

Introduction

RESPONSE STYLES AND BEHAVIORS IN SURVEY RESEARCH

- Many studies (Marradi & Gasperoni, 2002; Pitrone, 2005; Marradi & Macri, 2012) show the presence of *response set* or distortions in questionnaire responses, already in one-to-one administration mode.
- These phenomena are difficult to control if the administration is direct and one-to-one but are even more difficult when administration is one-to-many or online (web-surveys).
- In the international large-scale studies, ordinal scales are often treated as cardinal or quasi-cardinal scales, and are used to construct factors using factorial techniques and estimating the reliability of the scale (in general estimated by Cronbach's α).

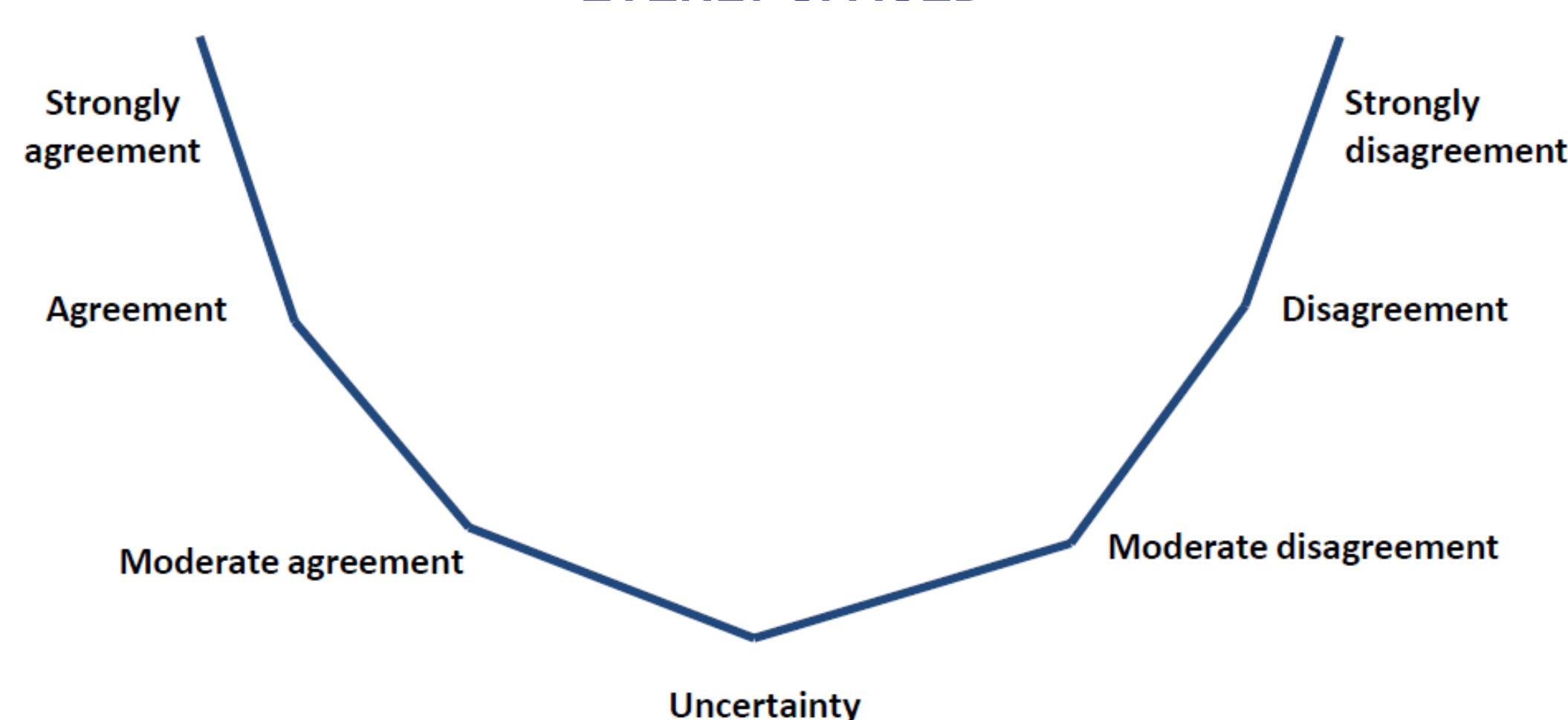
THE CORRESPONDENCE ANALYSIS TO TEST THE STUDENTS' RESPONSE STYLE

This approach assumes that the categories are perceived by respondents as equidistant from each other even though studies over time have shown that this is not usual.

When there are categories, because there are not intersubjective and replicable units, it is preferable to use the correspondence analysis approach rather than using factorial and principal component analyses.

The categories of Likert scales are not evenly perceived by respondents and omitted responses mean, especially where there is no neutral/intermediate response category but the respondent is required to polarize or negatively or positively. The correspondence analysis is a factorial technique that provides synthetic representations of large arrays of data. The matrix that is tested for matches is a contingency table between two category variables. The representations are geometric; the proximity between the dots is interpreted as semantic proximity. Applying the correspondence analysis two factors are extracted interpreted such as the representation of the agreement-disagreement dimension (first factor) and the intensity of attitude (second factor).

THE TYPE OF DIAGRAM THAT WOULD PRODUCE THE AC IF THE RESPONSE CATEGORIES TO LIKERT SCALES WERE EVENLY SPACED



Adopted from Marradi e Macri, 2012.

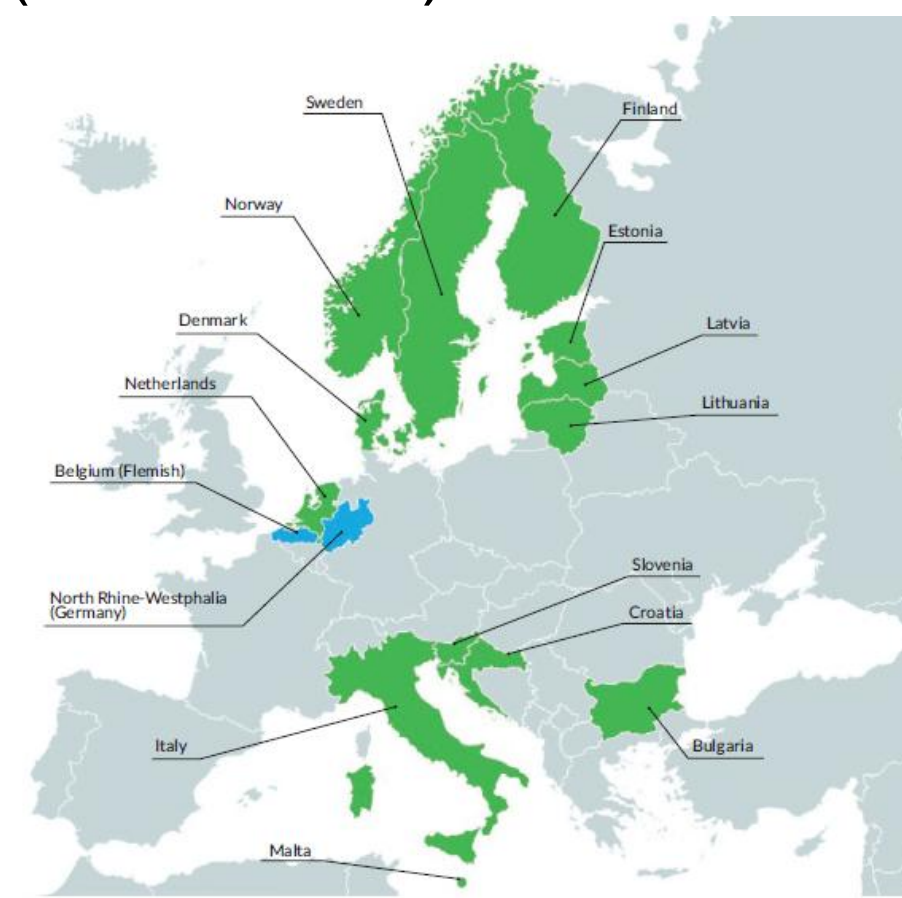
Methods

What are the response-styles of 13-year-old students to a questionnaire focuses on asking about more or less complex aspects of Europe, their identity as European citizens and their future?

- ICCS on civic and citizenship education.
- 94.000 students from 8th grade of 3.800 schools of 24 countries.
- Regional student instruments consisting of questionnaire-type items. These instruments are only administered in countries participating in the European and Latin American modules (15 minutes)

SAMPLE 52.788 students

- The European module is administered in 14 countries and a german Land in one-to-many mode by an administrator to students of the sampled classrooms.



ANALYSIS

Correspondence analysis to study the students' response style on 3 questions of the European module: Question **ES3G01**, **ES3G03** and **ES3G07** by using STATA software.

ES3G01: STUDENTS' PERCEPTIONS OF THEIR EUROPEAN IDENTITY

How much do you agree or disagree with the following statements?

Likert scale 4 modes («Strongly agree», «Agree», «Disagree», «Strongly disagree»)

- I see myself as European
- I am proud to live in Europe
- I feel part of Europe
- I see myself first as a citizen of Europe and then as a citizen of the world
- I feel part of the European Union
- I am proud that my country is a member of the European Union

ES3G03: STUDENTS' VIEWS ON EUROPEAN CITIZENS' FREEDOM TO RESIDE AND WORK WITHIN EUROPE

How much do you agree or disagree with the following statements related to the possibilities for European citizens to work in other European countries?

Likert scale 4 modes («Strongly agree», «Agree», «Disagree», «Strongly disagree»)

- Allowing citizens of European countries to work anywhere in Europe is good for the European economy
- Citizens of European countries should be allowed to work anywhere in Europe
- Allowing citizens of European countries to work anywhere in Europe helps to reduce unemployment
- Citizens of European countries should be allowed to work in another European country only if their skills are needed there
- "Citizens of European countries who wish to work in another country should be allowed to take only the jobs that no one in the other country wants to do
- Only a limited number of people should be allowed to move for work from one European country to another

ES3G07: STUDENTS' PERCEPTIONS OF THE FUTURE OF EUROPE

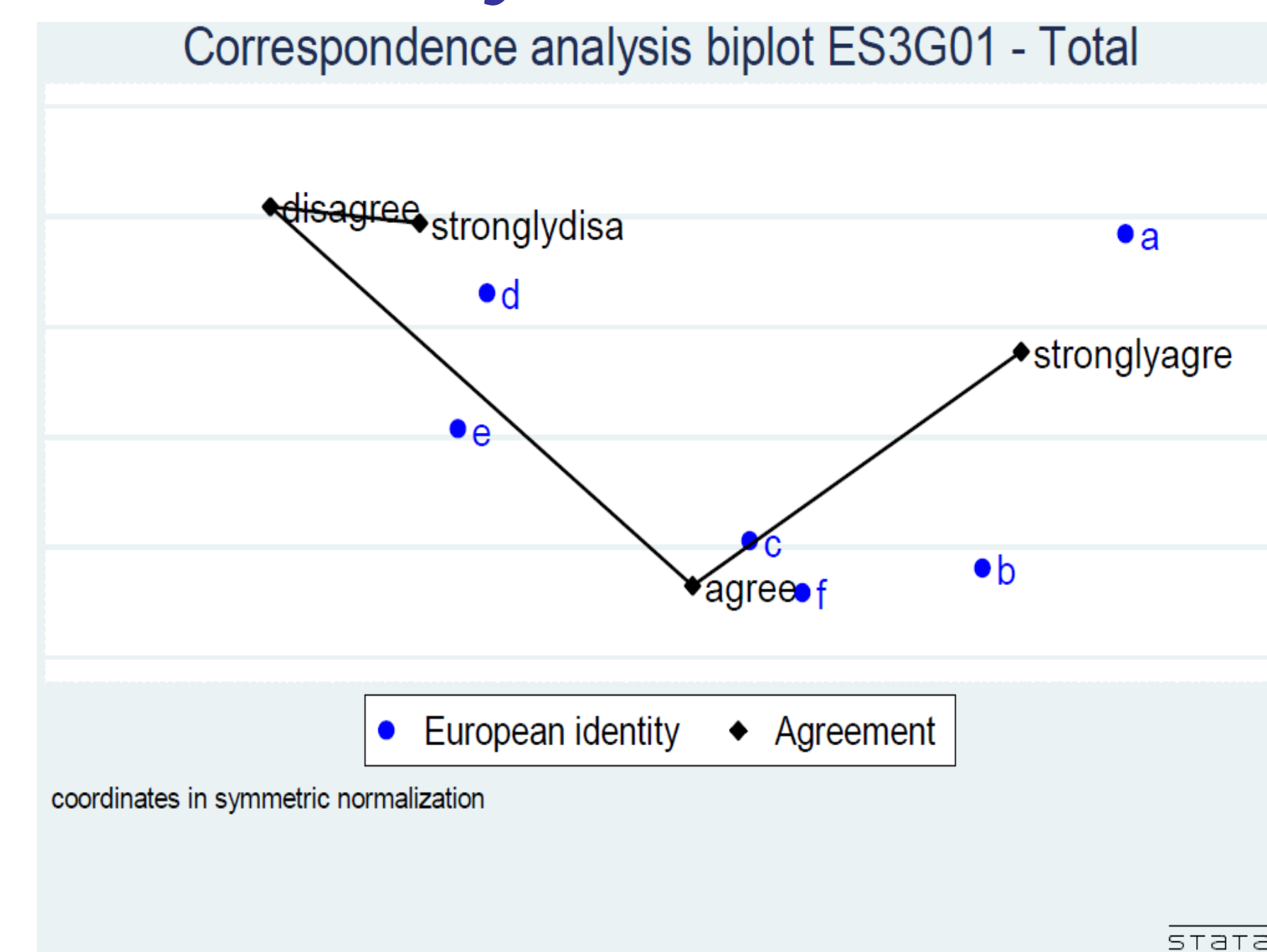
What is Europe likely to look like in 10 years?

Ordered category scale 4 steps (Original: «Very likely», «Likely», «Unlikely», «Very unlikely»)

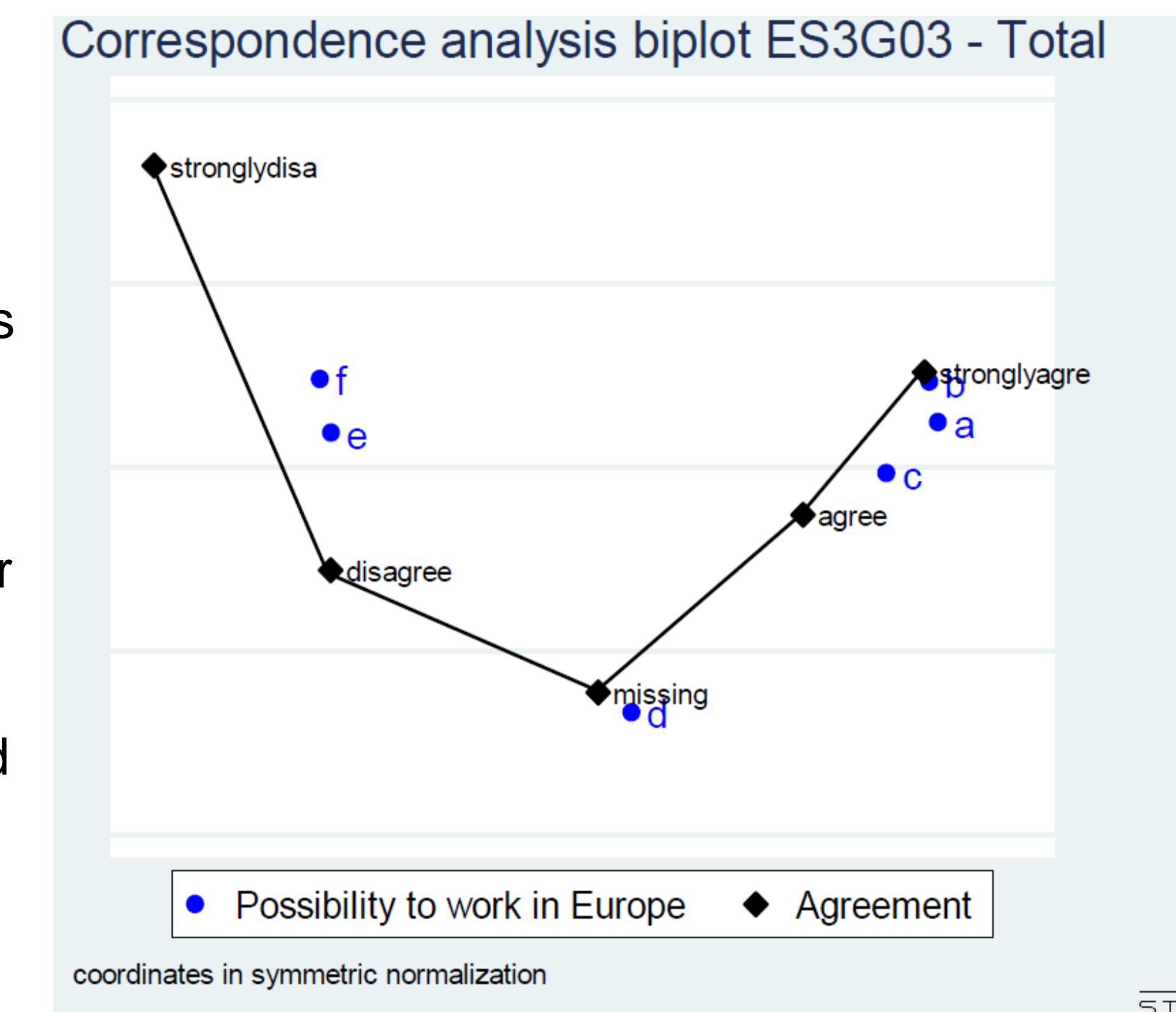
- There will be stronger cooperation among European countries
- There will be greater peace across Europe
- Terrorism will be more of a threat all across Europe
- Europe will be more influenced by non-European powers like China, India, and the United States
- The economy will be weaker in all European countries;
- There will be less air and water pollution in Europe
- There will be a rise in poverty and unemployment in Europe
- Democracy will be strengthened across Europe

Results

The study on Likert scales

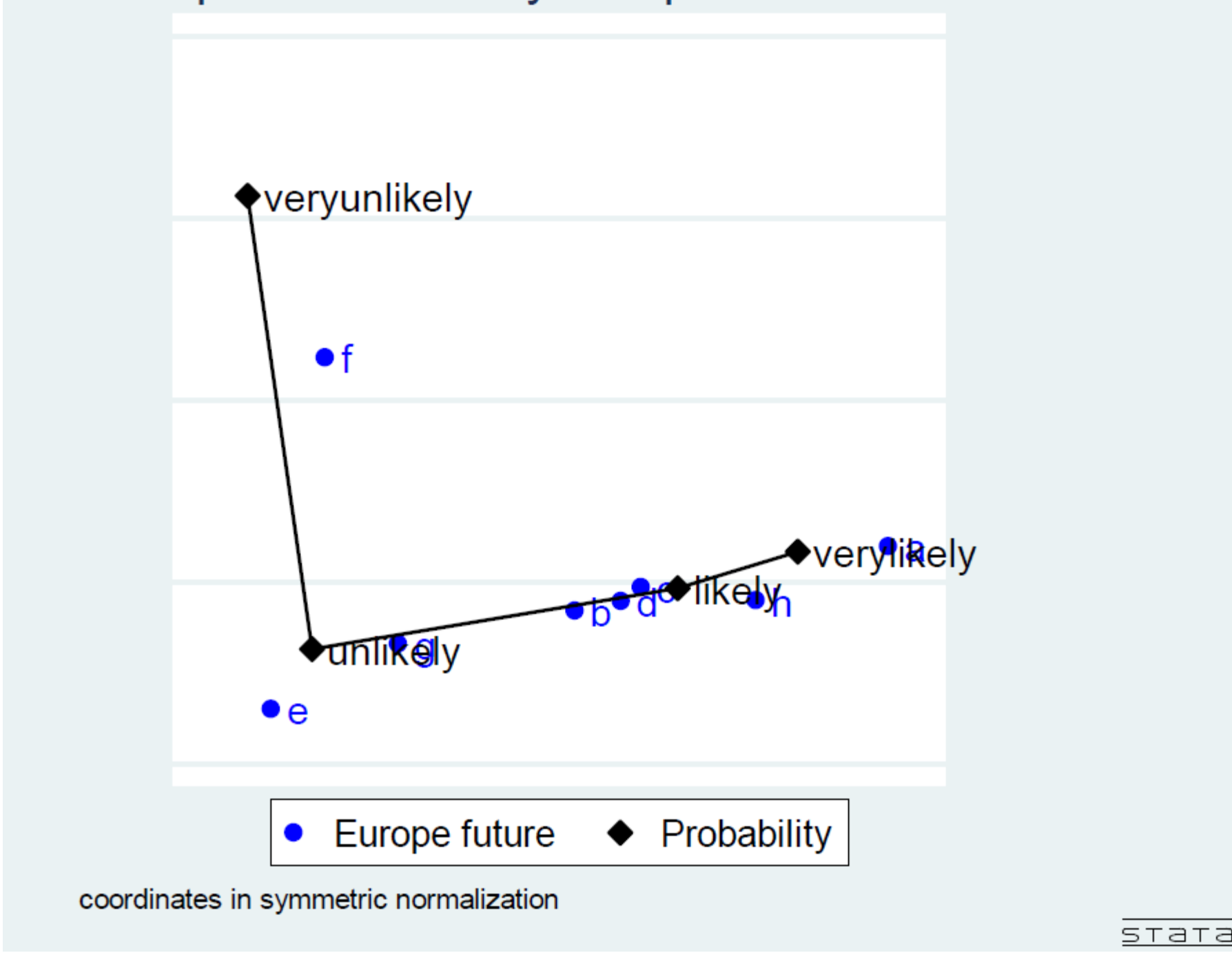


The analysis on the question ES3G01 (on the left) for the total of the students from all the countries shows that the two categories of disagreement overlapped; while for the question ES3G03 (on the right) there is a good equidistance between all the categories.

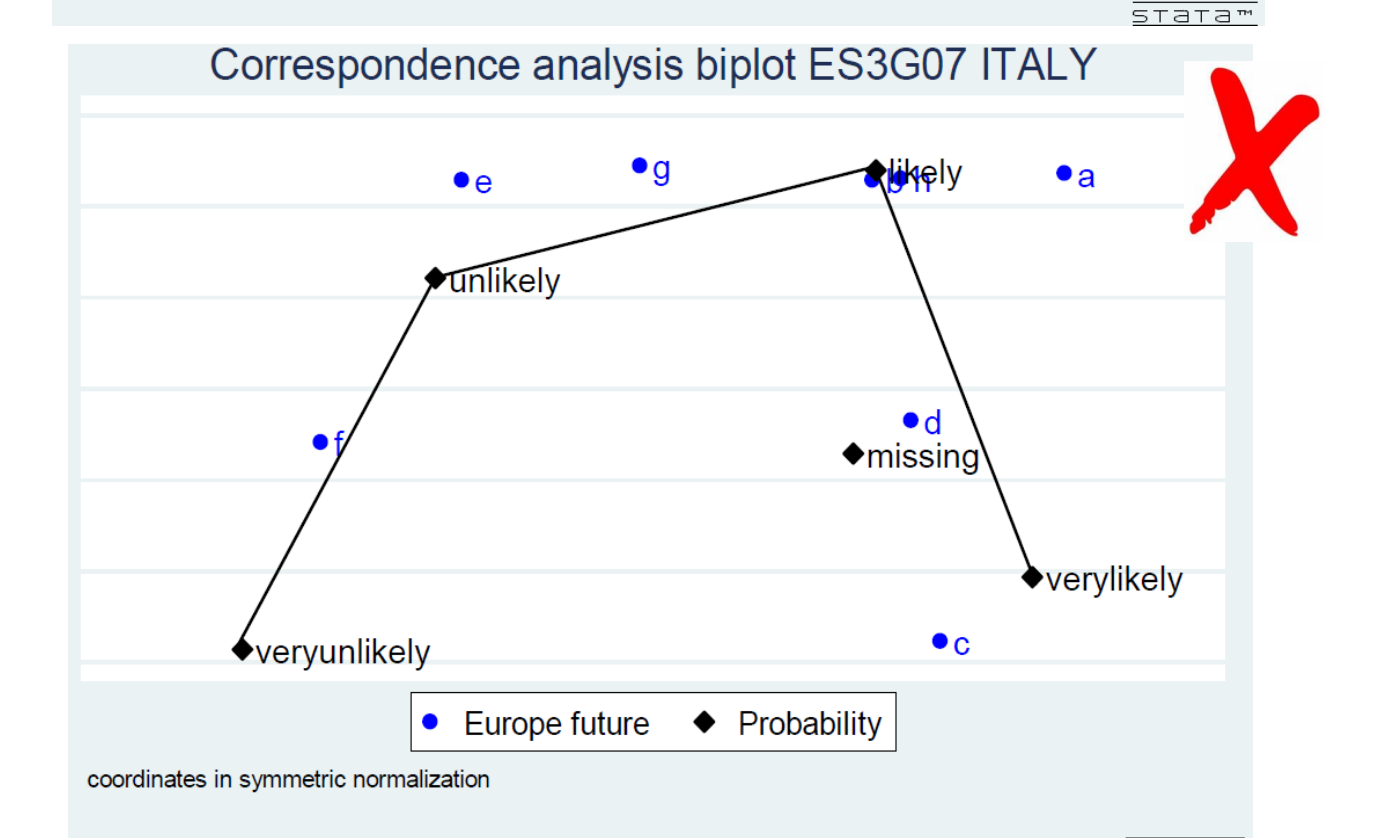
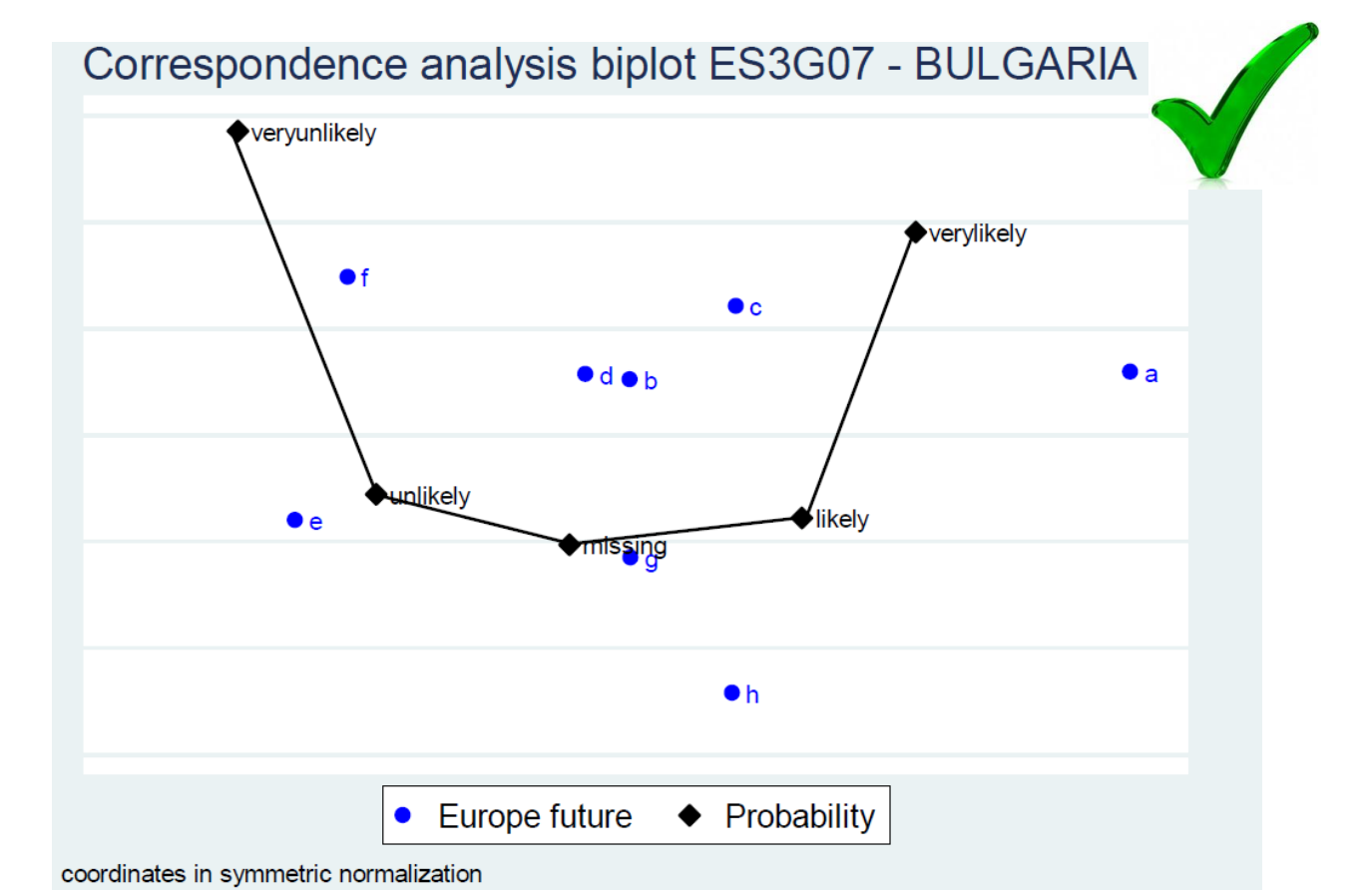


Ordinal scale on probability

Correspondence analysis biplot ES3G07 Total



The analysis on the question ES3G07 (on the right) show that there is a stronger distance between the category "very unlikely" and "unlikely", while the other categories don't show a good distance. The analysis per countries show a very good equidistance for the responses from the students of the following countries: Bulgaria, Croatia, Latvia and Lithuania. The following plots underline the students' response differences between Bulgaria and Italy.



Conclusions

The equivalence between the response categories is guaranteed where questions are on facts or concrete aspects.

Question of the **double ermeneutic circle**.

Aware secondary data analysis of data available to researchers. Pay attention to the semantic overlap of items, especially if the respondents cannot avail of the presence of the researcher/administrator.

More response ability (question understanding ?) when the question is about facts rather than values.

Do students understand how to respond when response modes are on probability? How much data collected with this type of question can be trusted?

Bibliography

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