Nonresponse in International Perspective

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umt

Two Studies

- ## International trends in Nonresponse
  - ### de Leeuw & de Heer

- ## International comparison, interviewers and Nonresponse
  - ### Hox & de Leeuw

- Both in: R.M. Groves, D.A. Dillman, J.L. Eltinghe & R.J.A. Little (eds.) (2001). *Survey Nonresponse*. New York: Wiley.

Trends in Nonresponse: Available Data

- **Official Statistics Time series**
  - Nonresponse questionnaire
- **16 countries:**
  - Australia, Belgium, Canada, Germany (East & West), Denmark, Finland, France, Hungary, Italy, The Netherlands, Poland, Sweden, Slovenia, Spain, UK, USA
- **10 surveys:**
  - Labour Force Survey, Family Expenditure, Health, National Travel, Income, Living Conditions, Consumer Sentiments, Victimization, Housing, General Household Survey

Impressive Data Set, but…

		SURVEY										
		1 Labour Force	2 Family expenditure	4 Housing	5 Income	6 Health	7 General household	8 National Travel	9 Living Condition	10 Consumer Sentiment	11 ictimization(ERV)	Total
COUNTR	1 Australia	7	2	1		1						11
	2 Belgium	15	5									20
	3 Canada	8	3			2						13
	5 Denmark	15	7					8				30
	6 Finland	15	6		13							34
	7 France	6	3									9
	8 Hungary	6	14									20
	11 Italy	11	1									12
	13 Poland	6	16									22
	14 Sweden	19	5		19				19			62
	15 Slovenia	10	6							3		19
	16 Spain	11	2									13
	17 UK	15	15				14	9				53
	18 USA	15	11		11	15					15	67
	19 The Netherlands	10				12		15	13	15	6	71
	41 Former West Ger	8										8
	42 Former East Ger	7										7
Total		184	96	1	43	30	14	32	32	18	21	471

Analysis Decisions

- Keep as many surveys as possible:
    - 8 surveys (at least data for two countries):
- Multilevel logistic model
    - For cross-classified data
    - Year as lowest level
    - Year recoded as: 1998=0, 1997=-1, ….

Analysis Decisions

- "We all believe strongly that response rates are declining and have been declining for some time. Part of the problem is *locating* respondents, and part of the problem is getting *cooperation*" (Bradburn, 1992)
- Therefore 3 dependent variables
  - Response rate
  - Non-contact rate
  - Refusal rate

Research Questions

- Does nonresponse differ between countries?
- Does nonresponse increase over time?
- Can we explain/model differences?

Differences between Countries

Country by Survey: Response trends over years. (logit, st. errors).
Dependent variables: Response Rate, Non-Contact Rate, and Refusal Rate.

	Response	Non-Contact	Refusal
Fixed Effect:			
Intercept	1.48 (.20)	-2.72 (.14)	-2.31 (.31)
Random Effect:			
Var. Country	0.33 (.12)	0.18 (.07)	0.64 (.24)
Var. Survey	0.17 (.09)	$0.005 (.006)^{ns}$	0.44 (.23)

First Conclusions

- Countries differ in:
  - Response rates
  - Non-contact rates
  - Refusal rates
- Surveys differ in:
  - Response rates
  - Refusal rates
- Surveys do *not* differ in:
  - Non-contact rate

Increase over Time

Country by Survey: Response trends over years. (logit, st. errors).
Dependent variables: Response Rate, Non-Contact Rate, and Refusal Rate.

	Response	Non-Contact	Refusal
Fixed Effect:			
Intercept	1.35 (.21)	-2.56 (.14)	-2.14 (.31)
Year	-0.02 (.01)	0.03 (.01)	0.03 (.01)

More Conclusions

- Negative trend over time
- Response decreases
    - Countries differ in overall response rate
    - Speed of decrease differs from country to country

Response across Years
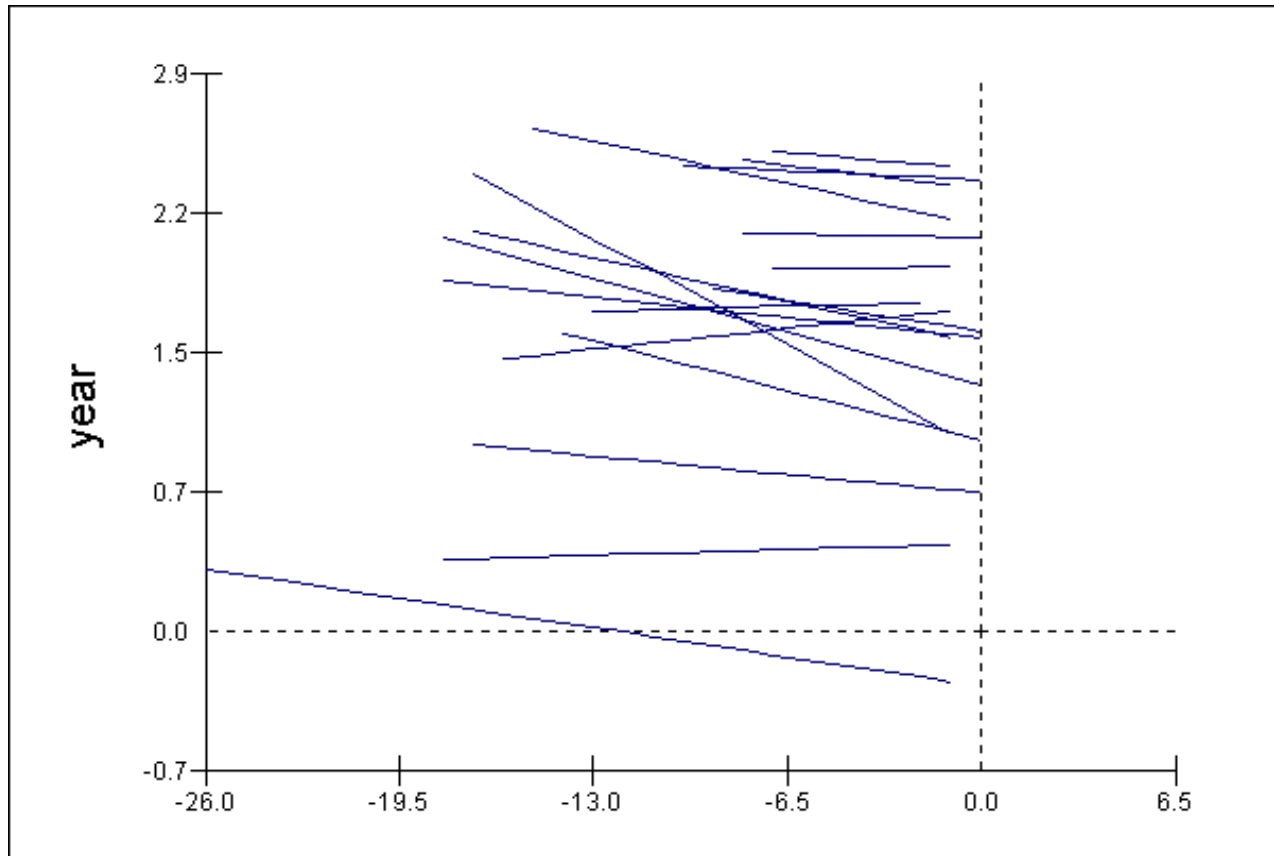
More Details

- Difference in trends between
  - Non-Contact
  - Refusal
- Non-contacts increase from year to year:
  - Countries differ in non-contact rates
  - Trend the *same* for each country
- Refusals increase from year to year
  - Countries not only differ in response rate
  - Trend *differs* from country to country

Non-contacts across Years
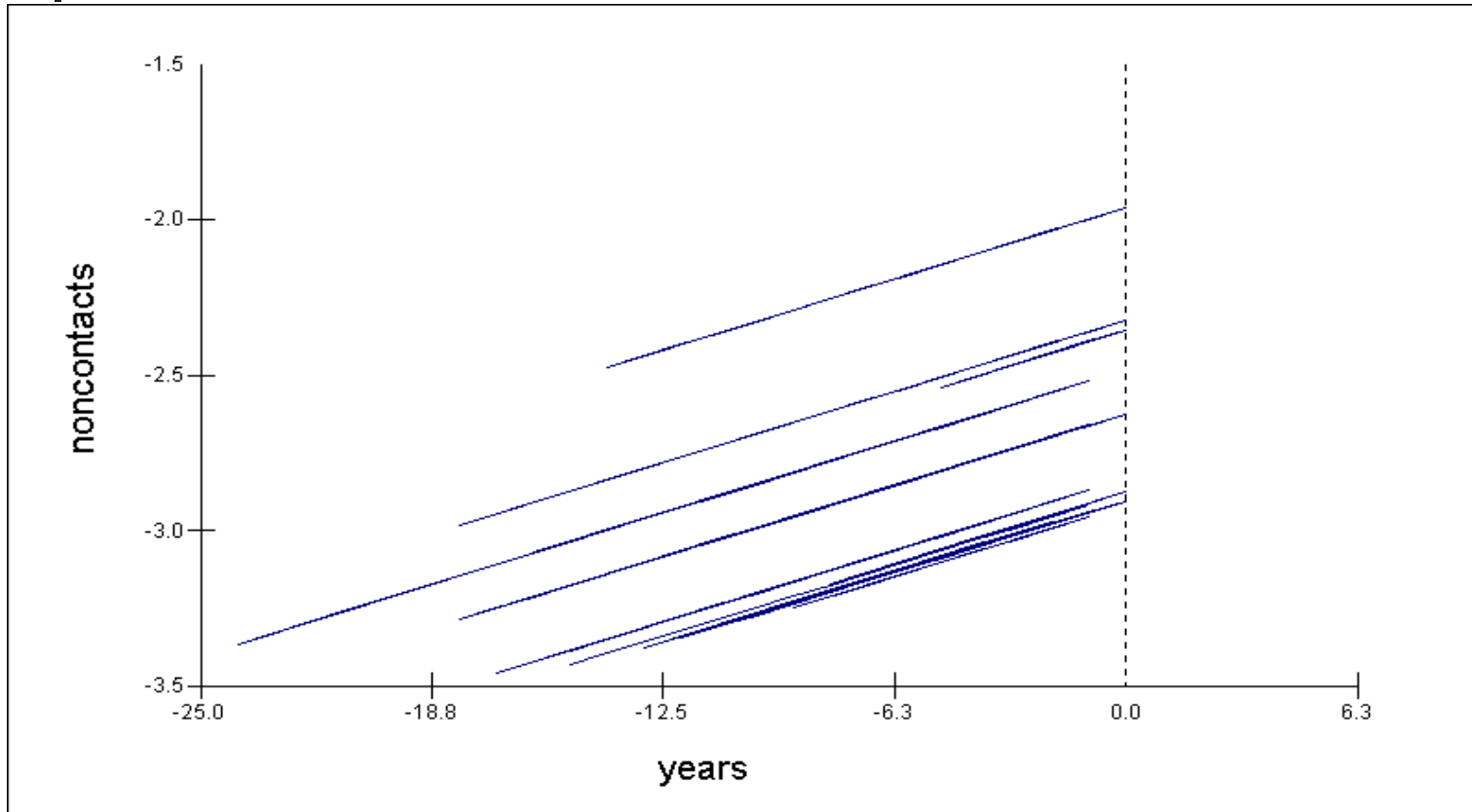
Refusals across Years
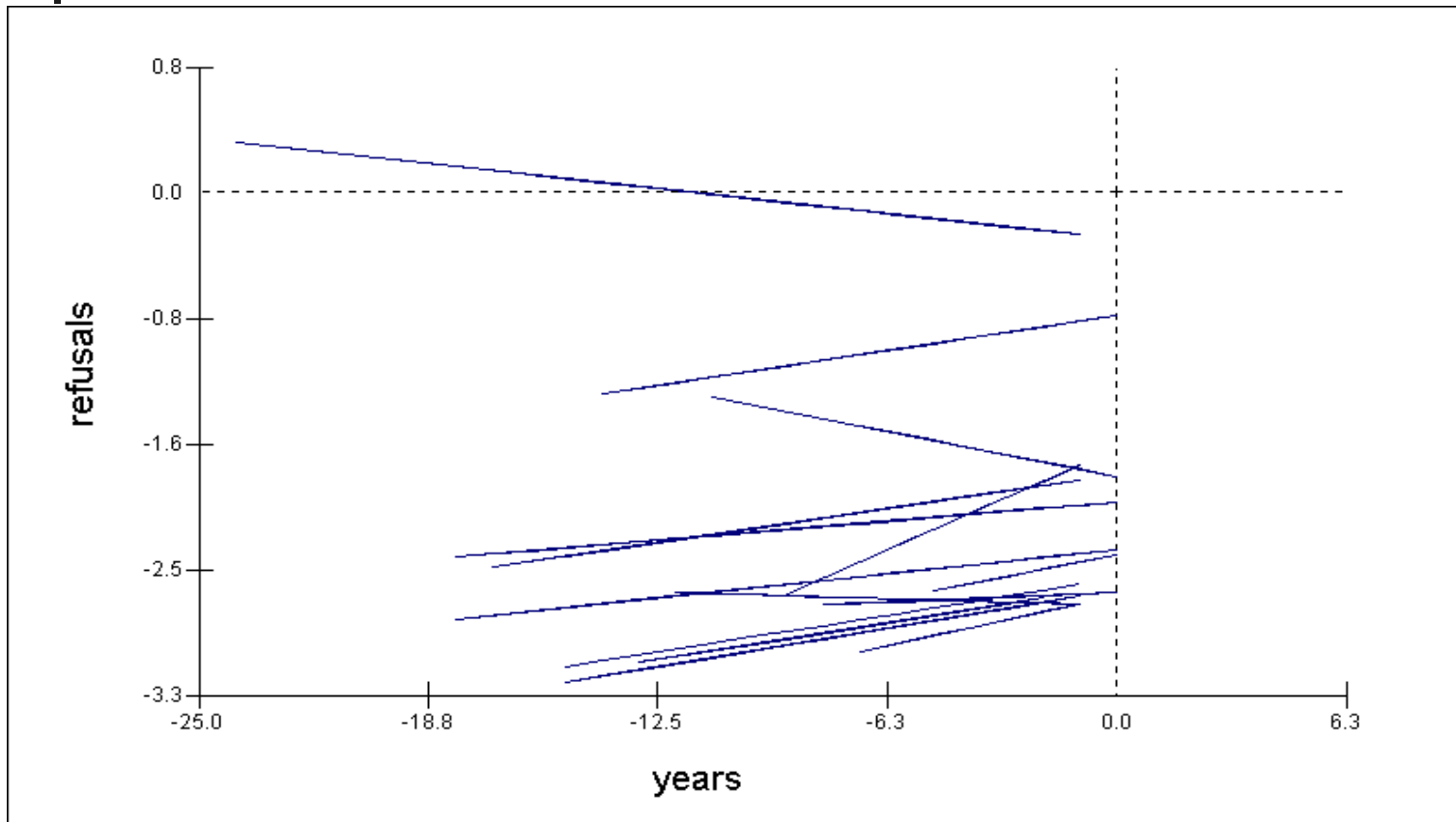
Looking at Differences

- Restricted to Labour Force Survey
- Non-contact & Refusals
- 15 countries (no German data)
- Procedure:
  - Analyze standardized residuals
  - Mean 0, standard deviation 1
  - Non-parametric correlations

Examples standardized residuals

- Non-contacts:
  - Denmark: 2.49 = high noncontact rate
  - Belgium & the Netherlands also high
  - Australia, Slovenia, USA low
- Refusals:
  - Netherlands: 3.22 = very high
  - UK: 1.05 = next high

Results Non-Contacts

- **Effect on Non-contacts:**

- **Design (rho=-.31)**
  - panel lower non-contact
- **Respondent selection (rho=-.27)**
  - 'all persons above 16' higher noncontact
- **Monitoring interviewers (rho=-.36)**
  - monitoring lowers non-contact

Results Refusals

- Effect on Refusals:

- Mandatory Vs Voluntary (rho=-.72)
    - mandatory clearly lower refusals
- Special letter to refusers (rho=-.35)
    - letter reduces refusal rate
- Substitution (rho=-.35)
    - substitution lowers refusal
- Monitoring interviewers (rho=-.23)
    - monitoring lowers refusal

Second Study: Comparison of Interviewers and Nonresponse

- ## Interviewer questionnaire
  - Response rates and interviewer characteristics
- ## Contributions by
  - Joop Hox & Edith de Leeuw, Mick Couper & Bob Groves, Wim de Heer, Vesa Kuusela, Risto Lehtonen, Geert Loosveldt, Peter Lundqvist & Lilli Japec, Jean Martin & Roeland Beerten, Sylvie Michaud & Tamara Knighton, Peter Mohler & Rolf Porst & Janet Harkness, Patrick Sturgis & Pamela Campanelli, Vasja Vehovar, Metka Zaletel & Eva Belak

Interviewer Questionnaire

- **Existing Interviewer Questionnaires**
    - the Netherlands, UK , USA
- **Mannheim nonresponse workshop 1997**
    - Call for international cooperation
    - Standard interviewer questionnaire
- **Data to be collected**
    - Interviewer behavior, attitude, attributes
    - Interviewer response rate
    - Description survey and data collection procedures

Available Data

- ## Data from 9 countries
  - 32 surveys
  - 3064 interviewers, 321947 respondents
- ## Data include:
  - Original Lehtonen data (Finland)
  - Couper & Groves data (USA)
  - Campanelli-data (UK)
  - De Heer/de Leeuw-data (Netherlands)
  - New: Belgium, Canada, Finland, Germany, Sweden, Slovenia, UK

Research Questions

- Do interviewers in different countries differ in
  - Attitudes ?
  - Avowed Behavior?
- Does interviewer attitude and behavior predict
 - Interviewer Response rate?

Interviewer Attitude

- Three distinct factors/subscales:
  - Persuasion oriented
    - reluctant respondents can be persuaded
    - caught at the right time, most people respond
  - Voluntariness/privacy oriented
    - accept refusal of reluctant respondent
    - respect privacy of respondent
  - Send-other
    - send other interviewer to reluctant respondent
  - Correlations between factors very low

Persuasion Orientation by Country

Voluntary/Privacy Orientation by Country
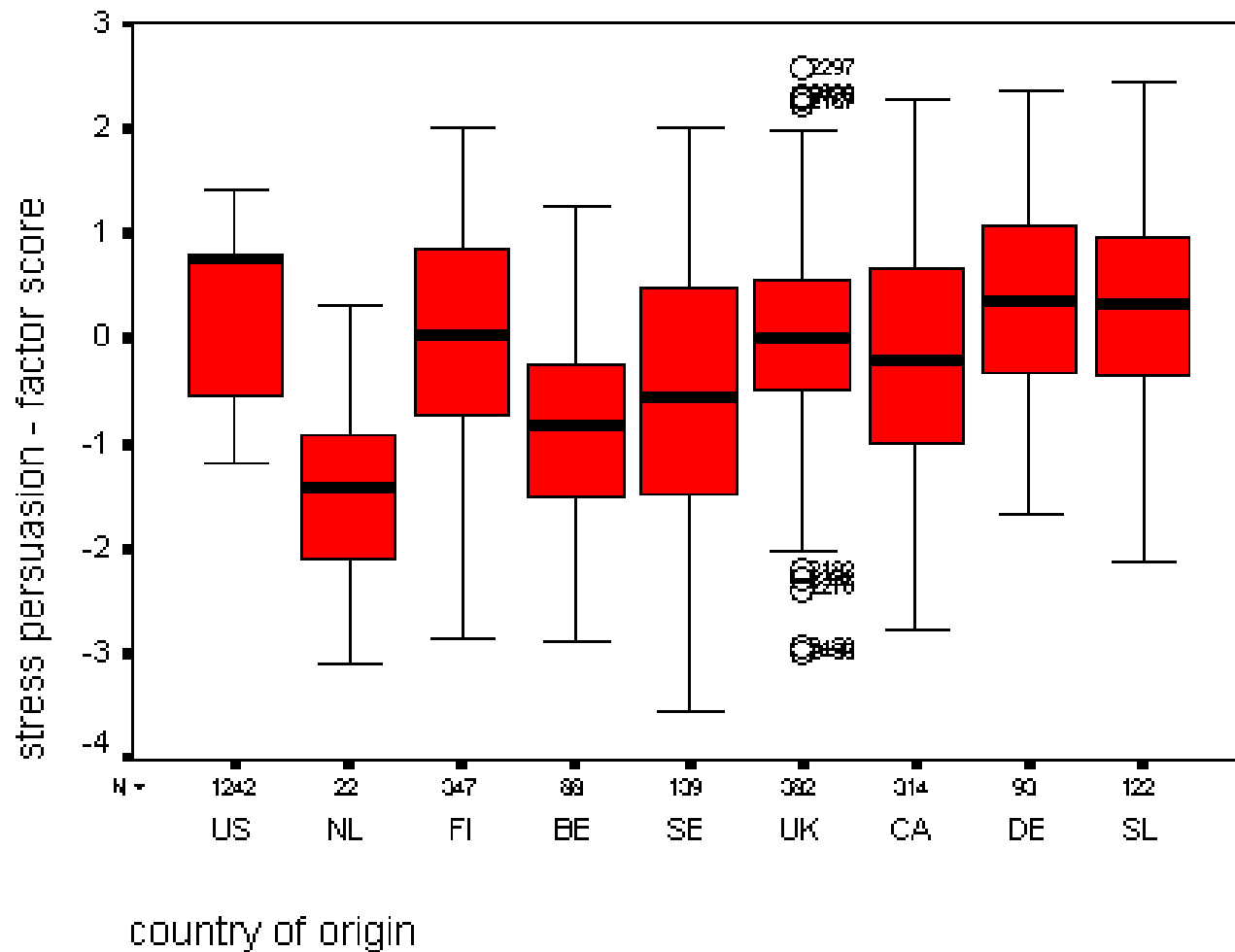
Send-Other by Country
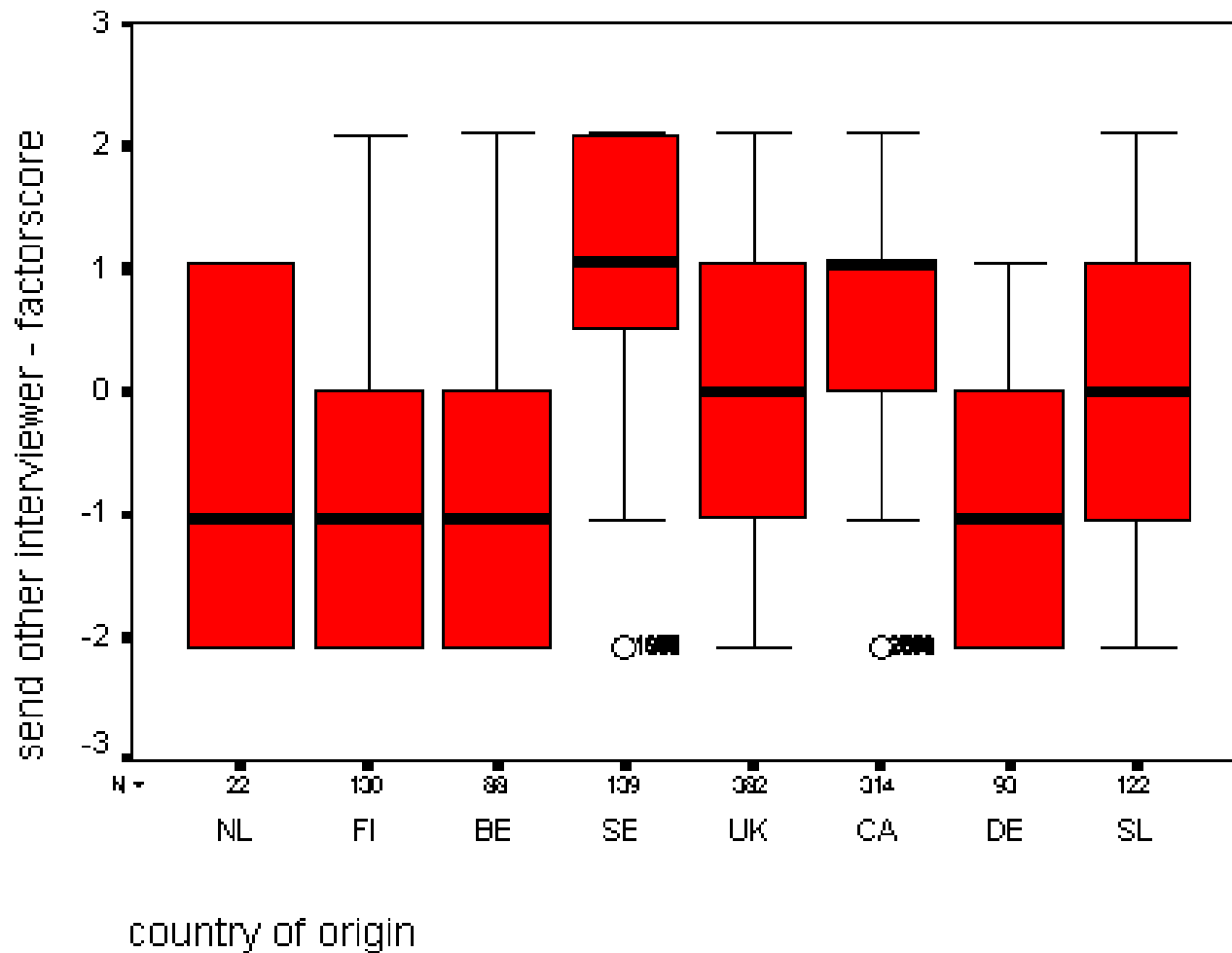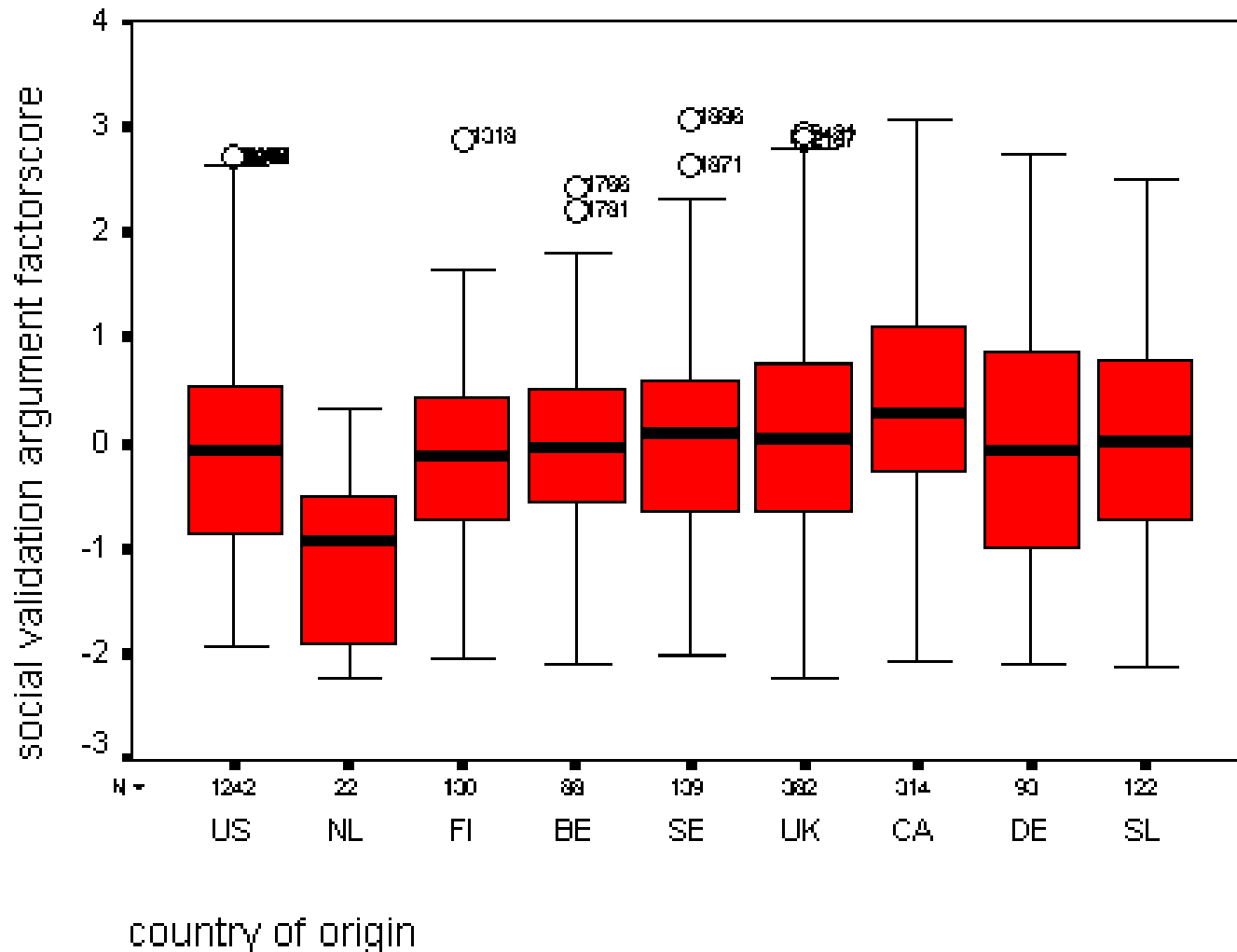
Countries Differ in Attitude

- **Analysis of Variance**
  - Correct for: Age, Sex, Experience, Organization
- **Rank-order on**
  - Persuasion
    - Germany, Slovenia, USA, UK, Canada, Finland, Sweden, Belgium, Netherlands
  - Voluntariness
    - Slovenia, Germany, Sweden, Belgium, Netherlands, Finland, UK, Canada
  - Send-Other
   - Sweden, Canada, Slovenia, UK, Belgium, Germany, Finland, Netherlands

Avowed (self-reported) Door Step Behavior

- **Three distinct factors/subscales:**
  - Social Validation Arguments
    - most people enjoy it, participate
  - Scarcity Arguments
    - you represent others
    - the chance to give opinion
  - Foot-in-door (consistency) technique
    - begin asking a question
  - Factors are positively correlated (± .40)
    - interviewers tend to (not) use all three strategies
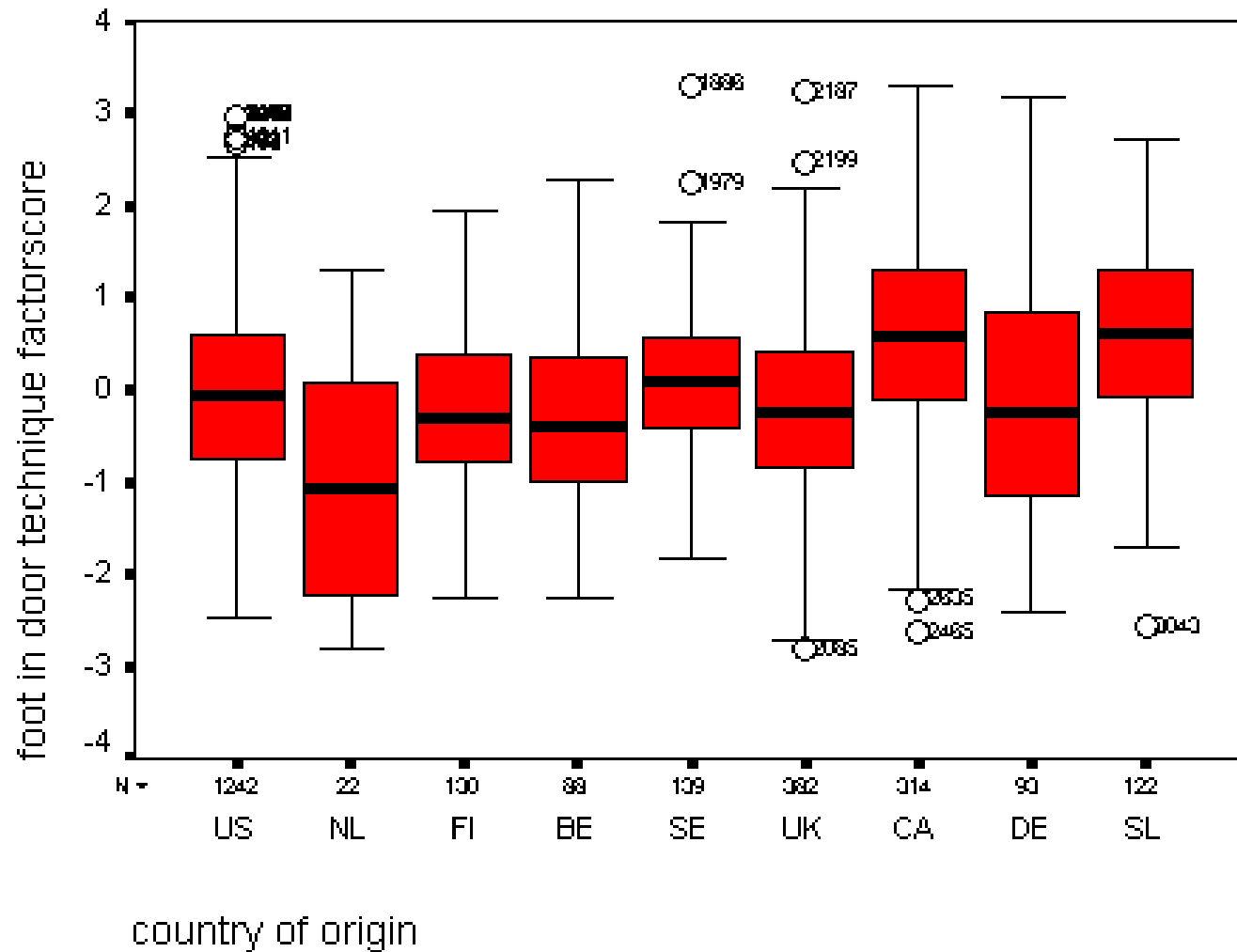   - tailoring

Social Validation Arguments by Country

Scarcity Arguments by Country
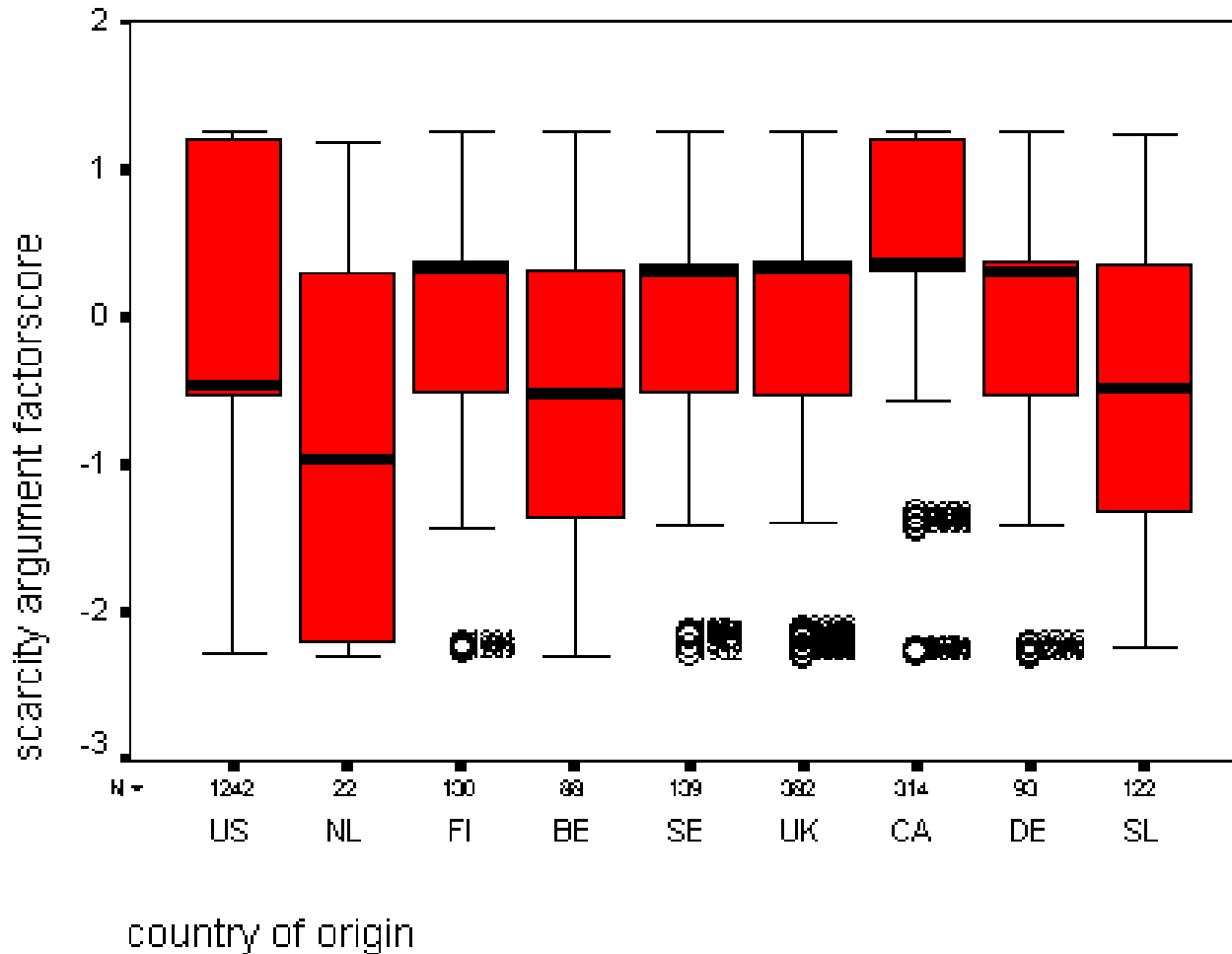
Foot-in-Door by Country

Countries Differ in Avowed Interviewer Behavior

- **Analysis of Variance**
  - Covariates: Age, Sex, Experience, Organization
- **Rank-order on**
  - Social validation
    - Canada, UK, Sweden, Finland, USA, Slovenia, Germany, Belgium, Netherlands
  - Scarcity
    - Canada, Sweden, Germany, UK, Finland, USA, Slovenia, Belgium, Netherlands
  - Foot-in-door
    - Canada, Slovenia, Sweden, USA, Germany, Finland, UK, Belgium, Netherlands

Predicting Nonresponse

- Multilevel logistic regression
  - Countries (highest level)
  - Surveys (middle level)
  - Interviewers (lowest level)

- What predicts best?
  - Interviewer attributes?
  - Interviewer behavior?
  - Interviewer attitudes?

Multilevel Logistic Regressions
Dep.Var.: Interviewer Response Rate

Model/ Predictor	Null Model	Interv. Attrib.	Interv. Behavior	Interv. Attitude
constant	1.25 (.30)	.79 (.30)	1.26 (.29)	1.29 (.29)
age		.01 (.001)		
sex		.03 (.015)		
exper.		.01 (.001)		
soc.val.			-.02 (.01)	
scarcity			$.003 (.01)^{ns}$	
foot in door			.03 (.01)	
persuasion				.10 (.01)
voluntariness				-.02 (.01)
send other				-.02 (.01)

Predicting Nonresponse: Results

- What predicts best?

- Interviewer attitudes best predictor set
- Attributes next
- Avowed behavior least

Interpretation of Results

- **Interviewer attributes appear small, *but* are scale dependent**
  - Age: 10 years more, 2% predicted increase
  - Experience: 10 years more, 1% predicted increase
- Attitude: Persuasion oriented
  - Increase from -1 to +1 (2 standard deviations)
  - Predicted increase response 3.6 %

Social Validation Effect

- **Interesting effect of social validation**
  - Unexpected negative effect (small)
- **Social validation arguments based on compliance theories**
  - Same compliance theories used by marketing, direct mailing, et cetera …
  - May invoke wrong respondent script

Conclusions
International Trend Study

- Countries differ in response rates
- Response rates have been declining over the years:
  - Noncontacts no difference in rate increase
  - Refusals trend different for each country
- Effective fieldwork procedures:
  - Monitoring interviewers
  - Special efforts
  - (Mandatory, substitution, respondent-selection)

Conclusions: Interviewer Comparison

- Select/train interviewers for special jobs
  - Difficult surveys
  - Refusal conversion
- Interviewer effects are not large enough to explain all country differences
  - Fieldwork?
  - Cultural effects?

Discussion Points

- Dutch nonresponse is extreme: *we must be doing something wrong*
- Improvements are small: *we may be doing many things a little wrong*

- Dealing with nonresponse becomes easier if we create our own

Handouts on

http://www.fss.uu.nl/ms/jh