The Susceptibility of Performance Items to Exposure

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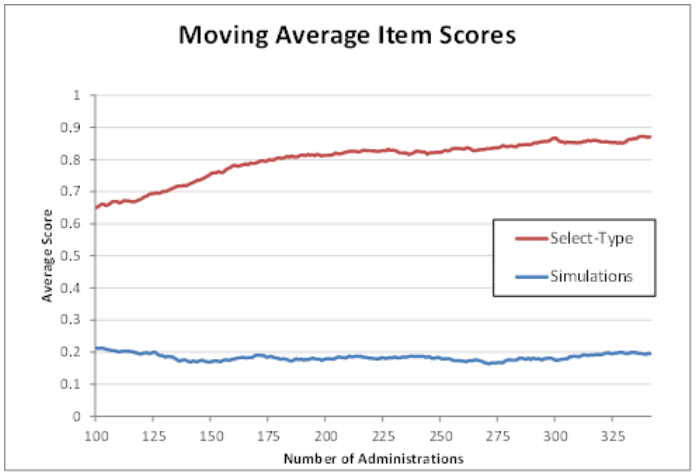
Purpose

- Pervasive exposure and security issues in IT Cert
- Extension of prior research:



- P-value change and Rasch Displacement
  - Multiple exams
- Explore the susceptibility of performance items relative to selected response items

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Exams Explored

- 7 exams
- 3 IT Certification Programs
- Different combinations of item types
- Continuously available
- Administered globally
- Analyses limited to English version
  - Exams are translated/localized

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Item Types Explored

- **Simulations (SIMs)**
  - Simulate hardware or software
  - Auto scored
  - Require process
  - Multiple solutions
- **Performance**
  - Auto scored
  - Require process
  - Multiple solutions
- **Selected Response + (SR+)**
  - Some may call “innovative” but really SR
  - Hotspot, drag and drop, matching
  - One correct answer (even if combination)
- **Selected Response (SR)**
  - Traditional multiple choice
  - May be multiple select

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Proportion of Item Types by Exam

Exam	Simulations	Performance	Selected Response	Selected Response +
A		2%	80%	18%
B		5%	78%	17%
C		6%	94%	
D	7%	1%	92%	
E	6%	2%	92%	
F	83%		17%	
G	14%		86%	

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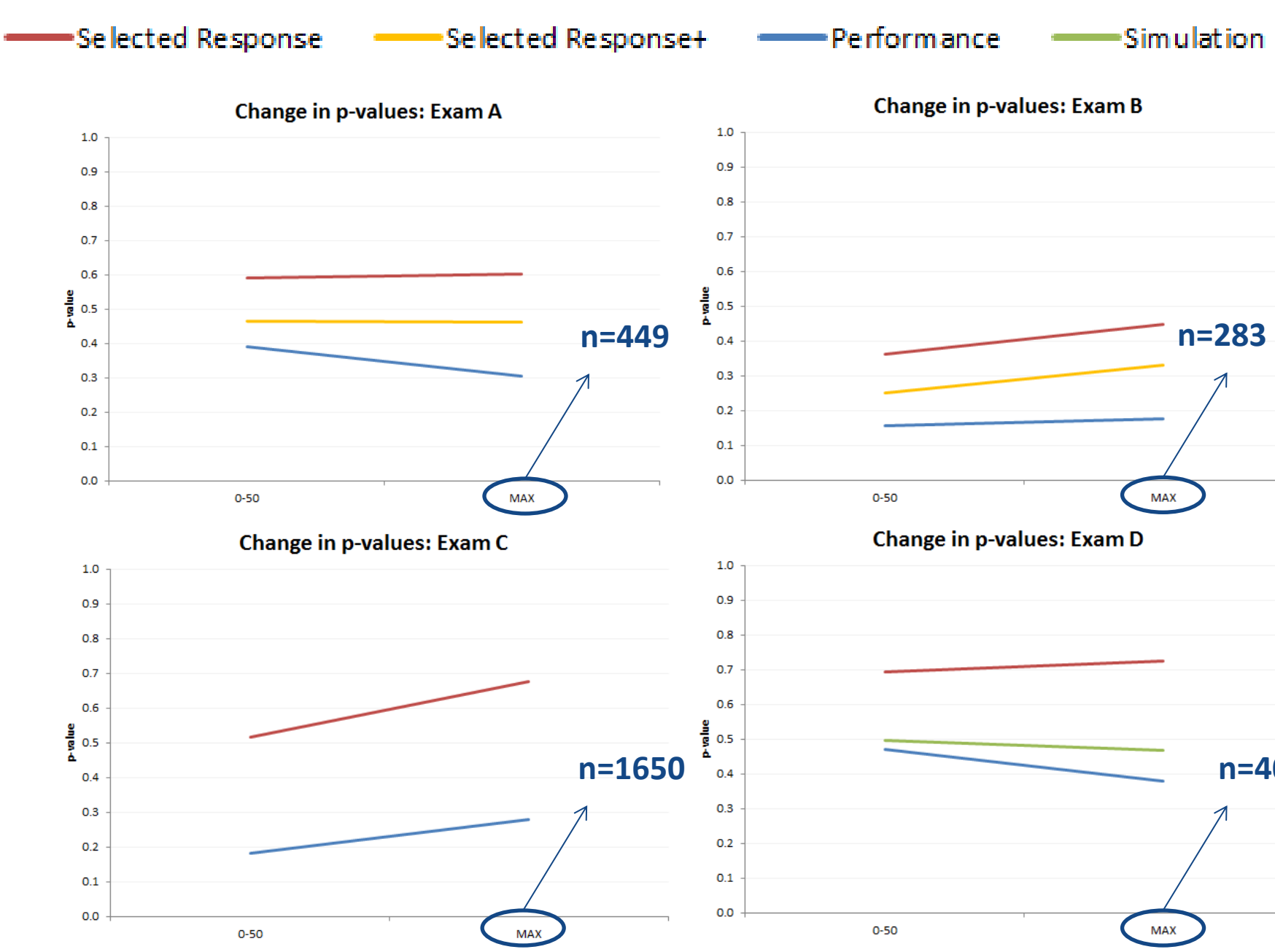

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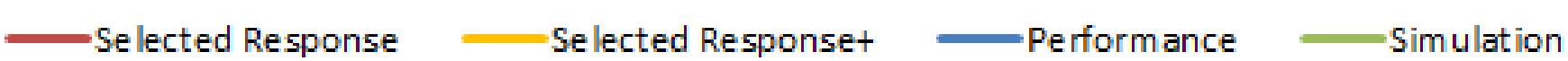

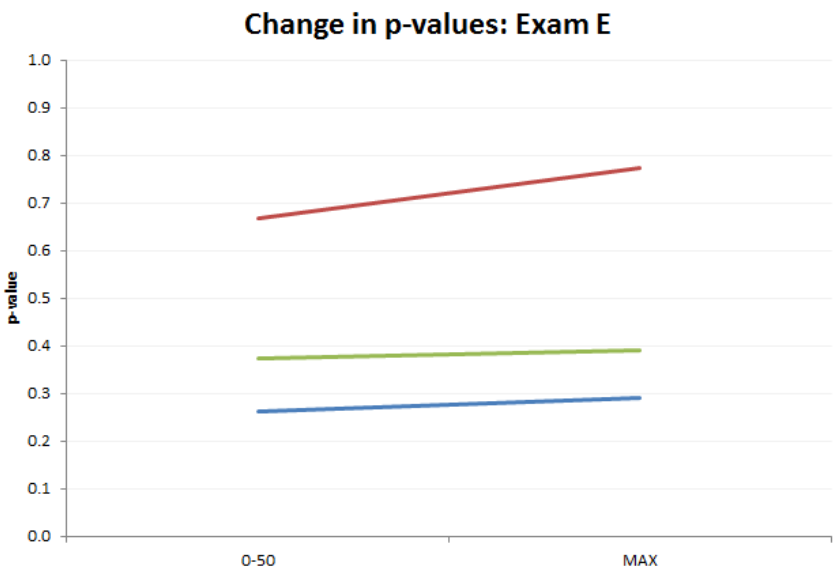

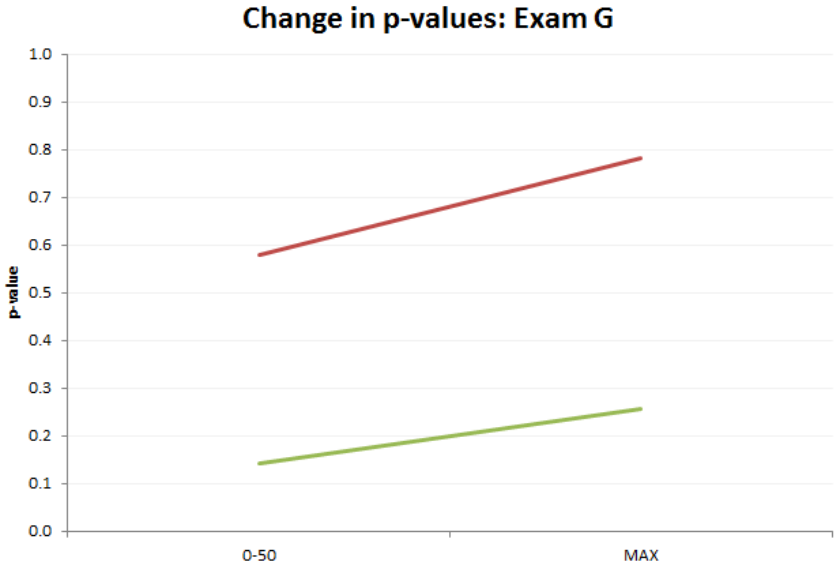

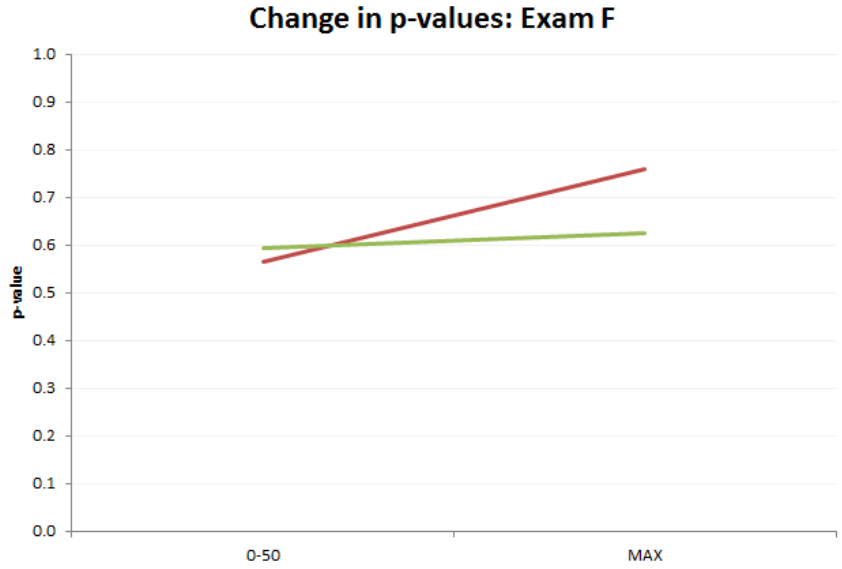

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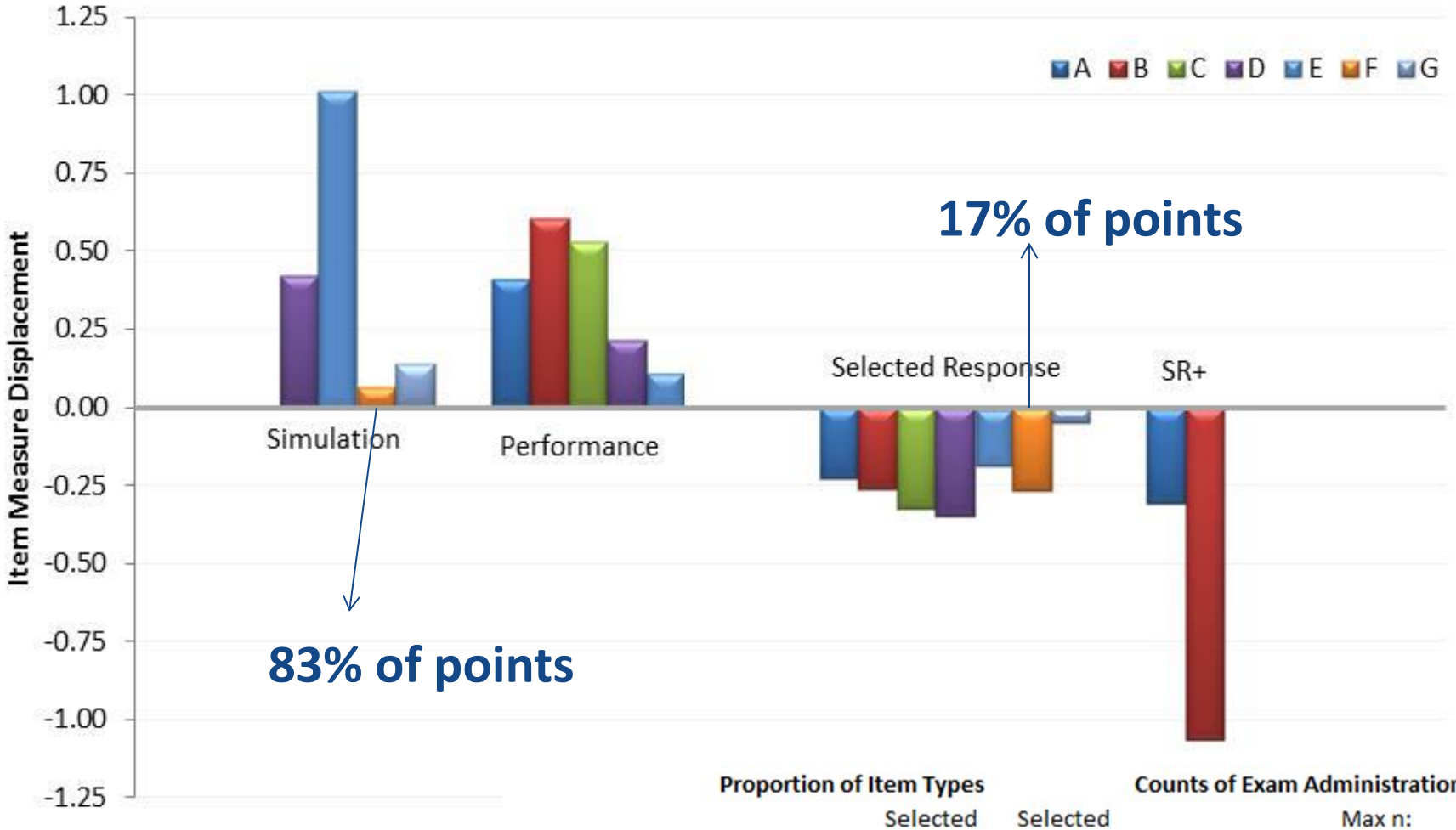
Average Item Displacement by Exam and Item Type



	Proportion of Item Types				Counts of Exam Administrations	
Exam	Simulations	Performance	Selected Response	Selected Response +	Total n	Max n: p-value change
A		2%	80%	18%	9,971	449
B		5%	78%	17%	5,507	283
C		6%	94%		13,156	1650
D	7%	1%	92%		12,492	400
E	6%	2%	92%		3,395	237
F	83%		17%		2,431	800
G	14%		86%		2,221	400

Conclusions

- SR+ items may be more susceptible to exposure than SR items
  - Possibly more memorable
- Performance and simulation items seem less susceptible to exposure than selected response items
- Future Research:
  - Replication outside of IT
  - Fine tune operational definitions of item types
  - Explore other item characteristics

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QUESTIONS?

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