Bond&FoxChapter5CHI.pdf: Bond & Fox 应用 Rasch 模型 第五章 : 检验 BLOT 数据的不变性	
检验BLOT数据的不变性 – Bond的逻辑操作测试数 据。 如果你的屏幕上已经显示Bond&FoxChapter5.txt 和此 教程,请跳至: 让我们回想一下BLOT测试。 如果未显示,请双击你从本书的网站上下载的 Bond&FoxStepsInstalLCHI.exe并安装 Bond&FoxStepsCHI到你的电脑中。	001 H G 1111111110110101010111111110111111 002 H G 1111111111111111111111111111111111
从你桌面上的快捷方式或Windows的"开始"菜单 启动Bond&FoxStepsCHI。	Bond&Fox Steps
Bond&FoxSteps 文件的安装界面显示出来。 我们将按照蓝色方框中的说明进行操作。	Control trade to make the trade to
单击"Data file"菜单。 单击Bond&FoxChapter5.txt(这是第五章BLOT不变 性例子中的数据容量加大的BLOT数据文件)	Files Edit Analysis Data files Tutorials Help Files Edit Analysis Data files Tutorials Help BondFoxChapter4.txt BondFoxChapter5.txt TITLE = Report title BondFoxChapter5~PRTIII.txt
Bond&FoxChapter5.txt 控制说明和数据显示在你的屏幕上。	Column: 1 2 4 5 6 7 8 9 10 11 12 3 4 Refresh Data Data entry

单击"Tutorials"菜单. 单击"Bond&FoxInvarianceCHI.pdf" – 这是与 Bond&FoxChapter5.txt相对应的教程	Files Edit Analysis Data files Tutorials Help BondFoxChapter4CHI.pdf TITLE = Report title is BondFoxChapter5CHI.pdf BondFoxChapter5CHI.pdf
此PDF文件显示出来。它就是你现在正在阅读的文件。	Insed&FacChapterSpdft Band & Fac (2001) Applying the Racch Model Chapter 5: The FRTIII Test B&F Bands Legical Operations Test FRTIII data Big data not be factor inselfs and the FRTIII set of Bands Factor Model Chapter 5: The FRTIII test of Bands Factor Model and Chapter 10 (and the FRTIII set of Bands Factor Model and
现在我们继续一步一步地跟着教程走 确认BLOT不变性教程 在欢迎界面单击"OK"。	Welcome to Bond&FoxSteps! Welcome to Bond&FoxSteps, a version of Winsteps customized to analyze the examples in "Applying the Rasch Model" by Trevor Bond and Christine Fox. Click on the "Data files" menu. Then click on the data file you want to investigate. Each is identified by its chapter. Click on the "Tutorials" menu. Then click on the Tutorial matching the data file. It is a PDF file and will be displayed after a few moments by Adobe Reader or equivalent. Follow the Tutorial. OK Thanks, I dont need to see this again
 让我们回想一下BLOT测试。 它由施测给150个被试的35道单选题构成。答对一道题记1分,答错记0分。 我们已经在这个文件里增加了额外的数据。 在Bond & Fox中,我们把每位被试都分配到一个能力小组: <i>原始得分</i>为0-26的在低分组,得分为27-35的在高分组。根据<i>原始分数</i>,H(高分组)和L(低分组)作为组别编码放在被试标签中的第五列。 在第7列,我们增加了下列标示: B=Boy,G=Girl, x=not known. 	Bond&FoxSteps Control File Set- TITLE = Report title is Bond & Fox BLOT data: Chapter 5 PERSON= A data row is a PERSON= A data row is a NAME1 First person label column ITEM= A data column is a ITEM= A data column is a ITEM1 = First item column Item 35 NAME1 First person label length Number of data rows Scan data for Columns Columns per response Item 35 NAME1 First person label length Tows and columns Scan data for Columns Catego Columns Columns Columns per response Catego Column: 1 Catego Column: 1 Catego Column: 1 Catego Column: Catego Column: 1 Catego Column: Catego Column: 1 Catego Column: 1 Catego Column: 1 Catego Column: 1 Catego Column: 1 Catego Column: 1 2 2 2 2 2 2
我们现在对这些数据进行如下分析: 单击 "Analysis"菜单 单击 "Exit to Analysis (does not Save)" - 此时我们还不想对数据或控制文件进行任何更改	File Bond&FoxChapter5.bct File Edit Analysis Data files Save control with data file and exit to Analysis Save control file without data and exit to Analysis Save data-only file and exit to Analysis Start Analysis (does not "Save") Exit to Analysis (does not "Save")
文件设置关闭,分析阶段开始。如果这是你第一次 运行此分析,它会检查你的电脑是否有可用的资 源	Bond&FoxChapter5.txt File Edit Diagnosis Output Tables Output Files Batch Help Specification Plots Excel/RSSST Graphs .Dat "C:\Program Files\TextPad 7\TextPad.exe" found for .txt files "C:\Program Files (x86)\Notepad++.notepad++.exe" found for .sav files "C:\Program Files (x86)\Hicrosoft Office\Dffice12\EXCEL.EXE" found for .xls files

Bond & Fox 图 5.1 "题目难度不变性—Bond的逻辑 操作测试"是低能力儿童组的题目难度相对于高能 力儿童组的题目难度的散点图。 这是一个共同题目链接。 因此我们需要进行两次分析:首先对高能力儿童组 进行分析,然后是低能力儿童组。	3 2 1 0 -1 -2 -3 -3 -2 -3 -3 -2 -1 0 1 -2 -3 -3 -2 -1 0 1 -2 -3 -3 -2 -1 0 1 0 1 -2 -3 -3 -2 -1 0 1 2 3 BLOT Item Ests (High Ability)
<pre>这是对高能力儿童组的分析。 Bond&FoxSteps -分析阶段 - 正确地报告控制文件是 Bond&FoxChapter5.txt.</pre>	File Edit Diagnosis Output Tables Output Files Batch Help Specification F Bond&FoxAnalysis Version 4.5.1 Apr 16 2020 15:11 Current Directory: C:\Bond&FoxStepsCHI\Bond-data\ Name of control file: C:\Bond&FoxStepsCHI\Bond-data\Bond&FoxEnapter5.txt Report output file name (or press Enter for temporary file Extra specifications (if any). Press Enter to analyze: PSELECT=????H
BLOT数据被进行了Rasch分析。 估值(被试能力、题目难度)被构建出来。 拟合统计量被计算出来。 注意79个被试的能力被估计出来: 这是79个高能力组儿童;他们的原始分数 > 26/35.	1 3 09 0178 12 21* Calculating Fit Statistics Time for estimation: 0:0:0.205 Bond & Fox BLOT data: Chapter 5 Person 150 INPUT T01AL COUNT 77 MEASURED INFIT UEAN 31.1 35.0 2.73 P.S.D 2.4 .0 1.03 Iten 35 INPUT 35 MEASURED INFIT 0UTFIT MEAN 70.2 79.0 18 .56 1.00 .2 .99 .1 P.S.D .0 0 1.32 .36 .06 .3 .55 .5 MEAN 70.2 79.0 .14 SEPARATION 1.71 Iten RELIABILITY .75
我们现在把H分析得到的题目难度保存到一个命名为 "H.txt"的文件 单击"Output Files"菜单. 单击"Item File IFILE="	Output Files Batch Help Specification P Control variable list= Person Agreement File AGREEFILE= Person Agreement File AGREEFILE= Category/Option/Distractor File DISFILE= Category/Option/Distractor File DISFILE= Category/Option/Distractor File EFILE= Graphics File GRFILE= Graphics File GRFILE= Guttmanized File GUTTMAN= Item Superclation File ICORFILE= Item File IFILE= Item File IFILE= Item File IFILE=

"Output File Specifications"? 大多数选项已经被预先正确选择 单击"Permanent file: specify file name" 单击"OK"	Output File Specifications: Item File IFILE= Output File Type: Ip Display file? Image: Specifications: Item File IFILE= Select fields + state of the select fields + state of the separated fields Image: Specifications: Item File IFILE= Select fields + state of the select fields + state of the separated fields Image: Specifications: Item File IFILE= Select fields + state of the separated fields Image: Specifications: Item File IFILE= Select fields + state of the separated fields Image: Specifications: Item File IFILE= Select fields + state of the separated fields Image: Specifications: Item File IFILE= Select fields + state of the select fields Image: Specifications: Item File IFILE= Select fields + state of the select fields Image: Specifications: Item File IFILE= Select fields + state of the state of the state of the select file name Image: Specifications: Item File: request file name Select file name Image: OK Cancel Help Set as default
"Item Measure File: IFILE="? "File name:"键入 H.txt 单击"Save"(保存)	Item Measure File: IFILE=
WordPad 显示文件"H.txt"。 前两列非常重要。它们显示了题目输入编码和每道 题目的难度。 这就是我们进行H分析后所需的全部数据。	H.bt × Filter Bond & Fox BLOT data: Chapter 5 7 FENTRY MEASURE ST COUNT SCORE MODLSE 189 1 79.0 76.0 .60 289 1 79.0 76.0 .60 3 .80 1 79.0 66.0 .32 4 .05 1 79.0 72.0 .41 5 -1.31 1 79.0 77.0 .72
关闭所有打开的输出窗口。	\overline{X}
现在,进行低能力儿童组的分析。从你桌面上的快 捷方式或从Windows"开始"菜单中启动 Bond&FoxSteps	Bond&Fox Steps
Bond&FoxSteps 控制文件设置界面显示出来。 在欢迎界面单击"OK"。	Image:
单击"Data files"菜单。 再次单击 Bond&FoxChapter5.txt	Files Edit Analysis Data files Tutorials Help BondFoxChapter4.txt TITLE = Report title BondFoxChapter5.txt BondFoxChapter5~PRTIII.txt

Bond&FoxChapter5.txt 控制说明和数据显示在你的屏幕上。 记住,H和L编码包含在第5列中。	Bond&FoxSteps Control File Set- TITLE - Report tille is Bond & Fox BLOT data 'Chapter 5 PERSON - A data row is a Person NAME1 First person label column 1 1 1 NAME1 First person label column 1 1 1 Number of data columns Number of data columns Number of data columns Data entry of data columns Tereson abel column Data entry of data columns Column 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 13 20 21 22 2 Person Calumn 1 2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 0 0 2 0 3 4 6 0 5 6 6 7 0 8 9 10 11 12 13 14 1 1 0 0 2 0 3 4 6 0 5 6 6 7 0 8 9 10 11 12 13 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 2 0 3 4 6 5 6 6 7 0 8 9 10 11 12 13 14 1 1 1 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 2 8 4 6 0 5 6 6 7 0 8 9 10 11 12 13 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
让我们对这些数据进行L(低能力)分析。 单击"Analysis"菜单 单击"Exit to Analysis (does not Save)" - 此时我们不想进行任何更改	Bond&FoxChapter5.txt File Edit Analysis Data files Tutorials Help Save control with data file and exit to Analysis Save control file without data and exit to Analysis TITLE Save control file without data and exit to Analysis Save data-only file and exit to Analysis Start Analysis (does not "Save") Exit to Analysis (does not "Save")
这是对低能力儿童组的分析。 Bond&FoxSteps – 分析阶段 –正确报告分析控制文件 是Bond&FoxChapter5.txt. "Report output file name" 按 Enter 键 "Extra specifications" 键入 PSELECT=???L (如果愿意,你可以复制、粘贴) 按 Enter 键 该命令规定: "只分析标签第5列中为L的被试数 据"。????L=L在第5列。	Pile Edit Diagnosis Output Tables Output Files Batch Help Spe Bond&FoxAnalysis Version 4.5.1 Apr 16 2020 15:28 Current Directory: C:\Bond&FoxStepsCHI\Bond-data\ Name of control file: C:\Bond&FoxStepsCHI\Bond-data\Bond&FoxChapter5.txt Report output file name (or press Enter for tempor Extra specifications (if any). Press Enter to anal PSELECT ????!
BLOT数据被Rasch分析了。 估值(被试能力、题目难度)被构建出来。 注意只有71个被试的能力被估计了。这些是71位低 能力(L)儿童;他们的BLOT <i>原始分数</i> <27/35.	Image: Problem State Image: Pr
我们现在看一下题目难度估值 单击"Output Tables" 单击"14. Item: entry"	Output Tables Output Files Batc Request Subtables 3.2+ Rating (partial credit) scale 2. 2. Measure forms (all) 10. 10. 10. Item: column): fit order 13. 14. Item: entry 14.

表 14显示出来。它显示了基于低能力组儿童的反应的BLOT题目难度。	TABLE 14.1 Bond & Fox BLOT date INPUT: 150 Person 35 Item REI Person: REAL SEP.: 1.48 REL.: Item STATISTICS: ENTH Item STATISTICS: TOTAL INUMBER SCORE COUNT MEASURE I I I I I I I I I I I I I I I I I I I
返回分析界面。单击Windows任务栏上的 "2 Bond&FoxChapter5.txt"	
现在我们获得了对于两组儿童的题目难度。对于高 能力儿童的BLOT题目难度估值在文件"H.txt"中。 对于低能力儿童的题目难度现在也被估计出来了。 单击"Plots"菜单 单击"Compare statistics"	Plots Excel/RSSST Graphs .Data Plot problems? Compare statistics: Scatterplot
在"Compare statistics: Scatterplot"界面上, 单击"items" 图5.1中的x轴来自对高能力儿童组的分析。 单击"Measures" 单击"PFILE=" 键入"H.txt"或使用"Browse"(浏览)按钮找到 H.txt y轴来自现在对低能力儿童组的分析。 单击"Measures" 单击"this analysis" 单击"Excel scatterplot" 单击"OK"	Compare statistics: Scatterplot Z For items persons Plot this (left.x-exis) 2. Measure Statistic field number: from This analysis Statistic field number: G Plot confidence bands for measures Statistic field number: and this (right.y-exis) 2. Measure S.E. field: from This analysis S.E. field: for Display with Table 34 columns S.E. field: OK Cancel Help Statistic field number:
"Plot data-point label" 像图 5.1所示那样,以"Marker"作为标签方式	Plot data-point label Hew are the plotted datapoints to be labeled? Marker Entry number Help Label Entry+Label Only part of the label?
经过一些数字运算后,Excel图显示出来 所示的曲线表示95%的置信区间。每个黑点代表35 道BLOT题目的一道题目。 这和图 5.1一致。	H.txt & Bond & Fox BLOT data: Chapter 5 Identity



Bond&FoxChapter5.txt 控制说明和数据显示在你的屏幕上。 性别(B/G)位于被试标签的第7列。	Bond&FoxChapter5.txt Files Edit Analysis Data files Tutorials Help Bond&FoxSteps TITLE= Report title is Bond & Fox BLOT data: Chapter ! PERSON= A data row is a PERSON= A data row is a NAME1= First person label column Number of data rows Number of data columns Value Refresh Data Display Column: 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
我们来分析这些数据 单击 "Analysis" 菜单 单击 "Exit to Analysis (does not Save)" -此时我们不想进行任何更改	File Edit Analysis Data files Tutorials Help Save control with data file and exit to Analysis Save control file without data and exit to Analysis Save control file without data and exit to Analysis Save control file without data and exit to Analysis Save data-only file and exit to Analysis Save data-ont: "Save") Exit to Analysis (does not: "Save") Exit to Analysis (does not: "Save")
首先,我们必须分析所有儿童的数据。 Bond&FoxSteps – 分析阶段 – 正确报告分析控制文件 是 Bond&FoxChapter5.txt. "Report output file name"? 按 Enter 键 "Extra specifications"? 按 Enter 键	2 Bond&FoxChapter5.txt File Edit Diagnosis Output Tables Output Files Batch Help Specificatic Bond&FoxAnalysis Version 4.5.1 Apr 16 2020 16:13 Current Directory: C:\Bond&FoxStepsCHI\Bond-data\ Name of control file C:\Bond&FoxStepsCHI\Bond-data\Bond&FoxChapter5.txt Report output file name (or press Enter for temporary f Extra specifications (if any). Press Enter to analyze:
BLOT 数据被进行了Rasch分析。 150位儿童的估值(被试能力、题目难度)构建出 来。 然后,拟合统计量计算出来。	Image: Constraint of the system Constraint of the system <thc< td=""></thc<>
我们现在来看一下女生在每道题目上的表现。 单击"Specification"菜单 在Specification对话框中键入 PSELECT=?????G (你可以复制、粘贴) 单击"OK"	Files Batch Help Specification Plots Excel/RSSST Gra Control Specification = Value Specification Value PSELECT=?????G OK and again OK Cancel
你的分析界面显示选了79位女生	PSELECT=?????G "PSELECT=?????G*" selected 79 Person CURRENTLY REPORTABLE Person = 79



单击 "Specification Menu" 在 "Specification = Value"对话框中键入 PSELECT=????? 单击 "OK and again" 这使得之前为女生设置的PSELECT命令失效。	ch Help Specification Plots Excel/RS Control Specifi Specification = Value PSELECT=????? OK and again OK
"Specification"对话框还显示在你的屏幕上。 在你的分析屏幕上显示150。每位被试都被恢复了。	PSELECT=?????? "PSELECT=?????*" selected 150 Person CURRENTLY REPORTABLE Person = 150
在"Specification = Value"对话框中键入 PSELECT=?????B 单击"OK"	Help Specification Plots Excel/ FAST CONTERGED CATEGORY Control Spe Specification = Value PSELECT=?????B OK
你的分析界面上显示"68"。只有男生。	PSELECT=?????B "PSELECT=?????B*" selected 68 Person CURRENTLY REPORTABLE Person = 68
现在我们看一下男生在每道题目上的行为。 单击"Graphs"菜单 单击"Expected Score ICC"	Graphs Data Setup Catego Probability Curves Expected Score ICC
它显示了男生在题目1上的表现。 单击 "Next Curve" 两次直接到题目3	1.01 Negation

