Potentially Bigger Data

ACT-R Workshop 2017 London

Beyond Experimental Data

- Three presentations
    - Me - Three Game related projects
    - Matthew - Text to knowledge
    - David - Language
- Discussion

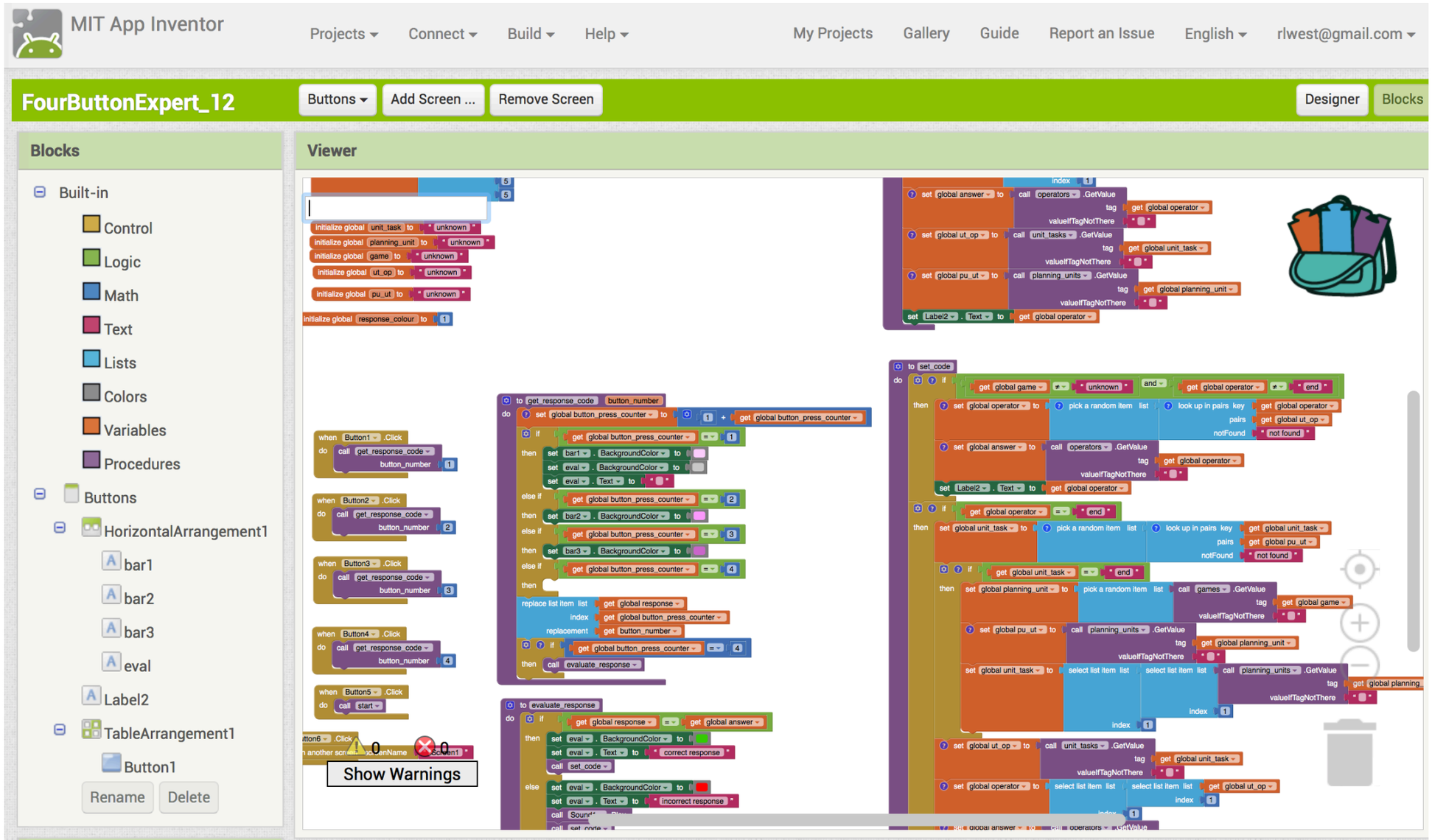
Using Apps and Games to Evaluate Cognitive Architectures

R. West, K. Dudzik, N. Nagy, F. Karimi

Apps for ACT-R

- Games designed for testing ACT-R
- Start with models of micro strategies
- Make simple games with corresponding models
- Distribute and test
- Large groups and experts

MIT AI2


MIT App Inventor
Projects
Connect
Build
Help
My Projects
Gallery
Guide
Report an Issue
English
rlwest@gmail.com
FourButtonExpert_12
Buttons
Add Screen ...
Remove Screen
Designer
Blocks
Blocks
Built-in
Control
Logic
Math
Text
Lists
Colors
Variables
Procedures
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HorizontalArrangement1
bar1
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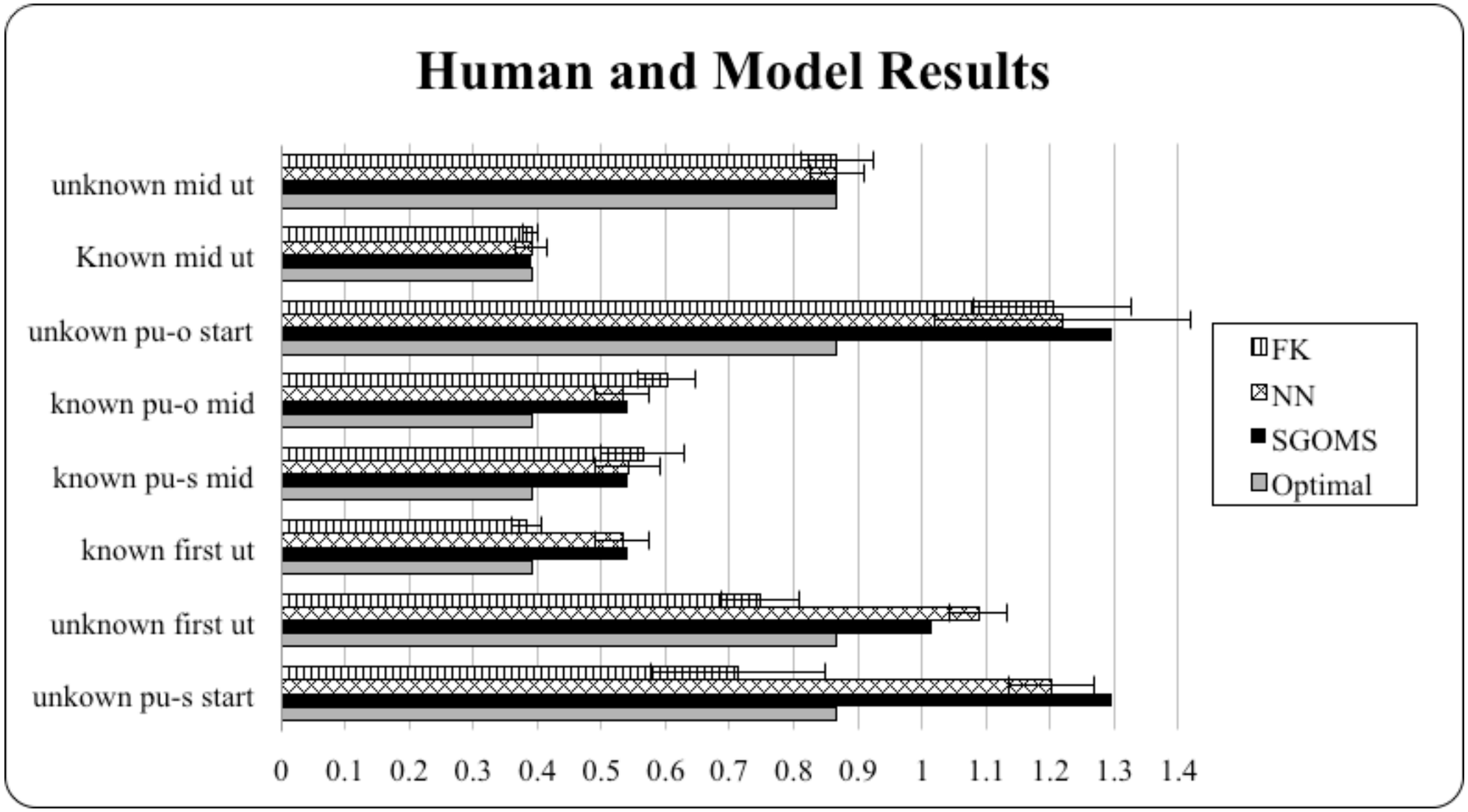
bar3
eval
Label2
TableArrangement1
Button1
Rename
Delete
Viewer
Show Warnings


Human and Model Results
unknown mid ut
Known mid ut
unkown pu-o start
known pu-o mid
known pu-s mid
known first ut
unknown first ut
unkown pu-s start
FK
NN
SGOMS
Optimal
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4

Using Cognitive Architectures to Explain Real Time Strategy Games

C. Peters, R. West, B. Esfandiari

Complex Games

- Blizzard has made the original Starcraft open source
- AI tournaments
    - Lots of big data used here
        - Alpha GO techniques
- AI versus human tournaments
    - Humans still win

ACT-R/SGOMS inspired agent versus ChadBot

ACT-R/SGOMS inspired agent versus ChadBot

ACT-R/SGOMS inspired agent versus ChadBot

ACT-R/SGOMS inspired agent versus ChadBot

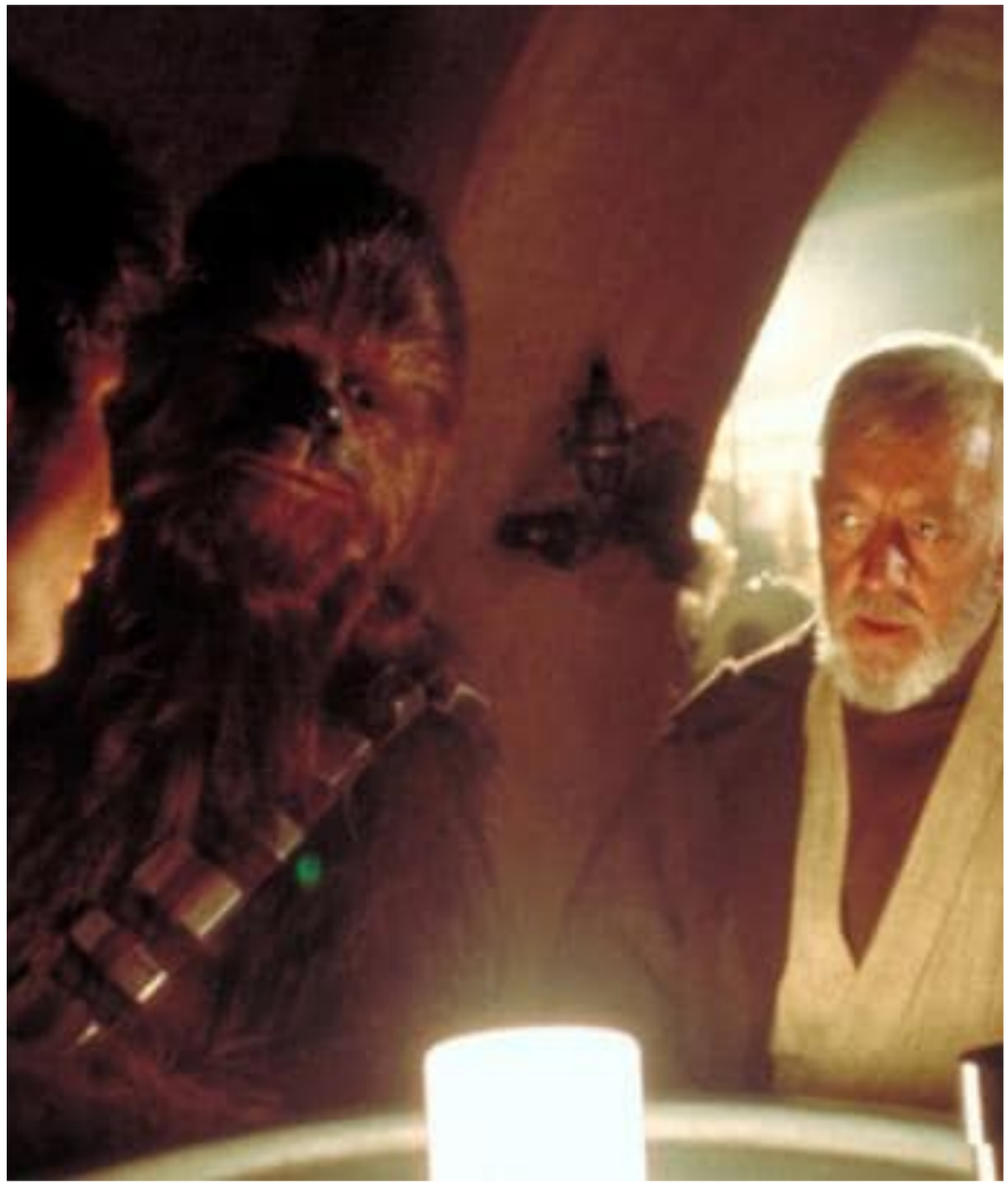
Generating Narrative with ACT-R Agents

R. West, K. Dudzik, B. Greenspan

Rachelle Project

- Project with Digital Humanities
- Literary project
- Based on William Gibson’s novel, IDORU
- And Allan Newell’s idea to model a whole task
- Purpose - generate realistic narrative

- Rachel works in a bar
- She has realistic, expert bartender knowledge
- She also has emotions and values
- Other characters have other reasons to be in the bar
- Interaction produces narrative
- Narrative is qualitatively evaluated



Applications

- Design better Non Player Characters
- Authoring tool