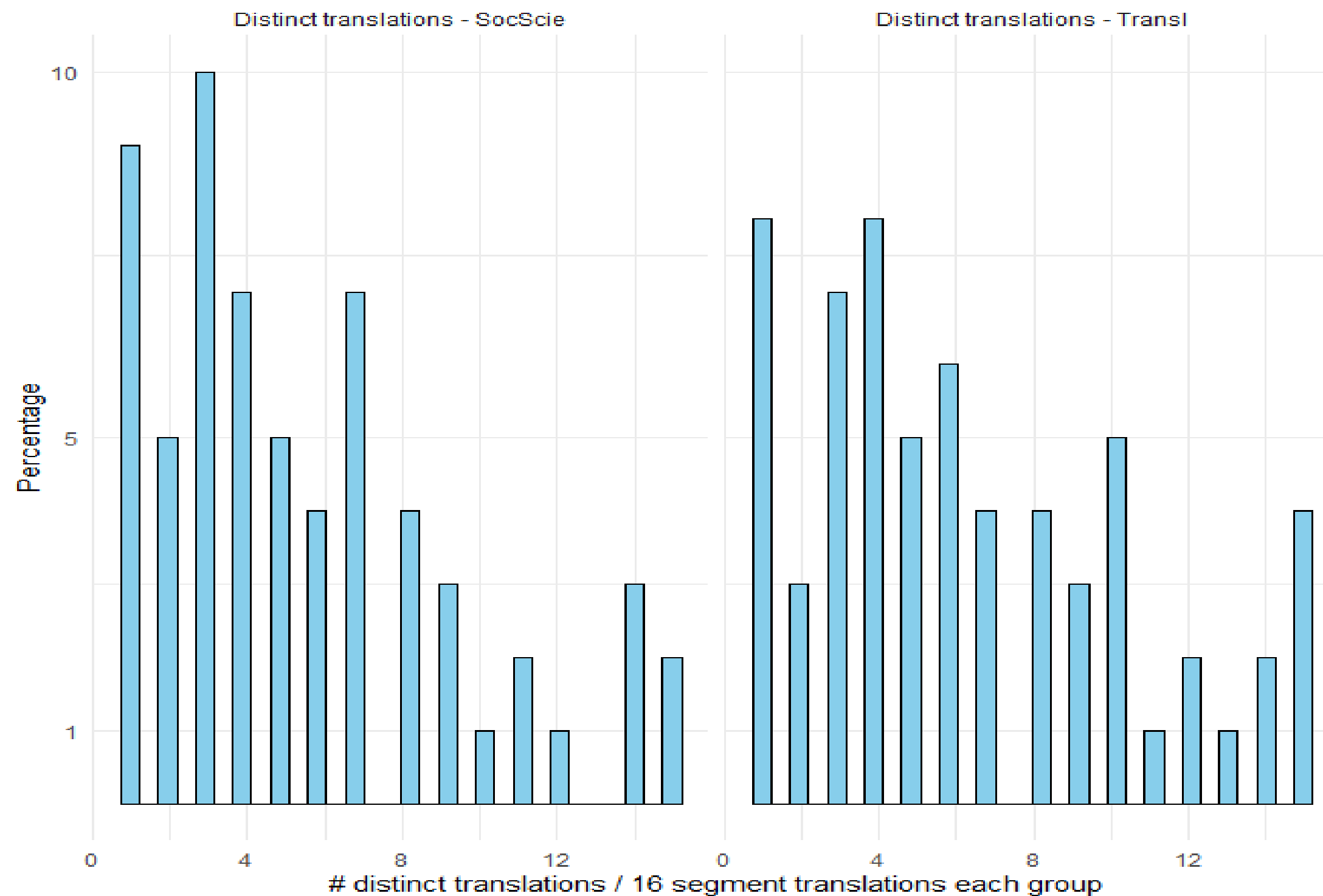


	Now we would like to know to what extent the following statements describe you.
a	Risk-taking is exciting to me.
b	When I have free time, I want to do things that are a little scary.
c	Creating an adventure as I go is much more appealing than a planned adventure.
d	I prefer friends who are excitingly unpredictable.
1	Does not describe me at all
2	Barely describes me
3	Somewhat describes me

- **PE:** more *uniform* translations; *priming* by machine translation
- **T:** about 20% of segments with 32 distinct translations; more *distinct* translations per segment, → more individual decision-making
- Wilcoxon rank sum test,  $p < 0.01$
- *Limitation:*
  - Pre-processing: punctuation/capitalization removed
  - $n = 63$  segments in PE,  $m = 114$  segments in T, different items
  - distinct translations -> differences can be of any size

# Focus on post-editing task

Comparison of distinct translations - translators vs. social scientists



- n = 63 segments
- pattern not statistically different between translator groups
- Similar results for the translation task

## Example 1 PE – *Creating\_an\_adventure\_as\_I\_go*

2.	Now we would like to know to what extent the following statements describe you.	Nun würden wir gerne wissen, inwieweit die folgenden Aussagen auf Sie zutreffen.
a	Risk-taking is exciting to me.	Risikobereitschaft ist für mich aufregend.
b	When I have free time, I want to do things that are a little scary.	Wenn ich freie Zeit habe, möchte ich Dinge tun, die ein bisschen unheimlich sind.
c	<u>Creating an adventure as I go is much more appealing than a planned adventure.</u>	<u>Ein Abenteuer auf eigene Faust zu erleben ist viel reizvoller als ein geplantes Abenteuer.</u>
d	I prefer friends who are excitingly unpredictable.	Ich bevorzuge Freunde, die aufregend unberechenbar sind.
1	Does not describe me at all	Beschreibt mich überhaupt nicht
2	Barely describes me	Beschreibt mich fast gar nicht
3	Somewhat describes me	Beschreibt mich einigermaßen
4	Neutral	Neutral
5	Generally describes me	Beschreibt mich im Allgemeinen
6	Mostly describes me	Beschreibt mich größtenteils
7	Completely describes me	Beschreibt mich voll und ganz



First results - examples

# Example 1 PE – distinct translation units

*Creating\_an\_adventure\_as\_i\_go*

... is much more appealing than a planned adventure.

MT: ... ist viel reizvoller als ein geplantes Abenteuer.

## Correct (V) meaning in context

### 1. creating

→ experiencing  
[erleben, unternehmen]

### 2. as\_i\_go

→ spontaneous, unplanned  
[spontan, ungeplant]

→ for me/myself  
[für mich, auf mich]

## Mistranslation (Mis) awkward (Awk)

### 1. gestalten / (er)schaffen / geraten

→ craft, design / fabricate / get into

### 2. auf\_eigene\_Faust / selbst entdeckt

→ on my own /  
taking it into my own hands

	Count	Distinct	Error	Mis	Awk	V
<b>MT</b>	<b>2</b>	<b>2</b>		<b>1</b>	<b>0</b>	<b>0</b>
1 Ein_Abenteuer_auf_eigene_Faust_zu_erleben	1	DeepL	Mis			
<b>Social Scientist</b>	<b>16</b>	<b>9</b>		<b>9</b>	<b>2</b>	<b>5</b>
1 Ein_Abenteuer_auf_eigene_Faust_zu_erleben	7		Mis			
3 Ein_selbst_entdecktes_Abenteuer	1		Mis			
4 Spontan_ein_Abenteuer_auf_eigene_Faust_zu_gestalten	1		Mis			
5 Ein_Abenteuer_selbst_zu_erschaffen	1		Awk			
6 Ein_spontanes_Abenteuer_zu_schaffen	1		Awk			
7 Ein_spontanes_Abenteuer_zu_erleben	2		V			
8 Ein_Abenteuer_spontan_zu_unternehmen	1		V			
9 Ein_spontanes_Abenteuer_für_mich	1		V			
10 Ein_ungeplantes_Abenteuer_zu_erleben	1		V			
<b>Translator</b>	<b>16</b>	<b>9</b>		<b>6</b>	<b>2</b>	<b>8</b>
1 Ein_Abenteuer_auf_eigene_Faust_zu_erleben	4		Mis			
1 Ein_Abenteuer_auf_eigene_Faust	1		Mis			
11 Ein_Abenteuer_zu_erleben_und_dabei_zu_gestalten	1		Mis			
12 Ein_Abenteuer_spontan_zu_erschaffen	1		Awk			
13 Unterwegs_ungeplant_in_ein_Abenteuer_zu_geraten	1		Awk			
7 Ein_spontanes_Abenteuer_zu_erleben	1		V			
14 Ein_spontanes_Abenteuer	3		V			
15 Ein_Abenteuer_spontan_zu_erleben	2		V			
16 Ein_Abenteuer_einfach_auf_mich_zukommen_zu_lassen	1		V			
17 Spontan_erlebte_Abenteuer_für_mich	1		V			
<b>Total</b>	<b>32</b>	<b>16</b>		<b>15</b>	<b>4</b>	<b>13</b>
	<b>+2 MT</b>	<b>+1</b>		<b>+1</b>		



## Example 2 PE – *strongly disagree*

<b>1.</b>	<b>Please indicate to what extent you agree or disagree with each of the following statements.</b>	Bitte geben Sie an, inwieweit Sie jeder der folgenden Aussagen zustimmen oder nicht zustimmen.
a	<b>There are people in my life who really care about me.</b>	Es gibt Menschen in meinem Leben, die sich wirklich um mich kümmern.
b	<b>I feel &lt;&lt;close to&gt;&gt; the people in my local area.</b>	Ich fühle mich den Menschen in meiner Umgebung nahe.
1	<b>Strongly agree</b>	Stimme voll und ganz zu
2	<b>Agree</b>	Stimme zu
3	<b>Neither agree nor disagree</b>	Weder zustimmen noch ablehnen
4	<b>Disagree</b>	Nicht einverstanden
5	<b>Strongly disagree</b>	Stimme überhaupt nicht zu
<b>6.</b>	<b>And what about the following statements?</b>	Und was ist mit den folgenden Aussagen?
a	<b>&lt;&lt;The people&gt;&gt;, and not politicians, should make our most important policy decisions.</b>	Die Menschen und nicht die Politiker sollten unsere wichtigsten politischen Entscheidungen treffen.
b	<b>Politicians talk too much and take too little action.</b>	Die Politiker reden zu viel und handeln zu wenig.
c	<b>There is a conflict between the &lt;&lt;ordinary people&gt;&gt; and &lt;&lt;those in power&gt;&gt; in [country].</b>	Es gibt einen Konflikt zwischen den einfachen Menschen und den Machthabern in [Land].
d	<b>Business leaders make their money at the expense of ordinary people.</b>	Wirtschaftsführer verdienen ihr Geld auf Kosten der einfachen Menschen.
e	<b>It is better to rely on the opinions of experts than the experiences of ordinary people.</b>	Es ist besser, sich auf die Meinung von Experten zu verlassen als auf die Erfahrungen der einfachen Menschen.
1	<b>Strongly agree</b>	Stimme voll und ganz zu
2	<b>Agree</b>	Stimme zu
3	<b>Neither agree nor disagree</b>	Weder zustimmen noch ablehnen
4	<b>Disagree</b>	Nicht einverstanden
5	<b>Strongly disagree</b>	Starke Ablehnung

<b>5.</b>	<b>To what extent do you agree or disagree with the following statements?</b>	Inwieweit stimmen Sie den folgenden Aussagen zu oder nicht zu?
a	<b>People like me don't have any say about what the government does.</b>	Menschen wie ich haben kein Mitspracherecht bei dem, was die Regierung tut.
b	<b>I don't think the government cares much what people like me think.</b>	Ich glaube nicht, dass sich die Regierung sehr dafür interessiert, was Menschen wie ich denken.
1	<b>Strongly agree</b>	Stimme voll und ganz zu
2	<b>Agree</b>	Stimme zu
3	<b>Neither agree nor disagree</b>	Weder zustimmen noch ablehnen
4	<b>Disagree</b>	Stimme nicht zu
5	<b>Strongly disagree</b>	Stimmt überhaupt nicht zu

### Translation

<b>7.</b>	<b>The next question is about the effect of social benefits and services on different areas of life in [country]. By social benefits and services we are thinking about things like health care, pensions and social security.</b>
	<b>To what extent you agree or disagree that social benefits and services in [country] ...</b>
a	<b>... place too great a strain on the economy?</b>
b	<b>... lead to a more equal society?</b>
1	<b>Strongly agree</b>
2	<b>Agree</b>
3	<b>Neither agree nor disagree</b>
4	<b>Disagree</b>
5	<b>Strongly disagree</b>

# Example 2 - T vs PE – distinct translation units

## Strongly (disagree)

### MT output for *disagree*

#### DeepL

- Stimme\_überhaupt\_nicht
- stimmt\_überhaupt\_nicht
- starke\_Ablehnung

Translation (Seg 51)	Count	Distinct
1		
13		
<b>Social Scientist (T)</b>	<b>16</b>	<b>6</b>
1 überhaupt	8	
2 ganz_und_gar	1	
3 voll_und_ganz	2	
4 gar	2	
5 stark	2	
6 Vehementer [Widerspruch]	1	
7		
<b>Translator (T)</b>	<b>16</b>	<b>8</b>
1 überhaupt	6	
2 ganz_und_gar	3	
3		
4 gar	1	
5		
6 vehement	1	
8 völlig	2	
10 – ausdrücklich /absolut/komplett	3	
12		
<b>Total</b>	<b>32</b>	<b>12</b>

## Post-Editing (Seg 9, 51, 63)

	Count	Distinct
<b>MT</b>	<b>2</b>	<b>2</b>
überhaupt	1	
<b>Social Scientist (PE)</b>	<b>16</b>	<b>4</b>
überhaupt	13	
voll_und_ganz	1	
Vehemente [Ablehnung]	1	
Vollkommen	1	
<b>Translator (PE)</b>	<b>16</b>	<b>2+2</b>
Überhaupt	15	
ganz_und_gar	1	
[Seg 63: Lehne_voll_und_ganz_ab]	[1]	
[Seg 63: starke_Ablehnung]	[1]	
<b>Total</b>	<b>32+2</b>	<b>5+2</b>

# Example T vs PE – distinct translation units

(Strongly) disagree

DeepL: *Stimme/stimmt\_überhaupt\_nicht\_zu* & *starke\_Ablehnung*

Translation (Seg 51)	Count	Distinct	Post-Editing (Seg 9)	Count	Distinct	Post-Editing (Seg 51)	Count	Distinct	Post-Editing (Seg 63)	Count	Distinct
			MT			MT			MT		
1			<i>Stimme_nicht_zu</i>	1		<i>Stimmt_nicht_zu</i>	1				
2											
3			Lehne_ab	1							
4									Ablehnung	1	
<b>Social Scientist</b>	<b>16</b>	<b>4</b>	<b>S</b>	<b>16</b>	<b>3</b>	<b>S</b>	<b>16</b>	<b>4</b>	<b>S</b>	<b>16</b>	<b>4</b>
1 <i>Stimme_nicht_zu</i>	10		<i>Stimme_nicht_zu</i>	13		<i>Stimme_nicht_zu</i>	6		<i>Stimme_nicht_zu</i>	10	
2						<i>Stimmt_nicht_zu</i>	7		<i>Stimmt_nicht_zu</i>	3	
3 Lehne_ab	4		Lehne_ab	2		Lehne_ab	2		Lehne_ab	2	
4			Ablehnung	1		Ablehnung	1		Ablehnung	1	
5 Trifft_nicht_zu	1										
7 Widerspruch	1										
<b>Translators</b>	<b>16</b>	<b>6</b>	<b>T</b>	<b>16</b>	<b>3</b>	<b>T</b>	<b>16</b>	<b>3</b>	<b>T</b>	<b>15</b>	<b>3</b>
1 <i>Stimme_nicht_zu</i>	7		<i>Stimme_nicht_zu</i>	14		<i>Stimme_nicht_zu</i>	13		<i>Stimme_nicht_zu</i>	13	
6 <i>Ich_stimme_nicht_zu</i>	4		<i>Ich_stimme_nicht_zu</i>	1		<i>Ich_stimme_nicht_zu</i>	1		<i>Ich_stimme_nicht_zu</i>	1	
2						<i>Stimmt_nicht_zu</i>	2				
4									Ablehnung	1	
7 Widerspreche	2										
8 Ich_bin_anderer_Meinung	1										
9 Ich_lehne_ab	1										
10 Lehne_ich_ab	1										
11			Die_Aussage_trifft_nicht_zu	1							
<b>Total</b>	<b>32</b>	<b>9</b>		<b>32+2</b>	<b>5</b>	<b>Gesamtergebnis</b>	<b>32+2</b>	<b>5</b>	<b>Gesamtergebnis</b>	<b>33</b>	

# Research questions and activities

– relevant both for social sciences and translation studies

Next steps:

- **Phase III** - Survey data collection – will start end of January
- **Error codes** and **error types** grouped by translator background (incl. AI) and tasks (from scratch and Post-Editing)
- **Translation alternatives** grouped by translator background and tasks (from scratch and Post-Editing)
- Combining error coding and **translation process data** (keylogging, research, comments)
- Combining error coding and **survey results**

Deliverables:

- Presenting results at social sciences conferences as well as translation conferences (Summer)
- Organizing an interdisciplinary online workshop on the data and related research questions (Fall)
- Feeding results into guidelines, recommendations, and online trainings
- Making data openly available to research community

# Thank you for your attention!

[Link](#) to the TransBack project

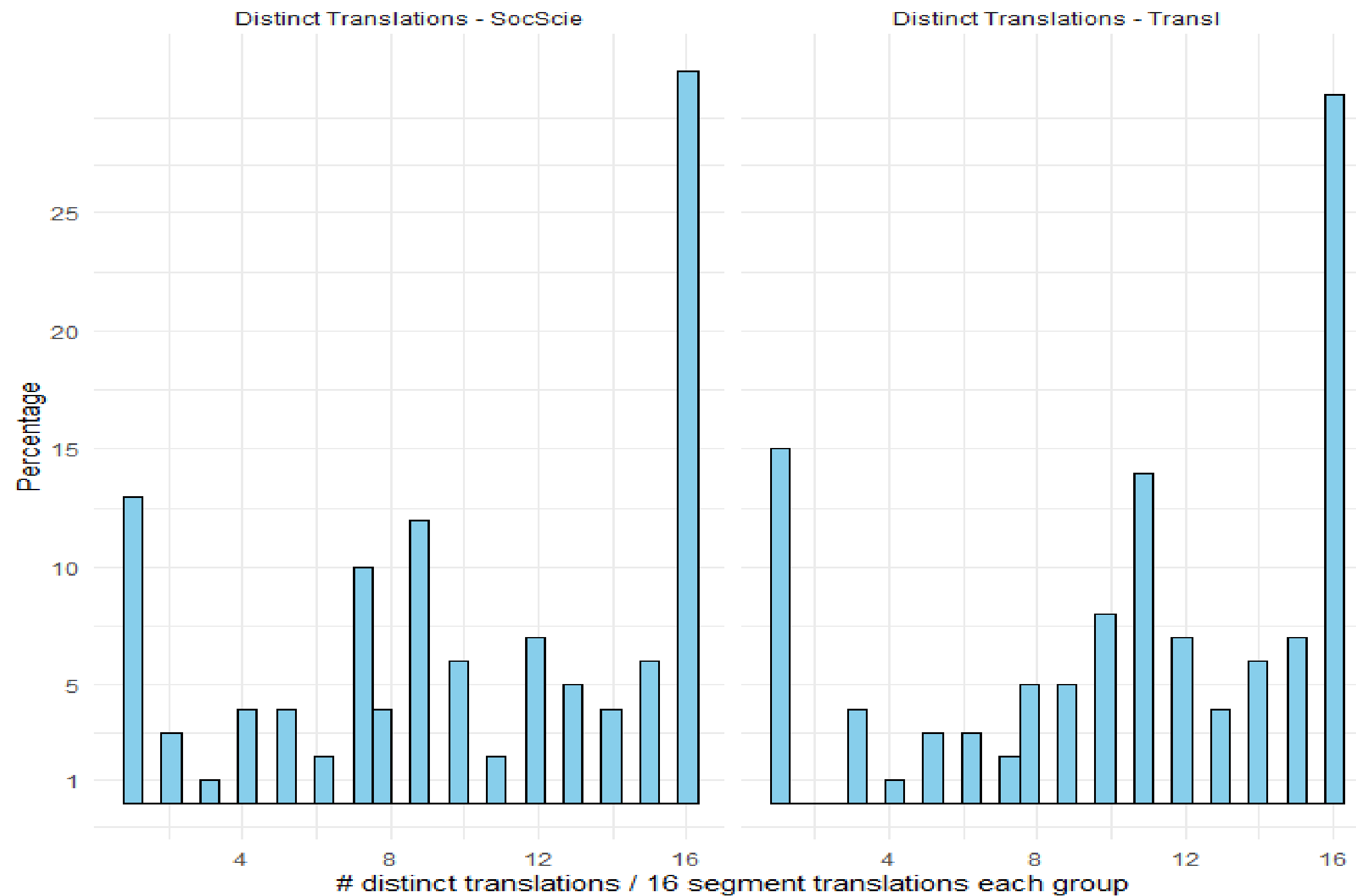
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# Appendix: Focus on from scratch translation

Comparison of distinct translations - translators vs. social scientists



- n = 114 segments
- pattern not statistically different between translator groups