

Quantifying The Benefits of a Cultural Festival: Social Cohesion and Personal Well-Being from The Wellington Diwali

Assoc. Prof. Joseph Bulbulia, Victoria University, Religious Studies, NZ
Dr. John Shaver, Victoria University, Religious Studies, NZ
Anna Lee, Victoria University, Psychology, NZ
Rebekka Kesberg, Georg-August-University Göttingen, MS Psychology.Cand. Germany,
Reneeta Mogan Naidu, Victoria University, PhD cand. Psychology, NZ
Amy Richardson, Victoria University, BA Hons Religious Religious Studies/ BA Hons Psychology, NZ
Dr. Shruti Tewari Centre for Behavioral and Cognitive Sciences, University of Allahabad, India
Dr Rick Weiss, Victoria University, Religious Studies, NZ
Professor Purnima Singh, Indian Institute of Technology Delhi, India
Assoc. Prof. Ronald Fischer, Victoria University, Psychology, NZ



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Photo Credits: The photos for the Wellington Diwali Study were taken by Ron Fischer, School of Psychology, Victoria University

Outline

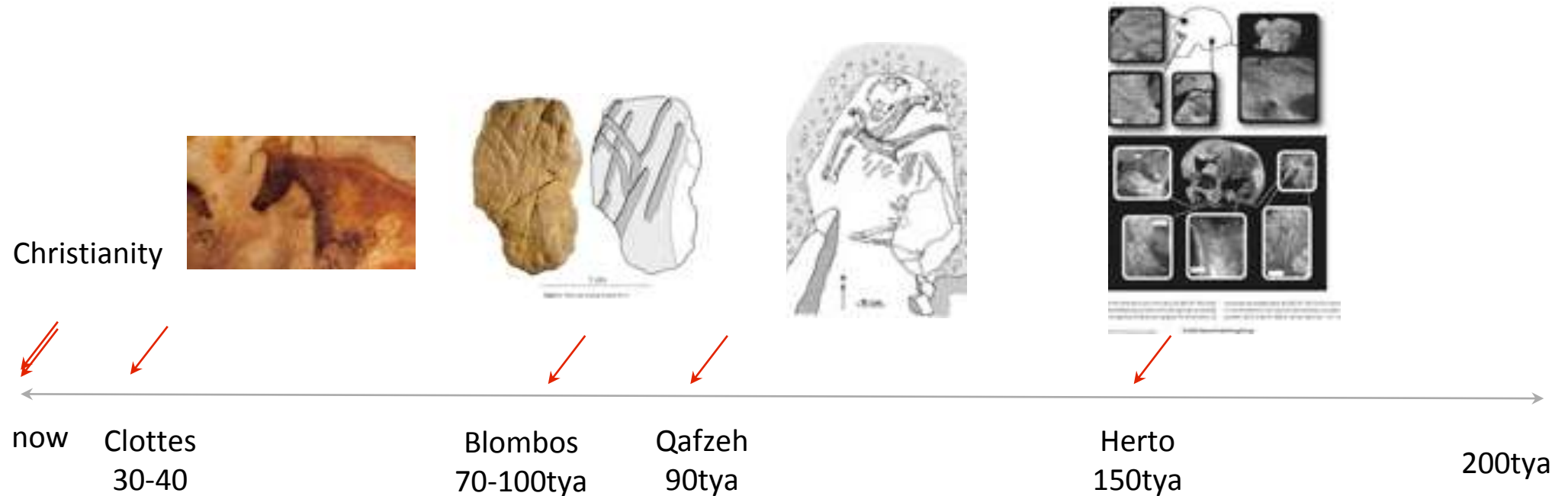
- What might rituals do? (10 mins)
 - Evolutionary theories
 - Previous evidence
 - Background Diwali
- The VUW, NZIRI 2014 Wellington Diwali Study (10 mins)
 - Hypotheses
 - Methods
 - Findings
- Implications of Findings (10 mins)
 - Methods/Theories
 - Applied
 - Future Directions

Outline

- What might rituals do? (10 mins)
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Problem: rituals seem useless (or worse) yet endure

<-----History of Ritual----->



Evolutionary conservation suggests benefits

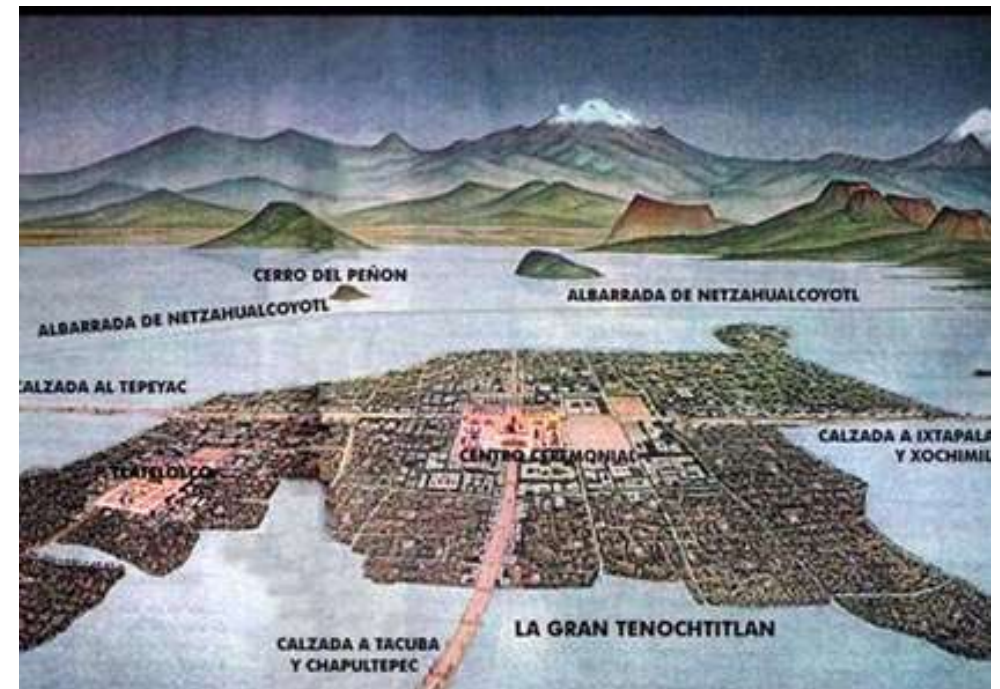
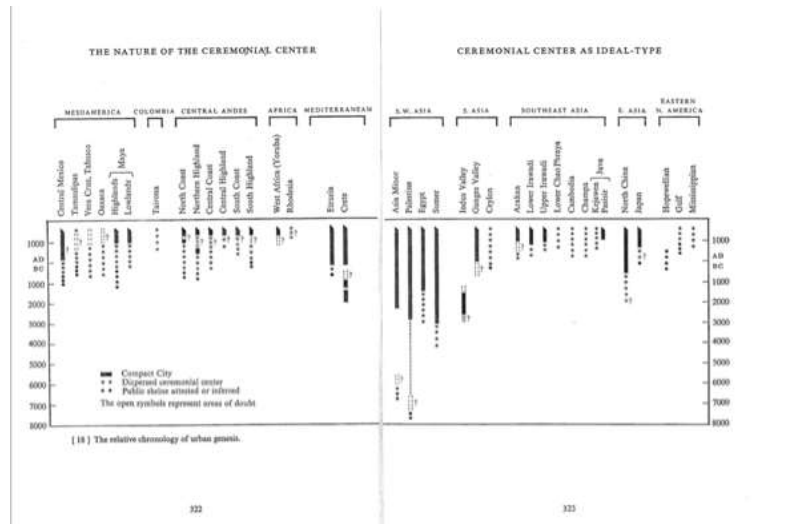
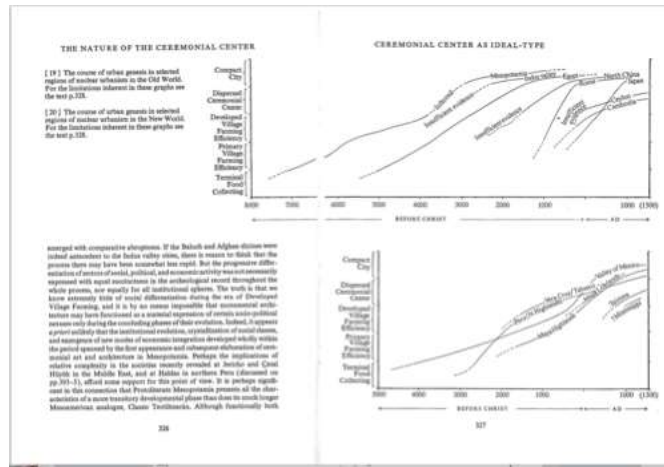


“...the [ritual] group regularly produces an intellectual and moral uniformity ... Everything is common to everyone. The movements are stereotyped. Everyone executes the same ones in the same circumstances; and this conformity of conduct only translates that of thought. Every mind being drawn into the same eddy, the individual type nearly confounds itself with that of the general type.”

—Emile Durkheim (1912).

Archaeology suggests economic benefits

Wheatley, P. (1971). *The Pivot of The Four Quarters*. Edinburgh University Press, Edinburgh.



Extreme Rituals Promote Prosociality

Dimitris Xygalatas^{1,2,3}, Panagiotis Mitkidis^{1,2,3}, Ronald Fischer⁴, Paul Reddish^{2,4}, Joshua Skewes^{1,3}, Armin W. Geertz^{1,3}, Andreas Roepstorff^{1,3}, and Joseph Bulbulia^{2,5}

¹Department of Culture and Society, Aarhus University; ²LEVYNA Laboratory for the Experimental Research of Religion, Masaryk University; ³Interactive Minds Centre, Aarhus University; ⁴School of Psychology, Victoria University of Wellington; and ⁵School of Art History, Classics and Religious

Psychological Science
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Let's Dance Together: Synchrony, Shared Intentionality and Cooperation

How Do Rituals Affect Cooperation?

An Experimental Field Study Comparing Nine Ritual Types

Ronald Fischer · Rohan Callander ·
Paul Reddish · Joseph Bulbulia

rsity, Bmo, Czech

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Participation in Mass Gatherings Can Benefit Well-Being: Longitudinal and Control Data from a North Indian Hindu Pilgrimage Event

Shruti Tewari¹, Sammyh Khan², Nick Hopkins^{2*}, Narayanan Srinivasan¹, Stephen Reicher³

¹Centre of Behavioural and Cognitive Sciences, University of Allahabad, Allahabad, Uttar Pradesh, India; ²School of Psychology, University of Dundee, Dundee, Scotland, United Kingdom; ³School of Psychology, University of St Andrews, St Andrews, Scotland, United Kingdom

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The Fire-Walker's High: Affect and Physiological Responses in an Extreme Collective Ritual

Ronald Fischer^{1,2*}, Dimitris Xygalatas^{2,3}, Panagiotis Mitkidis^{3,4,5}, Paul Reddish², Penny Tok², Ivana Konvalinka^{6,7}, Joseph Bulbulia^{2,8}

¹Centre for Applied Cross-Cultural Research & School of Psychology, Victoria University Wellington, Wellington, New Zealand; ²LEVYNA Laboratory for the Experimental Research of Religion, Masaryk University, Bmo, Czech Republic; ³Interactive Minds Centre (IMC), Department of Culture and Society, Aarhus, Aarhus University, Aarhus, Denmark; ⁴Center for Advanced Hindsight, Social Science Research Institute, Duke University, Durham, North Carolina, United States of America; ⁵Interdisciplinary Centre for Organizational Architecture, School of Business and Social Sciences, Aarhus University, Aarhus, Denmark; ⁶Cognitive Systems, Department of Applied Mathematics and Computer Science, Technical University of Denmark, Kgs. Lyngby, Denmark; ⁷Department of Cognitive Science, Central European University, Budapest, Hungary; ⁸Faculty of Humanities and Social Studies, Victoria University Wellington, Wellington, New Zealand

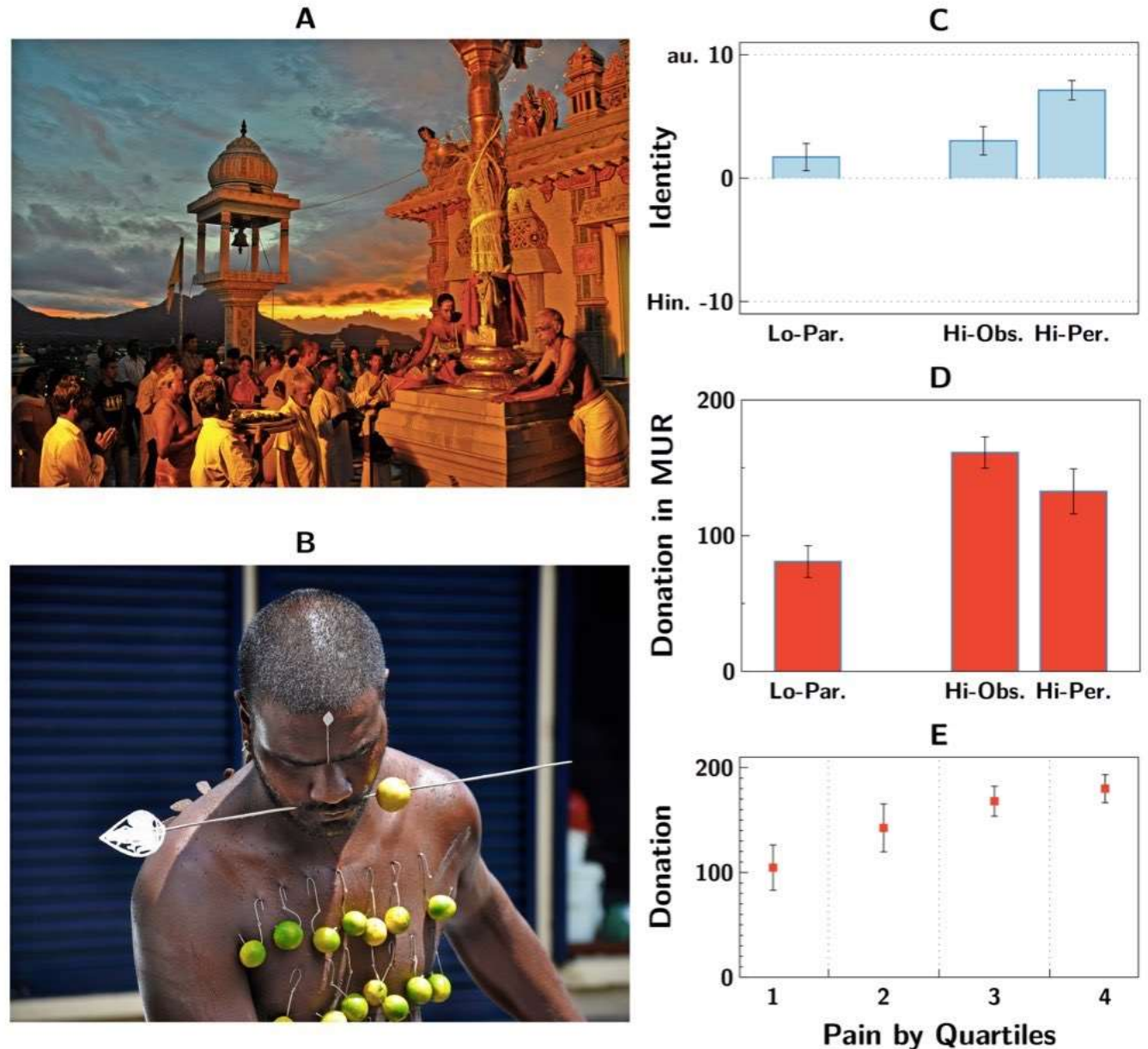
Synchronized arousal between performers and related spectators in a fire-walking ritual

Ivana Konvalinka¹, Dimitris Xygalatas^{2,3}, Joseph Bulbulia⁴, Uffe Schjød⁵, Else-Marie Jegindø⁶, Sebastian Wallot⁴, Guy Van Orden⁷, and Andreas Roepstorff^{2,8}

¹Center of Functionally Integrative Neuroscience, Aarhus University, 8000 Aarhus, Denmark; ²Institute of Anthropology, Archaeology and Linguistics, Aarhus University, 8000 Aarhus, Denmark; ³Faculty of Humanities and Social Sciences, Victoria University, Wellington 6140, New Zealand; and ⁴Center for Cognition, Action and Perception, University of Cincinnati, Cincinnati, OH 45221

Edited* by Riitta Hari, Aalto University School of Science and Technology, Espoo, Finland, and approved March 28, 2011 (received for review December 14, 2010)

Our group *quantifies* social/affective responses



Diwali: Background

Diwali or Deepavali (row of lamps) celebrated globally.

Called The Festival of Lights, Diwali signifies the triumph of light over darkness, good over evil and the renewal of life.

Diwali commemorates the return of Lord Rama, his wife and brother from their 14-year exile and their defeat of the ten-headed demon-king Ravana.

We find the story The Ramayana - epic Sanskrit poem


NOTE: many different interpretations given to the meaning/ stories vary. However most of the history: **ritual is accorded a sacred value.**

Source, accessed May 6, 2015

<http://www.aucklandnz.com/diwali/about-diwali>

Painted by Indian Folk Artist Monimala Chitrakar, 2006

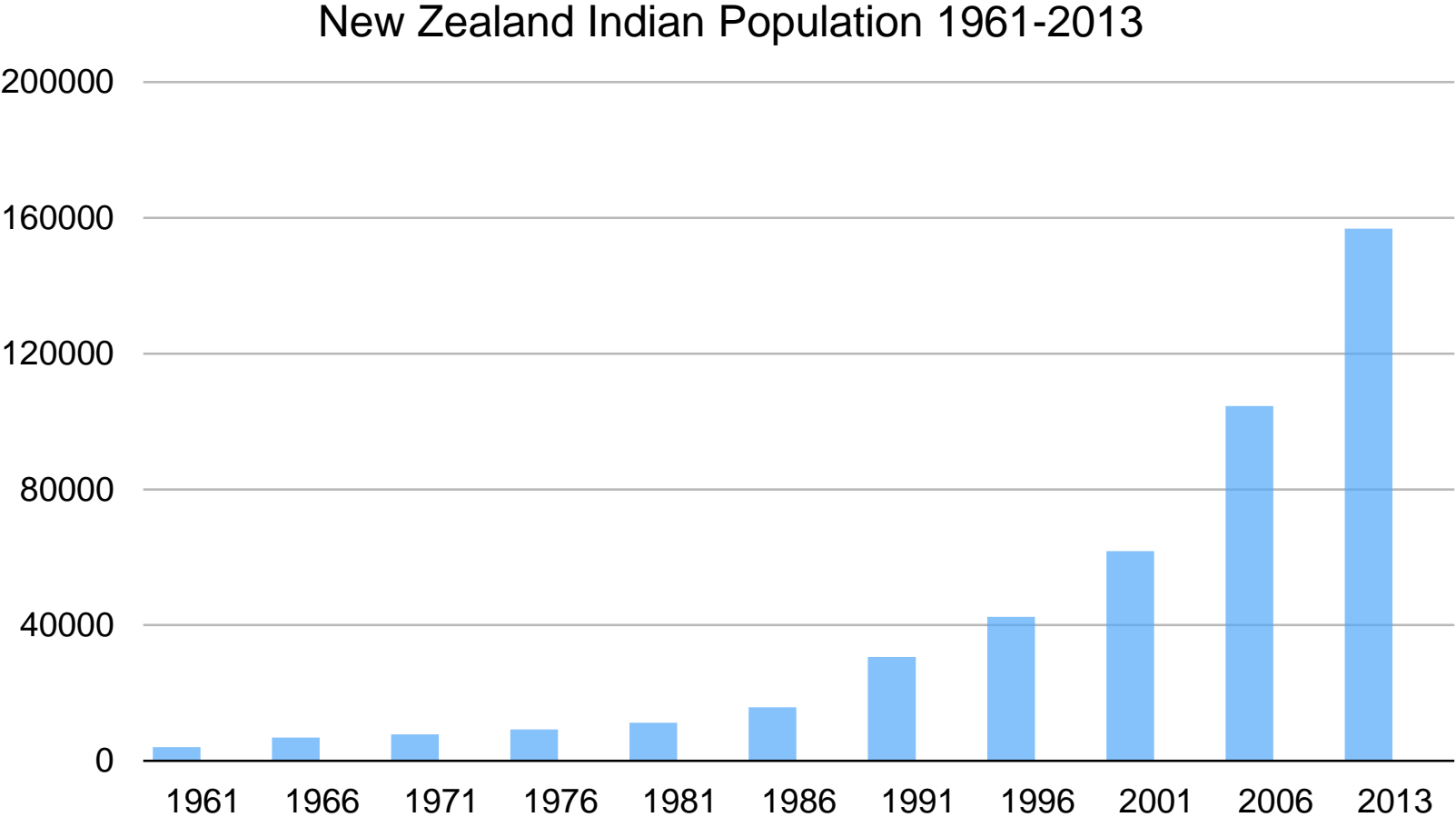


A close-up photograph of a person's lower body and feet. They are wearing a traditional garment with a wide yellow band and a red skirt with gold embroidery. Their feet are adorned with a red and white patterned cloth and a large, ornate collar of red tassels and small bells. The background is dark and out of focus.

**Key question:
how do sacred rituals travel?
(new country: secular context)**

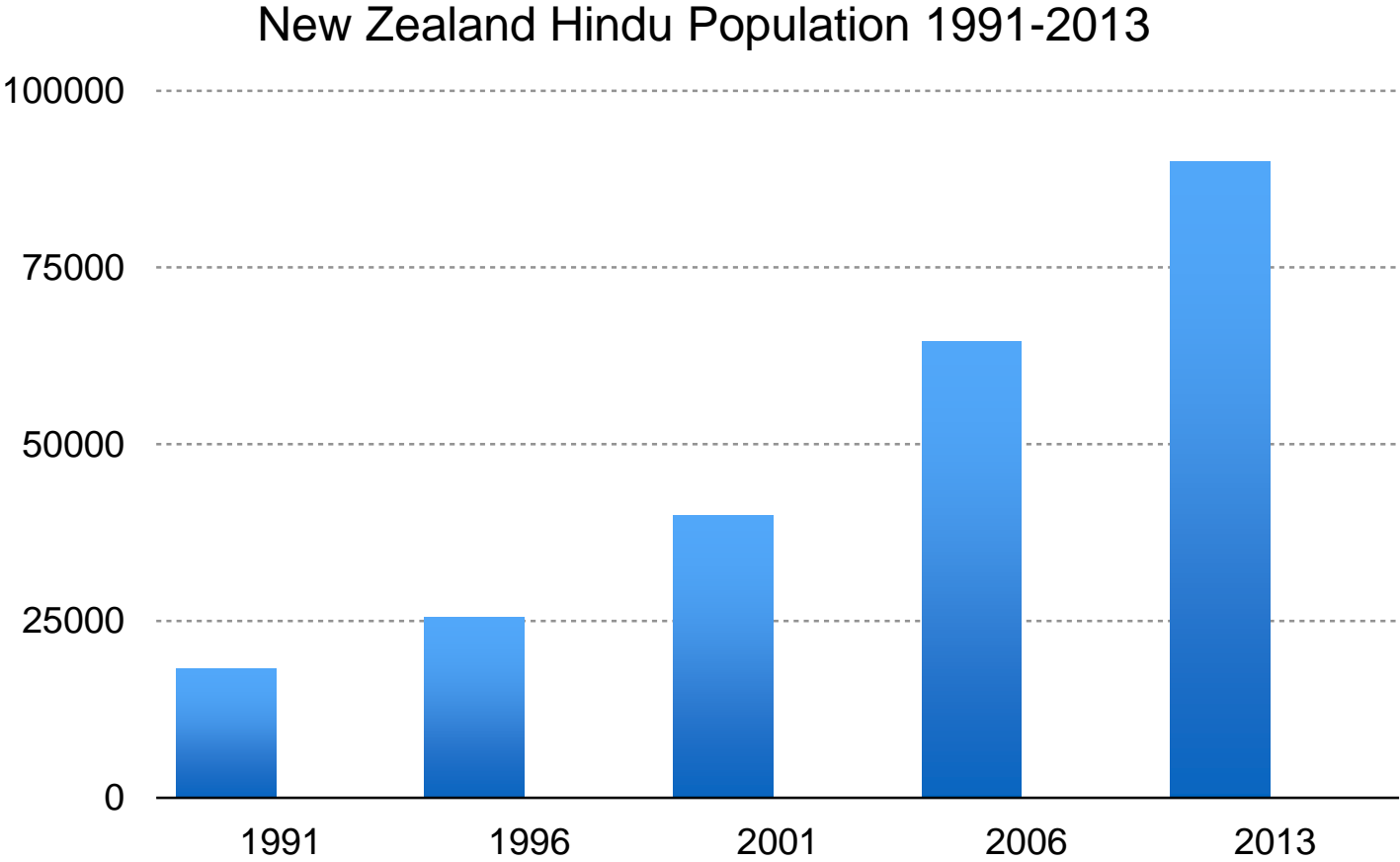
good historical source: <http://www.victoria.ac.nz/hppi/centres/india-research/documents/nachowitz.pdf>

Source:
NZstats



good historical source: <http://www.victoria.ac.nz/hppi/centres/india-research/documents/nachowitz.pdf>

Source:
NZstats



NZ Diwali: political/economic/ social context

Prime Minister HELEN CLARK 2004:

"The Indian community is of long standing in New Zealand and it is wonderful to see the celebration of Diwali becoming a significant event in New Zealand's cultural calendar."

"I have just returned from a very exciting visit to India - the first New Zealand prime minister to go there in almost 20 years," she said.

"New Zealand and India have traditionally had a close relationship, and I want to see these ties grow even stronger. I acknowledge the efforts and dedication of Indians to making a new life and contributing to New Zealand society,"

Source, accessed May 6, 2015

<http://www.aucklandnz.com/diwali/about-diwali>

Painted by Indian Folk Artist Monimala Chitrakar, 2006





Outline

- ~~What might rituals do? (10 mins)~~
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What was our study?



Social/Personal Effects of Diwali

Hypotheses

1. Enhanced personal well-being
2. Enhanced connection outside Indian community
(family/friends/workers)
3. Enhanced connection with Indian community in Wellington.
4. Enhanced connection with Indian community in New Zealand



Recruitment



PARTICIPANTS NEEDED

... and be in to

WIN 1 of 3 \$50 AMAZON VOUCHERS TODAY

WHAT TO DO : SHORT REPEATED SURVEYS

HOW LONG : 10 MINUTES

RECEIVE : \$20 SHOPPING VOUCHER



SERVING WELLINGTON ZIMBAWESANS FOR RESEARCH PROJECT

With support from the India Research Institute at Victoria University, we are conducting research into the benefits of cultural activities. We are particularly interested in how cultural stories and performances such as Dossal may influence the health and well-being of performers and audiences. This research may result in increased awareness of the benefits of group activities, especially as part of cultural festivals.

We are looking for people aged 18+ who will attend the Wellington Haka Festival at the TSB Arena on Sunday 19th October.

Participants will receive a token of appreciation in the form of a \$25 value supermarket voucher. If you agree to take part, you will be asked to complete 3 short surveys about your mood, well-being and opinions – each survey should not take more than 10 minutes to complete. We will email you the surveys via email. This research has ethical approval from Victoria University of Wellington, and all data collected will remain strictly confidential (recorded by number only). We will not share your personal details with anyone outside the research team.

We are hoping to recruit 80 participants, so if you or anyone you know would be interested in taking part, please contact Anna Lee via email or phone.

If you have any questions please don't hesitate to contact us.

Research Assistant
Anna-Lyn Mill
Centre for Applied Cross-Cultural Research, School of Psychology
Victoria University of Wellington
anna.l.mill@vuw.ac.nz; 021 2442054

Lead Researchers:
Dr Joseph Mulligan
Department of Religious Studies
Victoria University of Wellington
joseph.mulligan@vuw.ac.nz : 04-455 5045

Dr. Ronald Fischer
Center for Applied Cross-Cultural Research, School of Psychology
Victoria University of Wellington
Ronald.Fischer@vuw.ac.nz :: 04 463 6548

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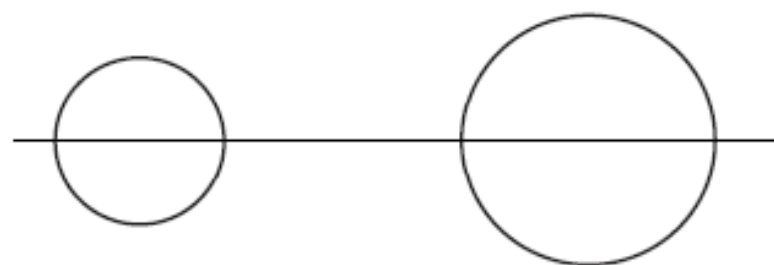
E.g. of measures

	Not at all					Very Much	
People who celebrate Diwali think like me.	1	2	3	4	5	6	7
People who celebrate Diwali share my values.	1	2	3	4	5	6	7
People who celebrate Diwali have a lot in common with me.	1	2	3	4	5	6	7
I think people who celebrate Diwali could be friends of mine.	1	2	3	4	5	6	7
I would like to have a friendly chat with people who celebrate Diwali.	1	2	3	4	5	6	7
I would like to spend time socializing with people who celebrate Diwali.	1	2	3	4	5	6	7
I could become close friends with people who celebrate Diwali.	1	2	3	4	5	6	7
How respected do you feel by people who celebrate Diwali?	1	2	3	4	5	6	7
How accepted do you feel by people who celebrate Diwali?	1	2	3	4	5	6	7
How liked do you feel by people who celebrate Diwali?	1	2	3	4	5	6	7

Using the relevant scales below, please indicate how you are feeling today where 1 indicates 'very poor/not at all' and 7 indicates 'very good/a great deal':

	Very poor					Very Good	
Today, how would you describe your physical health?	1	2	3	4	5	6	7
Today, how would you describe your state of mind?	1	2	3	4	5	6	7
Today how would you describe your energy level?	1	2	3	4	5	6	7

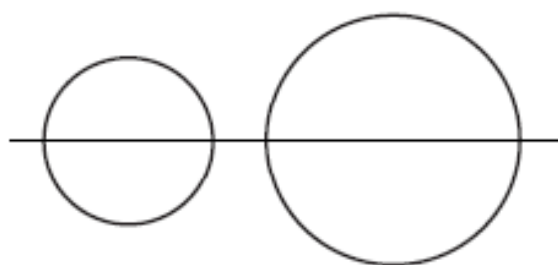
E.g. of measures



Self

Group

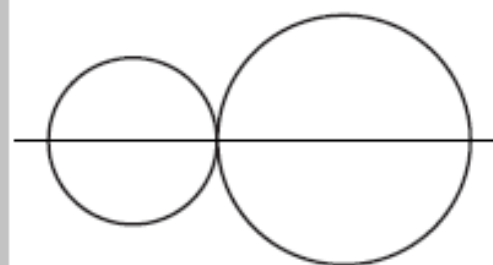
A



Self

Group

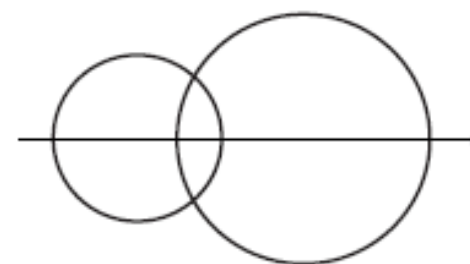
B



Self

Group

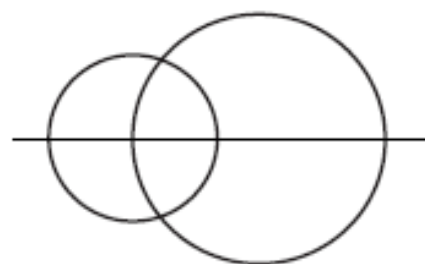
C



Self

Group

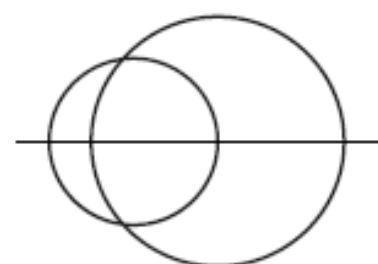
D



Self

Group

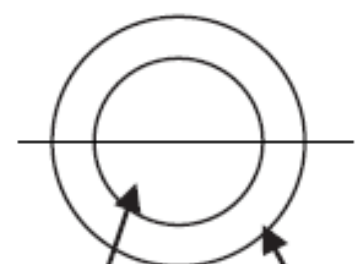
E



Self

Group

F

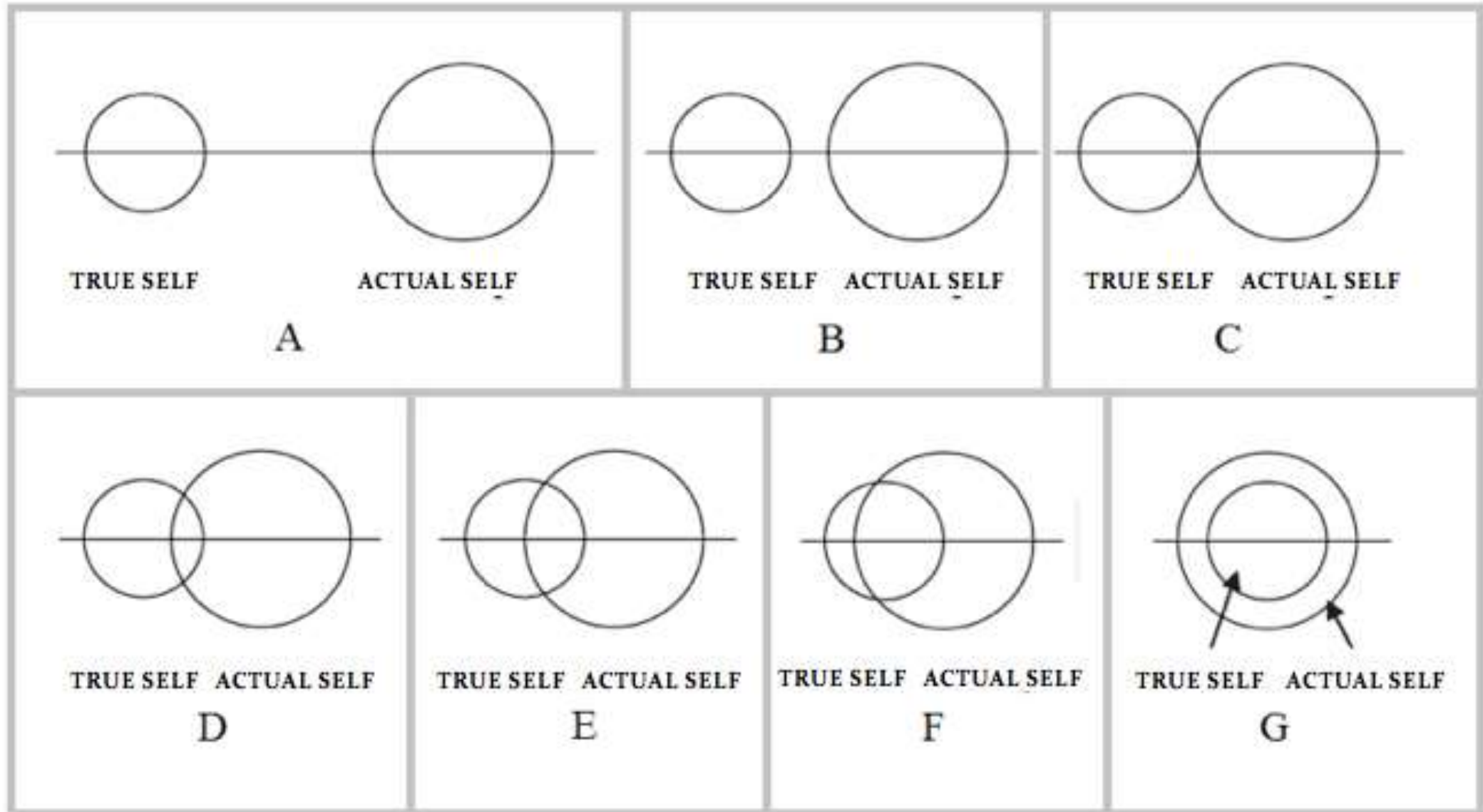


Self

Group

G

E.g. of measures



What did we observe?





Ron Fischer











Ron Fischer







Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer



Ron Fischer

S



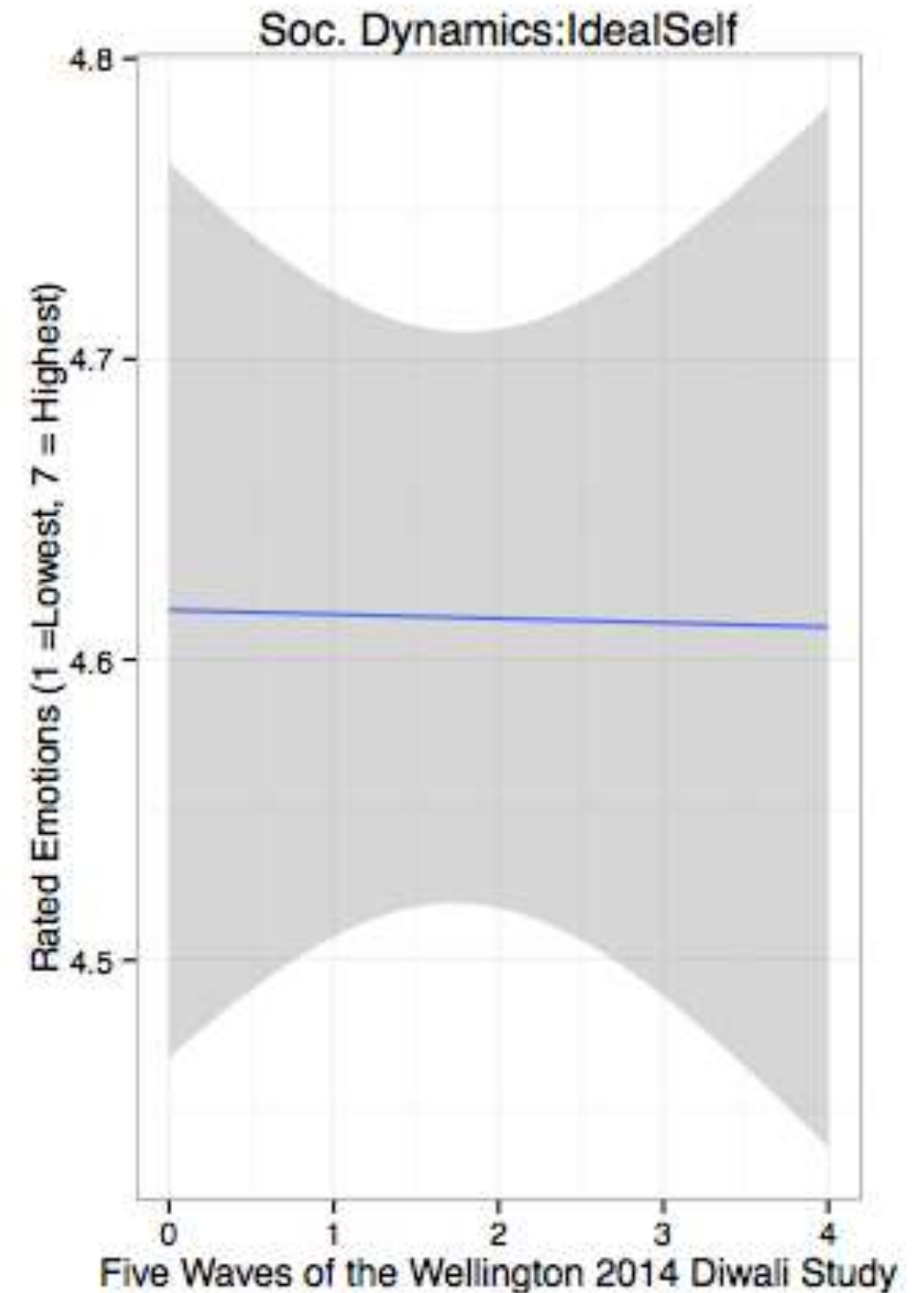
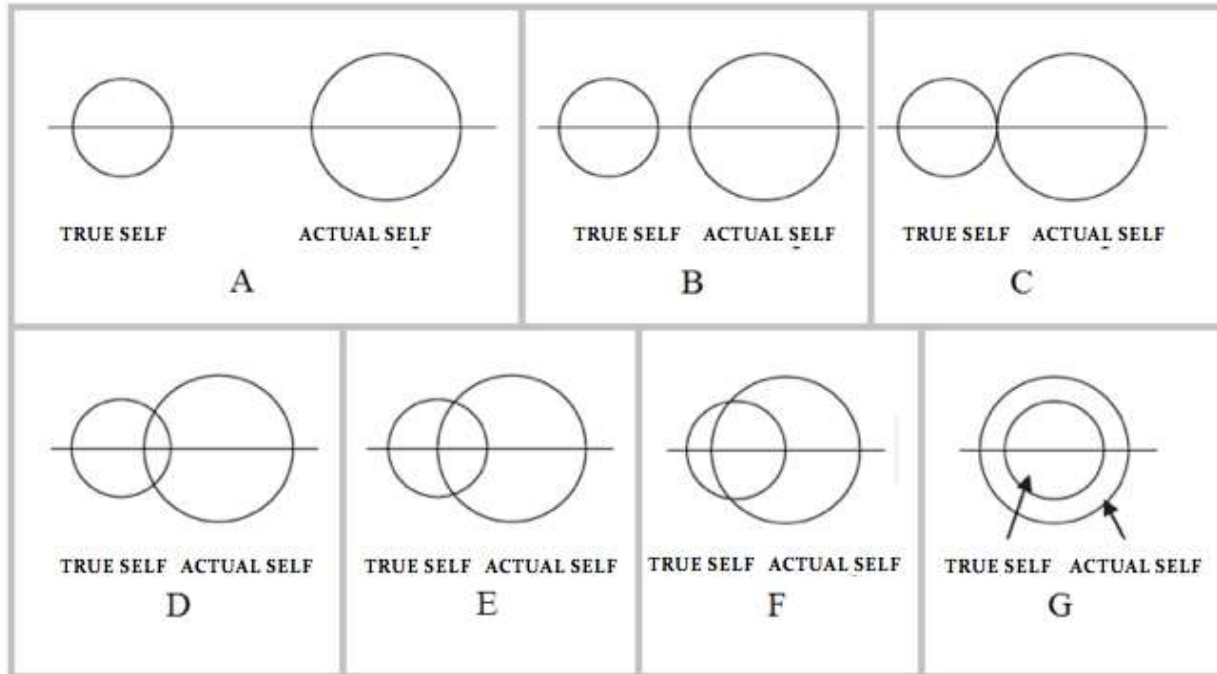
Reasons people gave for attending

- “Never been before”
- “Love India and anything Indian
- “Great food! Want a hena tattoo
- “Being an Indian it makes me feel proud to attend our home country festival
- “I was invited
- “I always go wherever I am in the world.
- “Flat tradition
- “Because I used to celebrate Diwali in India with family. It is a fun, vibrant and family festival. But I am just here to see Bhangra (dance group)
- “Diwali is in my DNA.”
- “Usher
- “I’m attending because it’s a festival I use to celebrate in Fiji
- “To meet fellow Indians and enjoy the lights
- “I enjoy attending cultural and religious events of all cultures, religions, and ethnicities
- “I was attracted by the Indian culture and wanted to know what Diwali Festival is about.
- “For food.
- “For cultural significance and introducing Diwali celebration in NZ to kids of Indian origin
- “I am an Indian and have been celebrating Diwali since birth. So, it is natural for me to attend it.
- “Diwali is part of my Pakeha culture now”

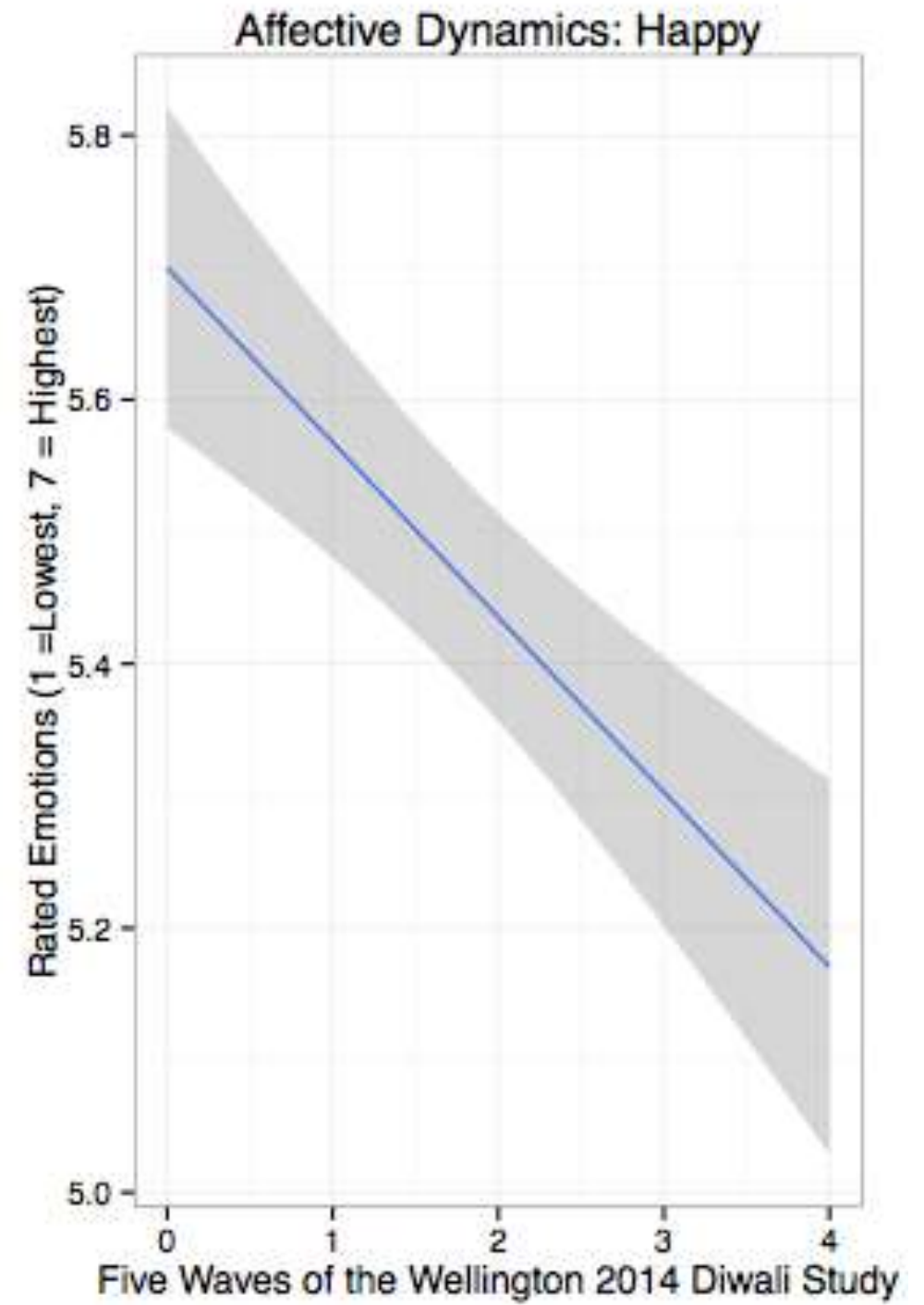
Descriptive Results

- Participants: $N = 324$
- All five surveys, $n = 163$ (101 female, 60 male)
- avg Age = 33 (SD = 12.19)
- Gender: 60% female (195 female, 125 male, 1 n/a)
- Ethnicity: 24% report Indian Ethnicity
- Hindu: 14% report being Hindu
- Came to specifically to celebrate Diwali: 43%
- Reported celebrating Diwali at home: 22% of sample ($n = 195$ who reported)
 - 78% of Hindus celebrate at home,
 - Of those who were not-Hindu, 13% celebrate Diwali at home
 - Of those who celebrate at home, 48% were not Hindu.

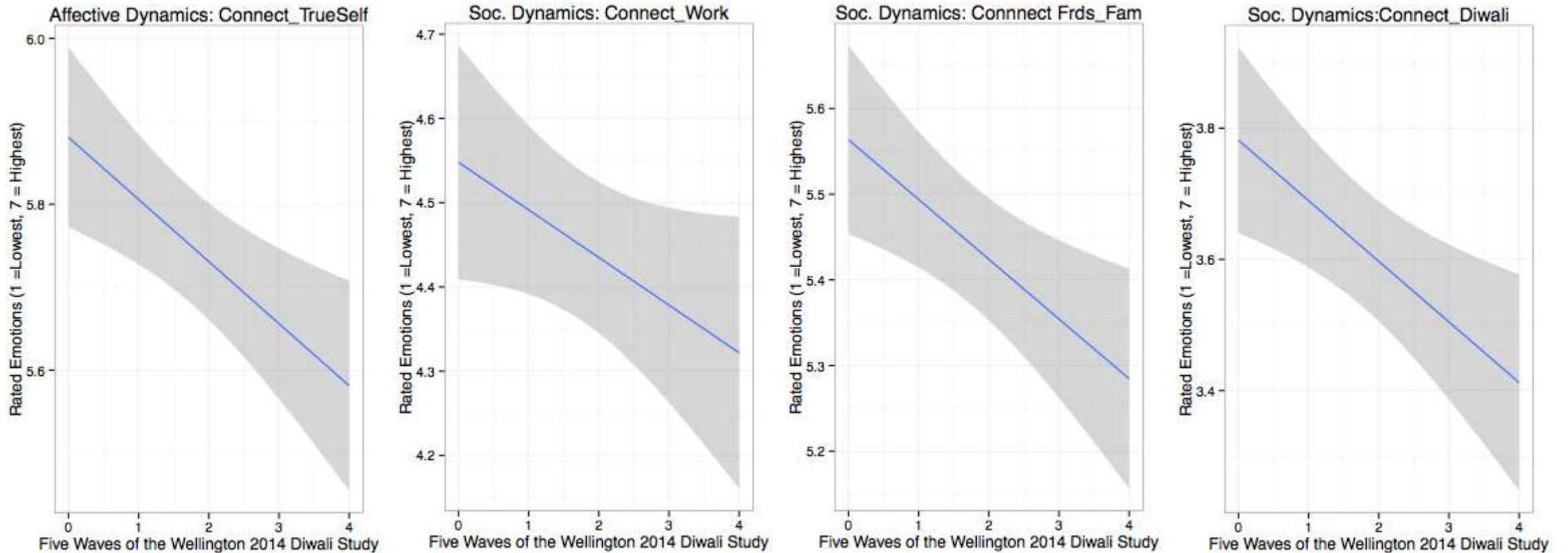
Descriptive Results: IoS



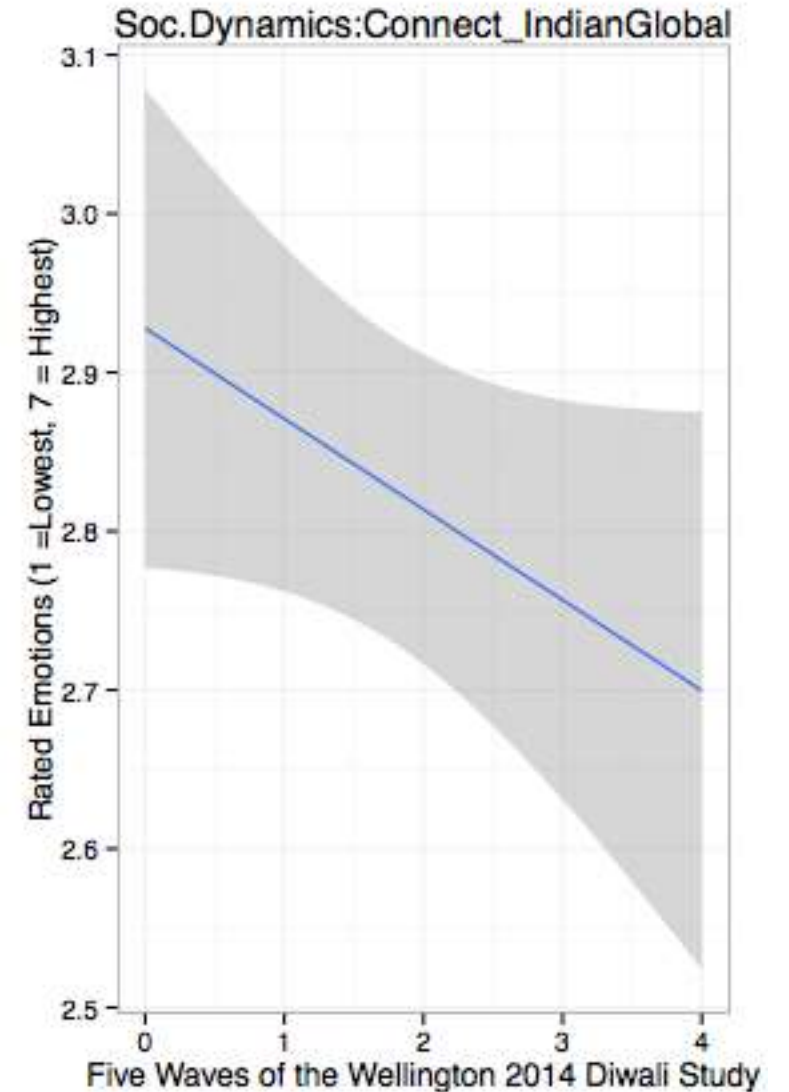
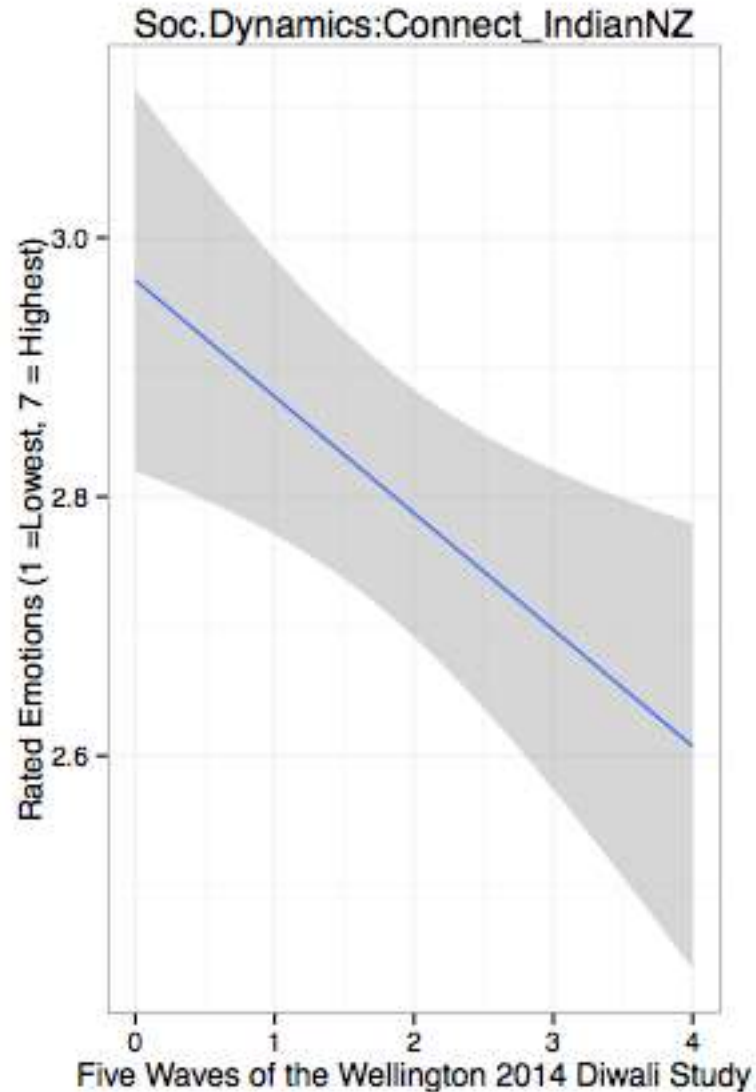
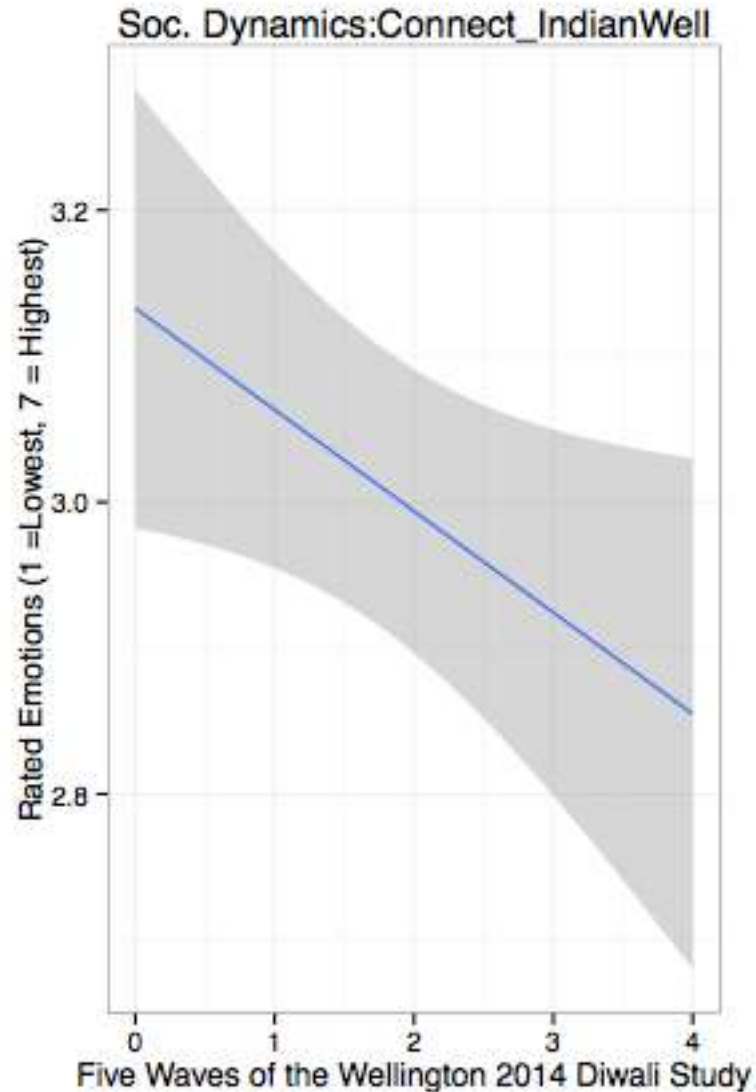
Descriptive Results: Happy



Descriptive Results: Social Connections

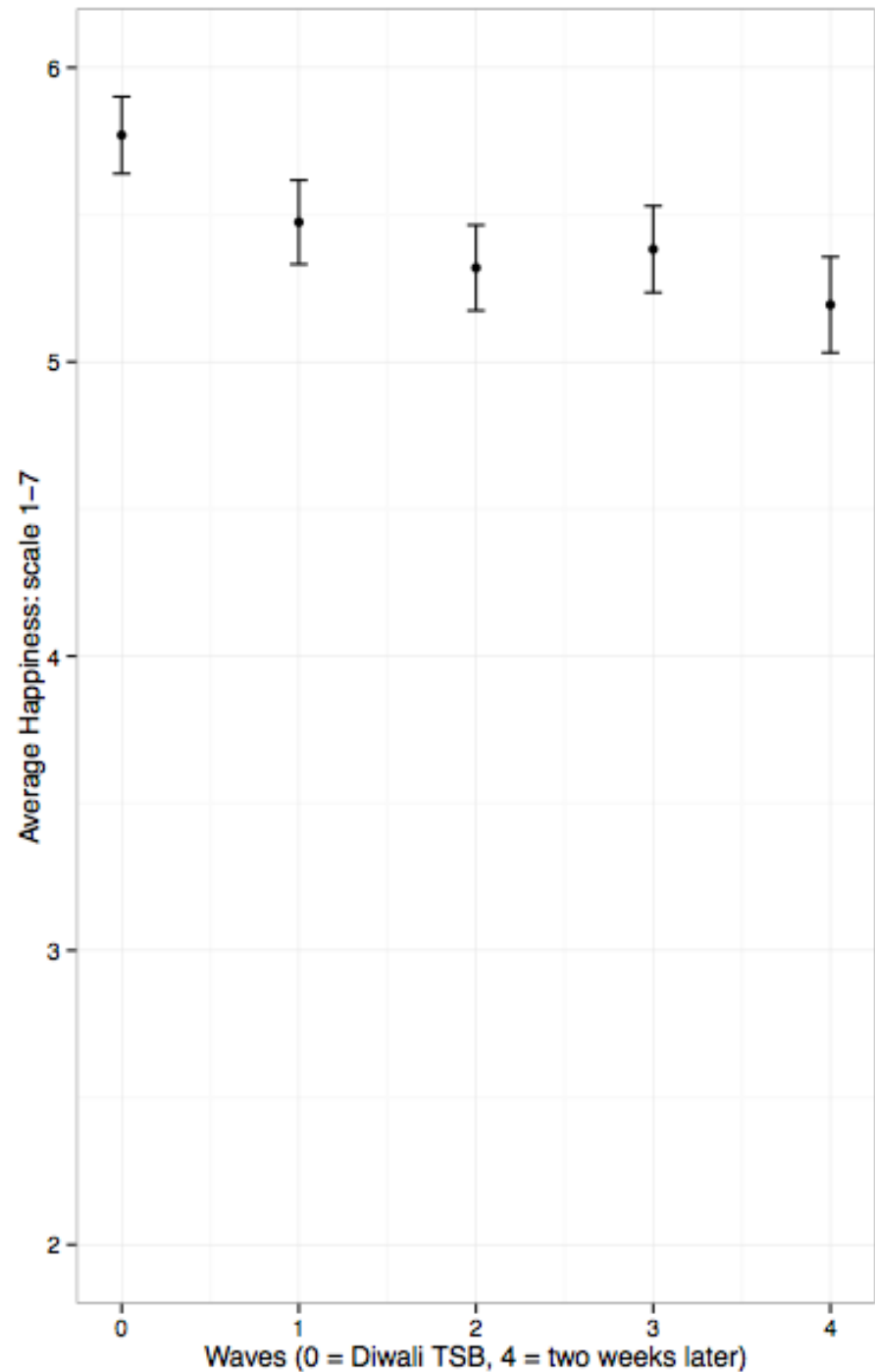


Descriptive Results: Connect with Indians

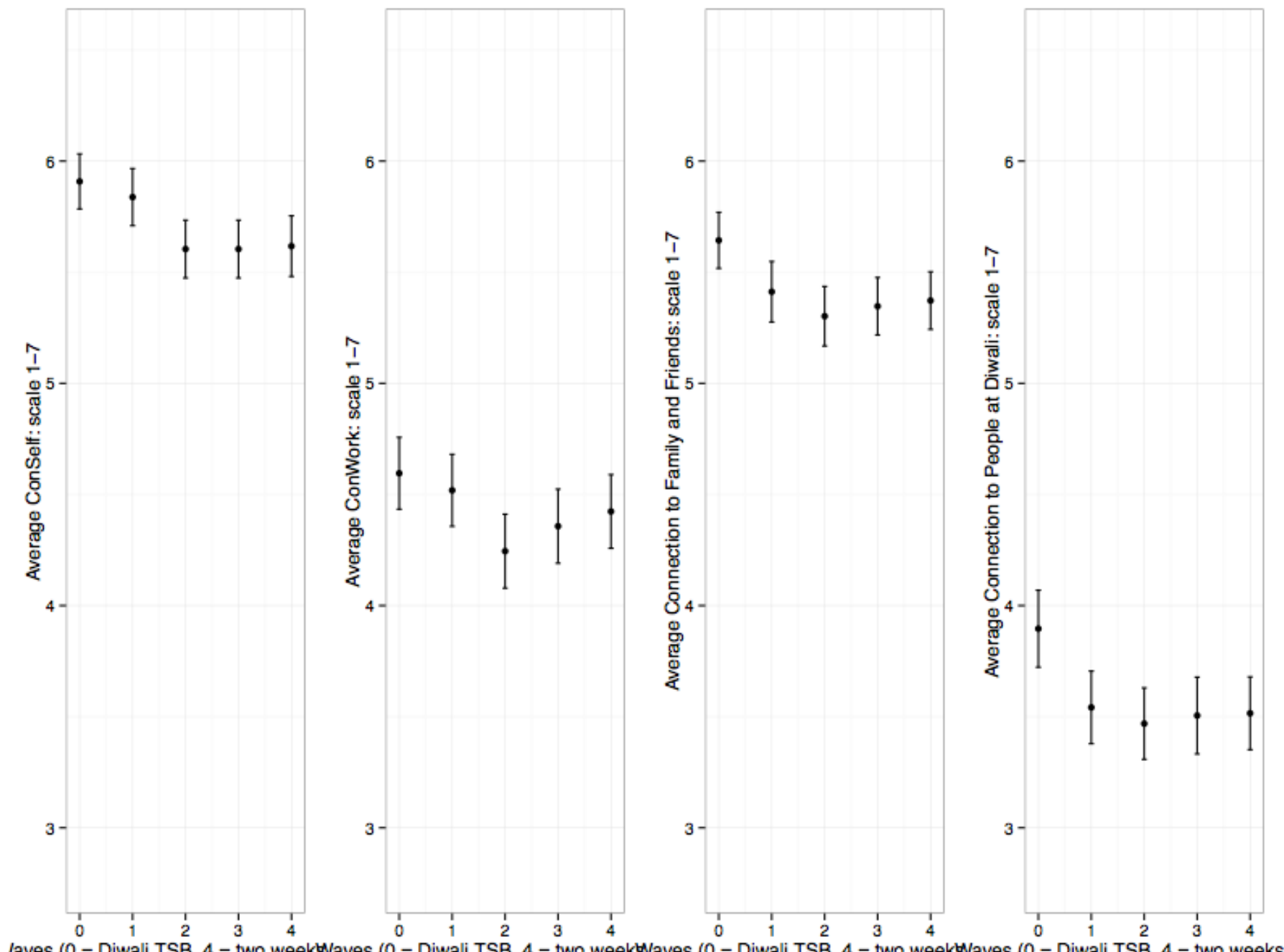


Misleading?

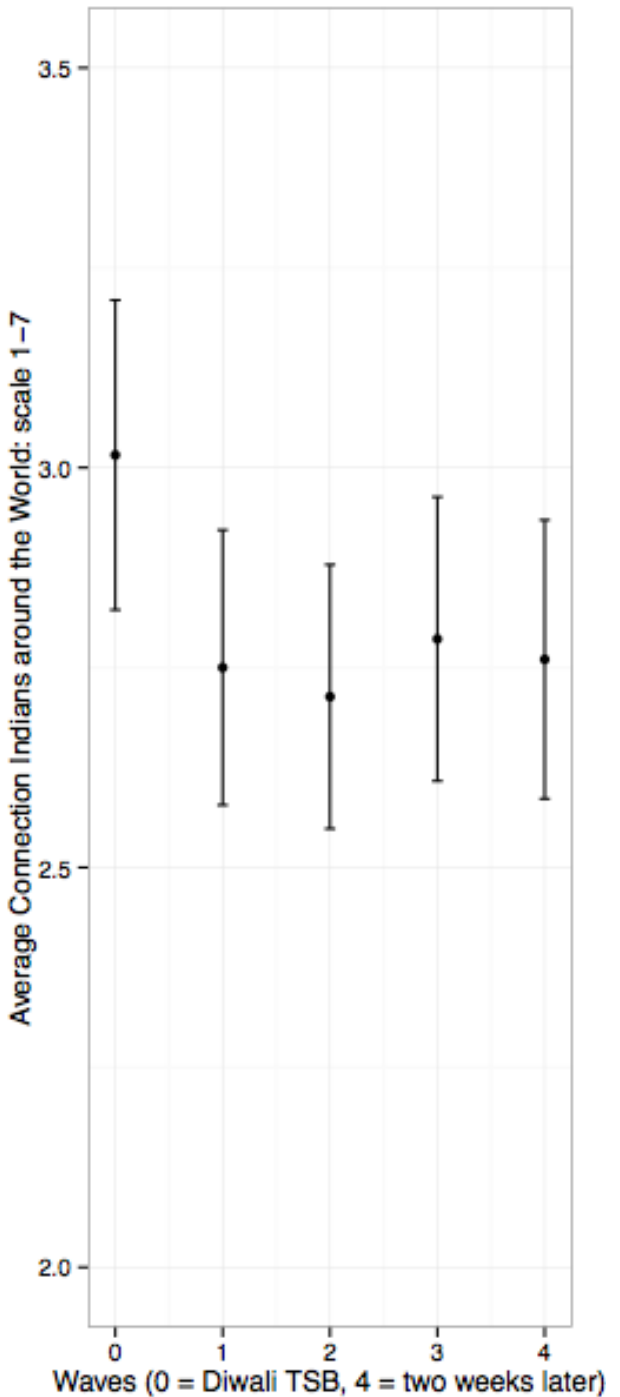
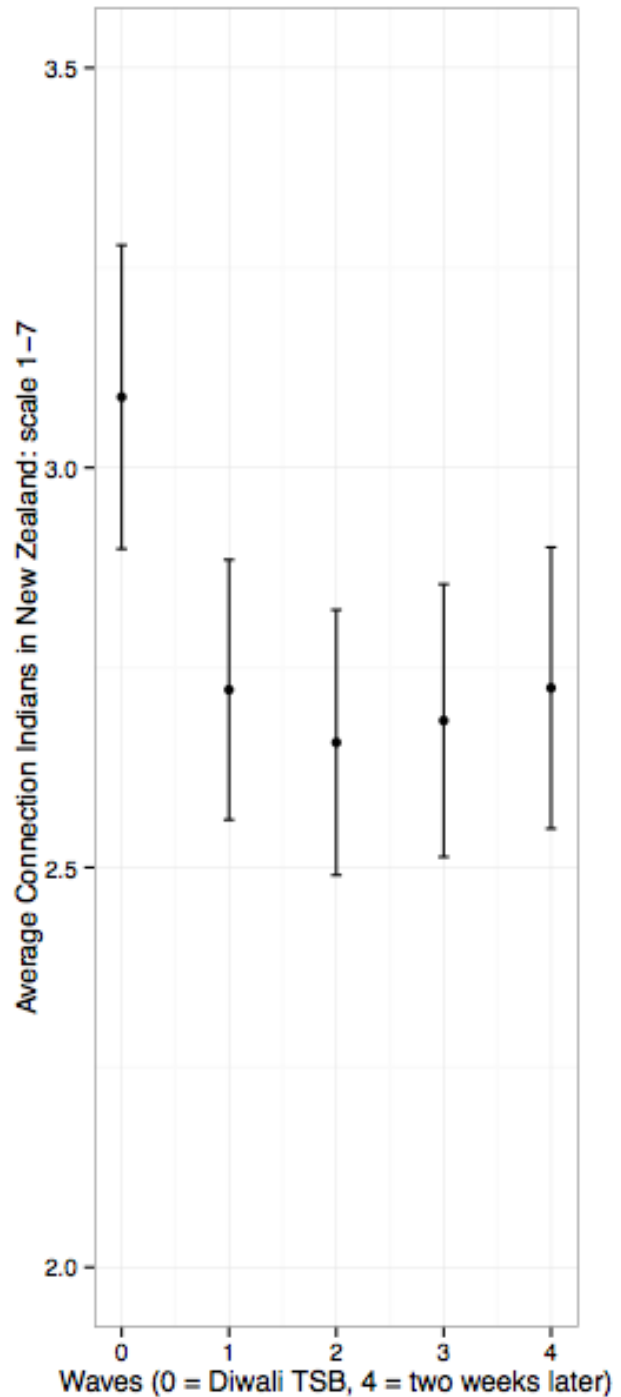
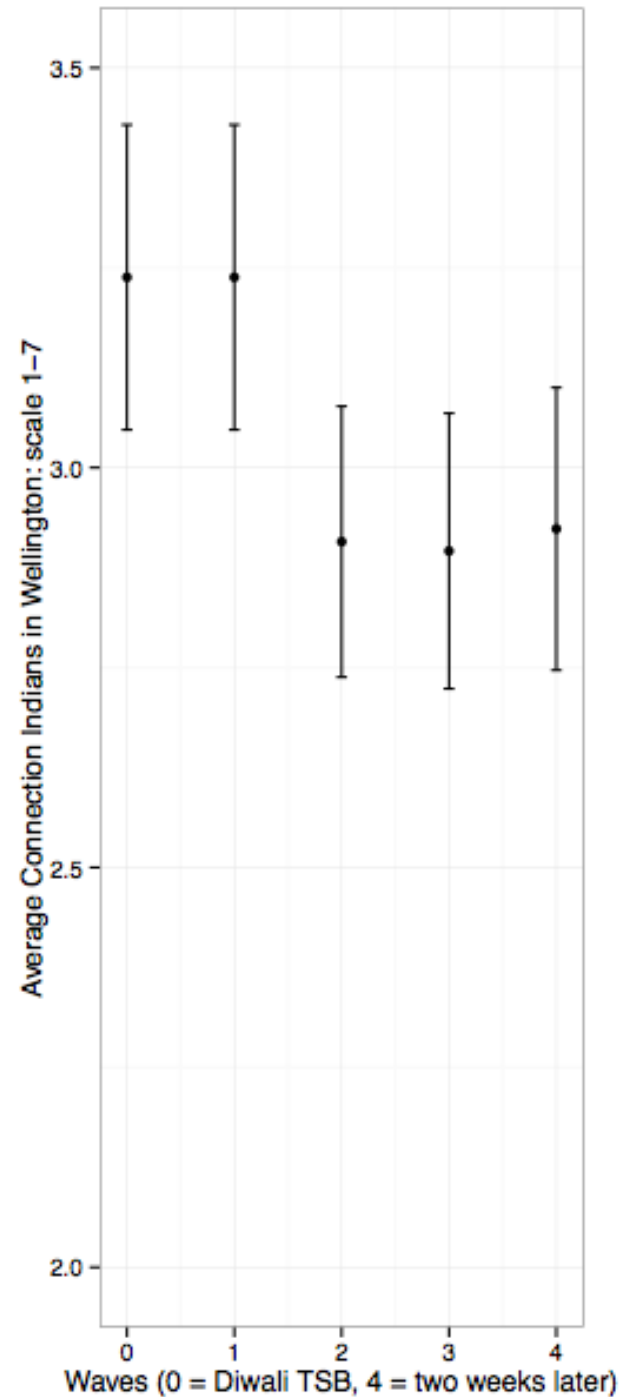
Happiness: more informative graph



Social connections

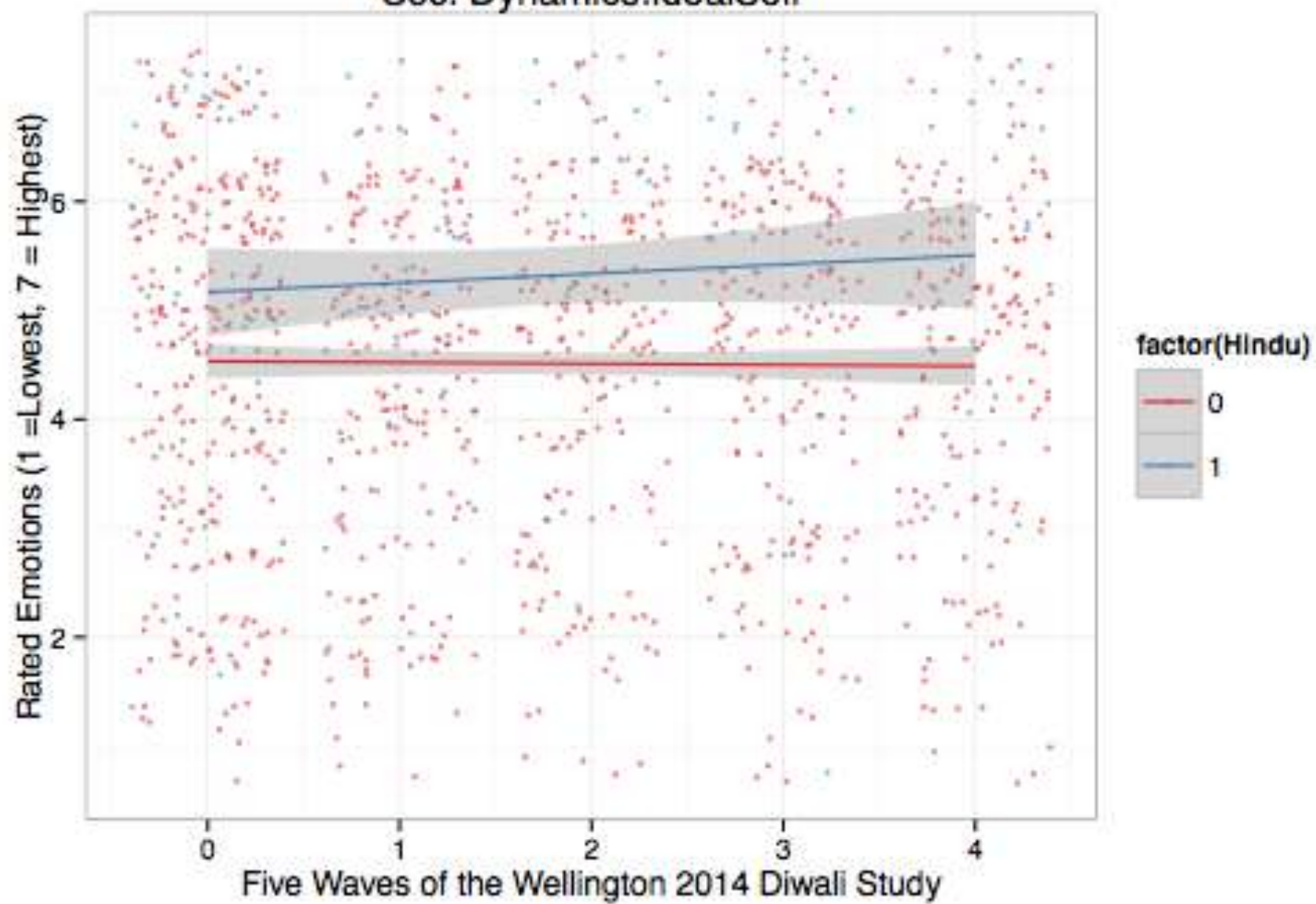


Connections to Indians

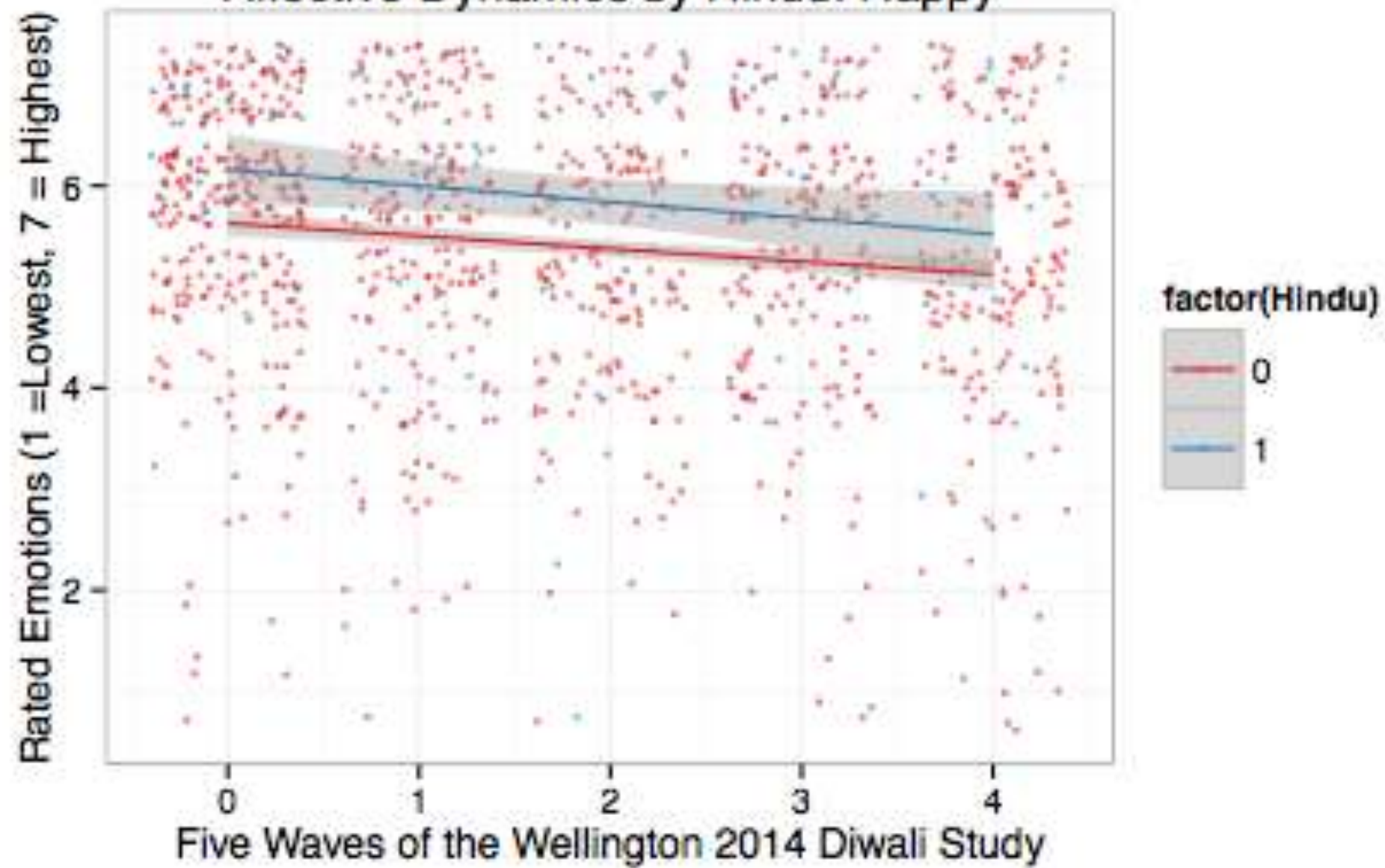


Can we do better?

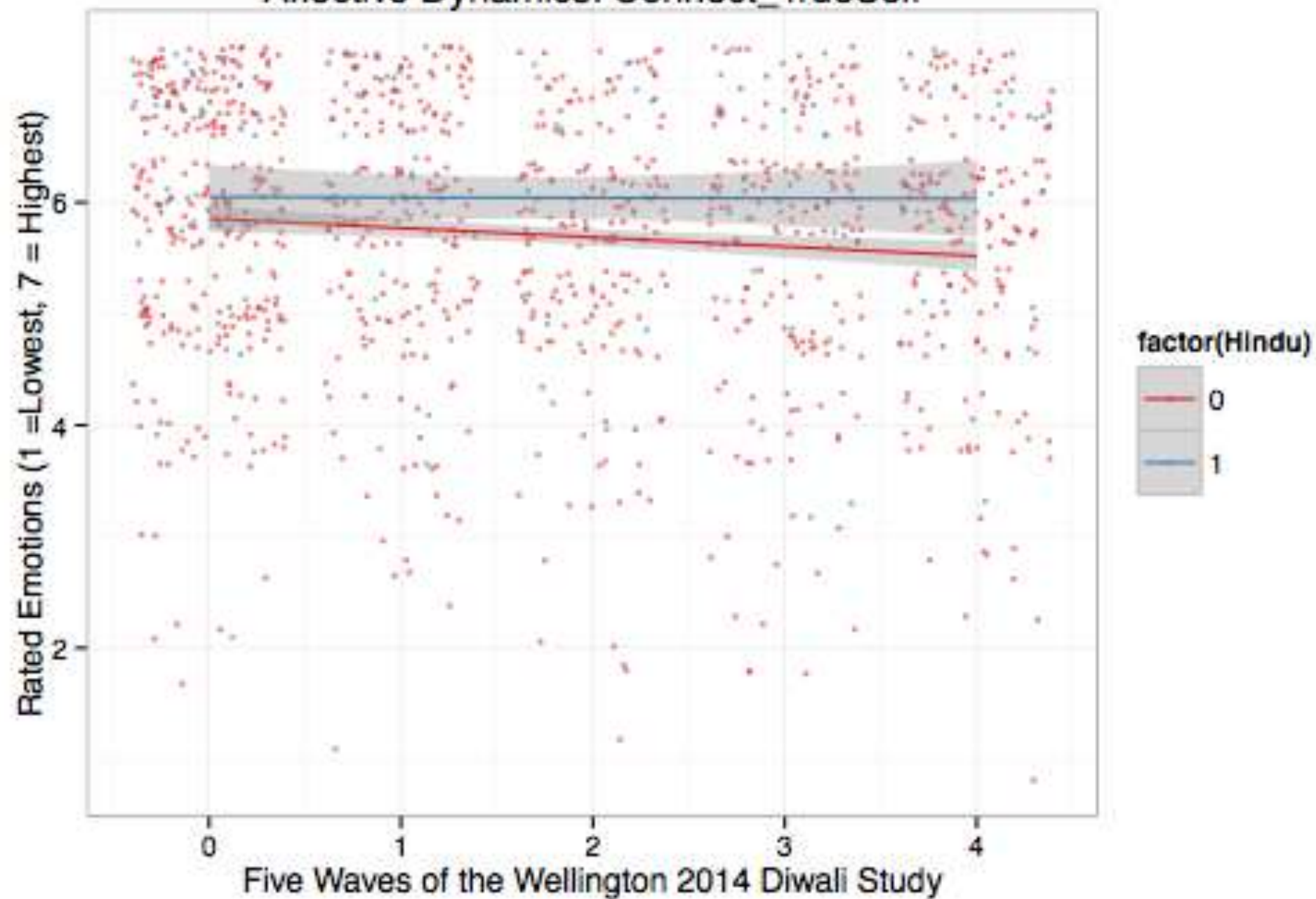
Soc. Dynamics:IdealSelf



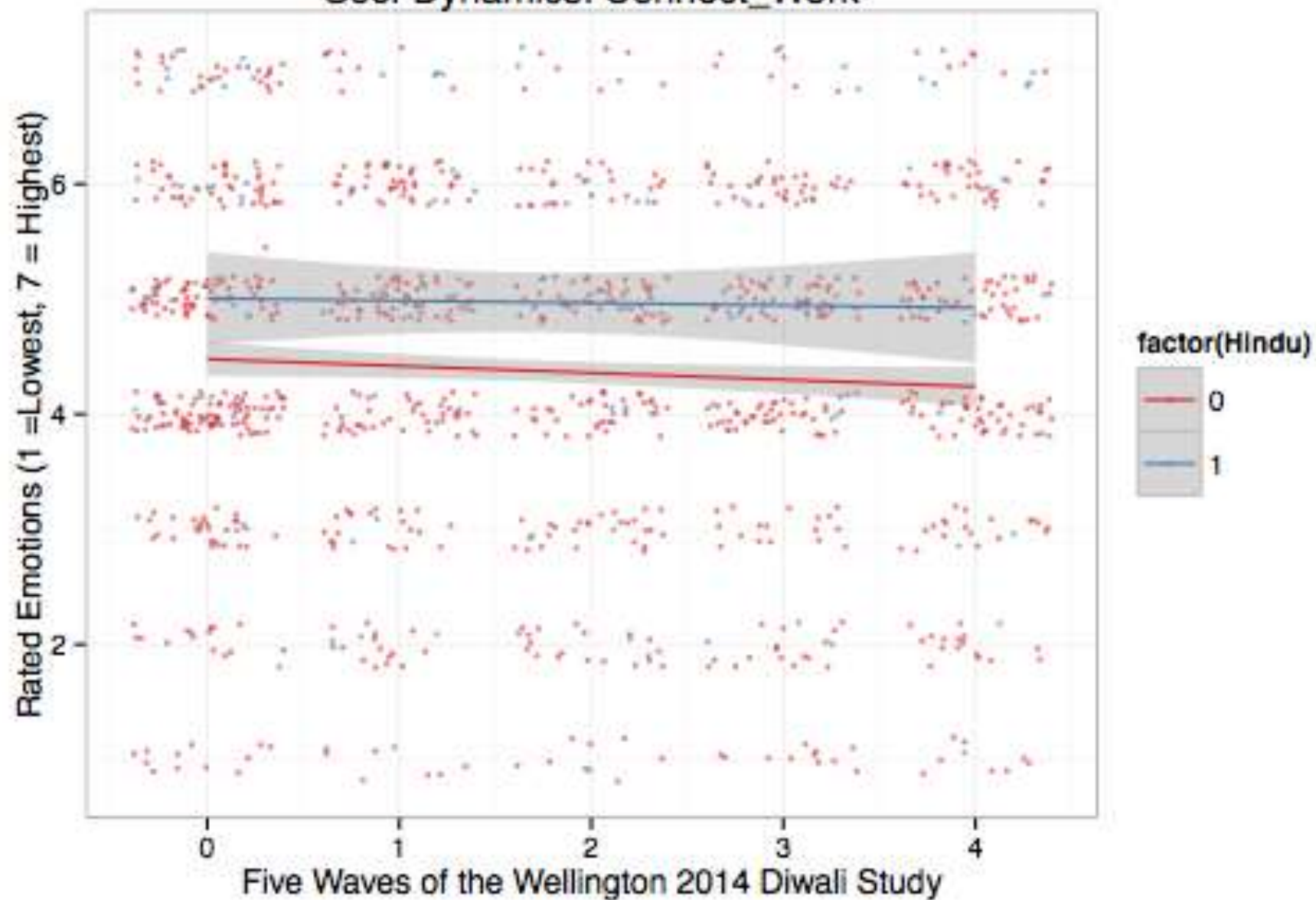
Affective Dynamics by Hindu: Happy



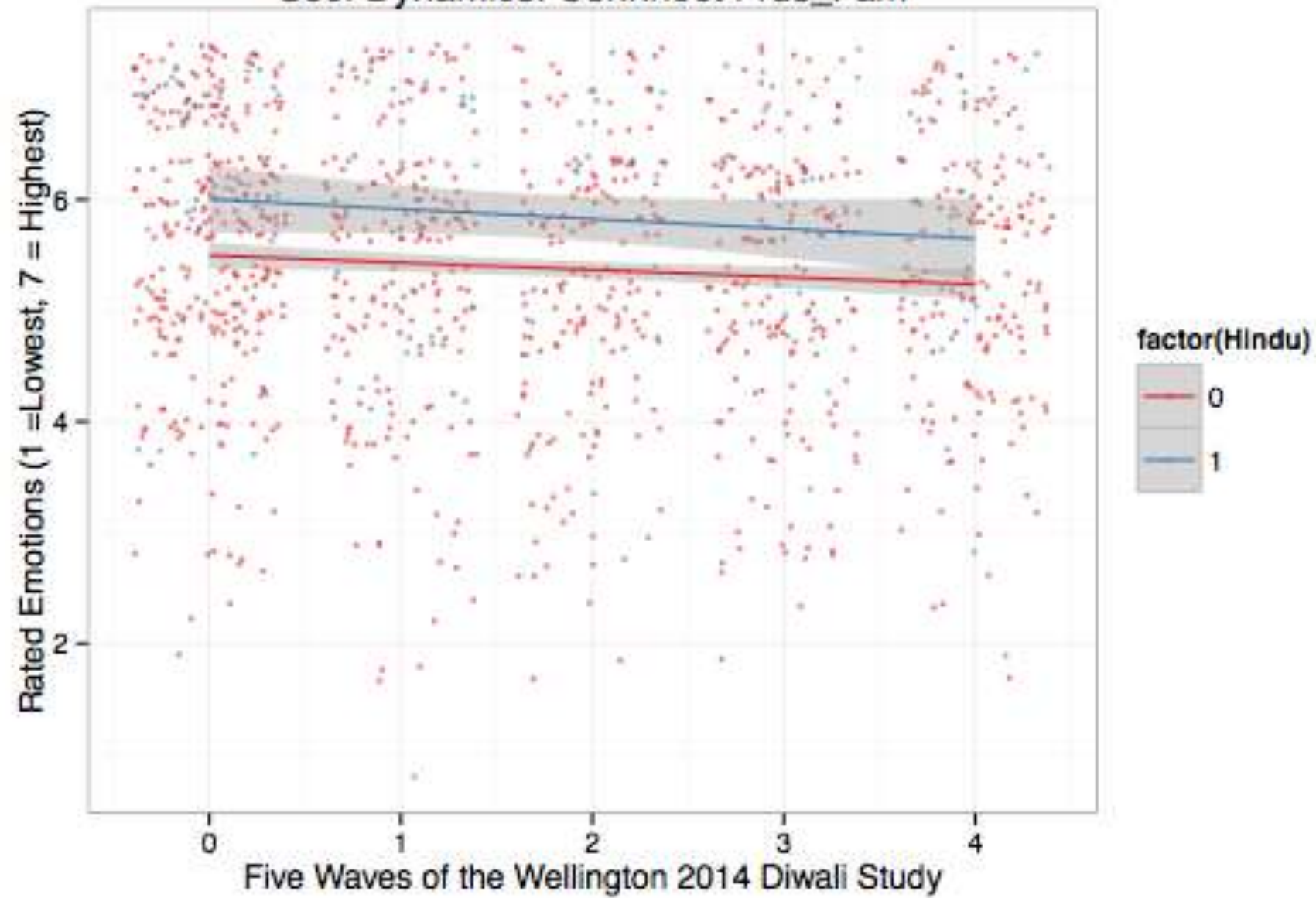
Affective Dynamics: Connect_TrueSelf



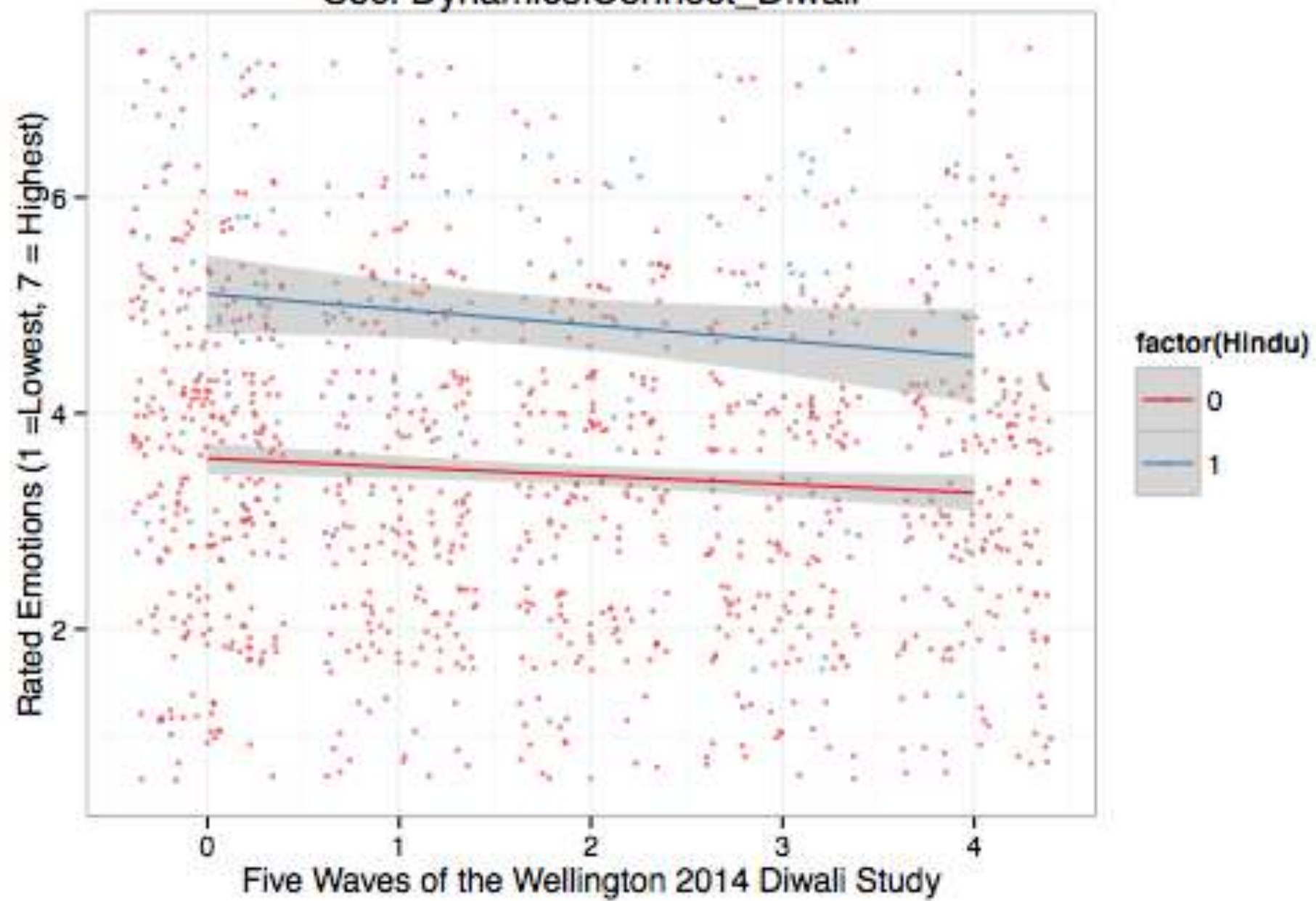
Soc. Dynamics: Connect_Work



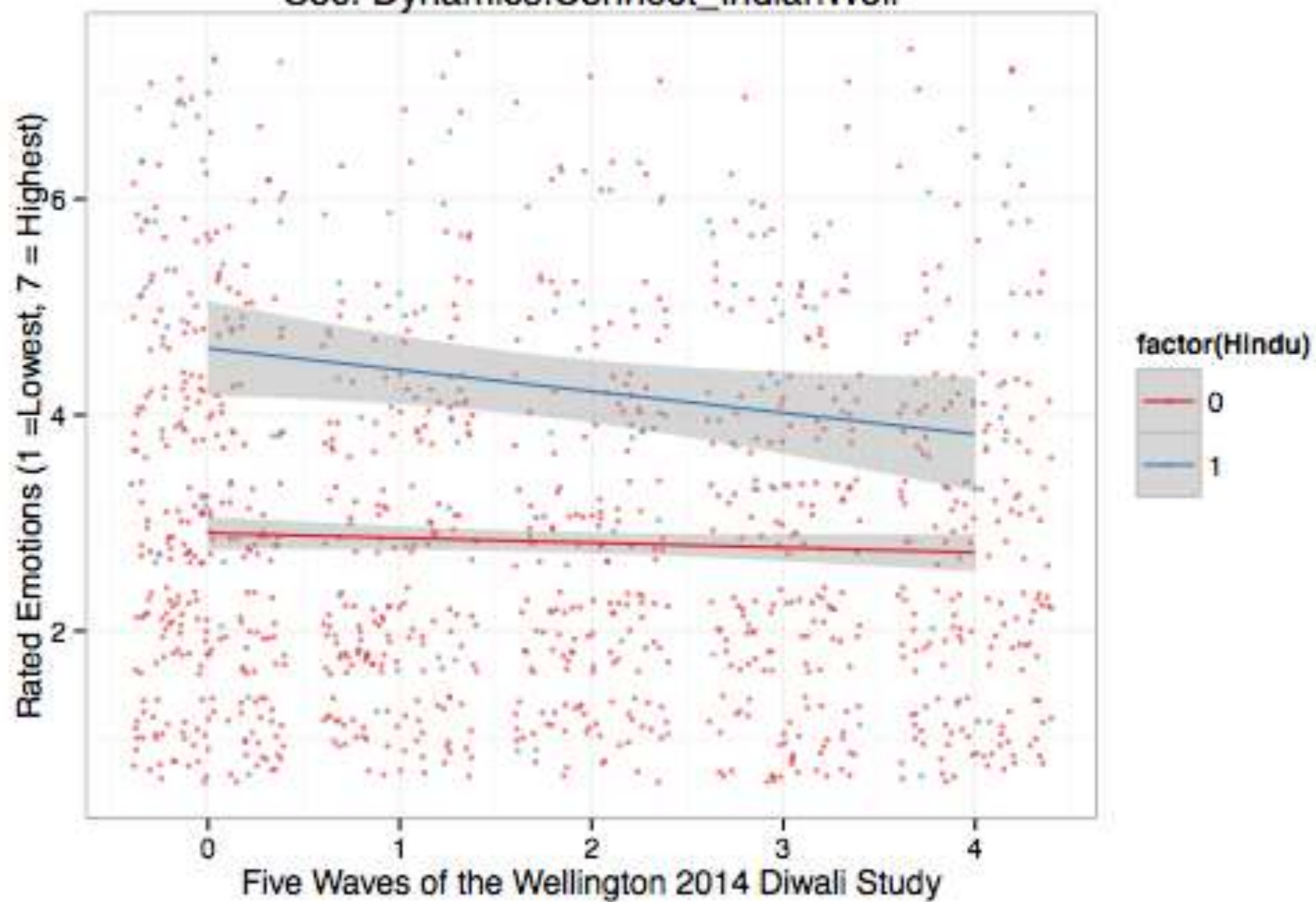
Soc. Dynamics: Connect Frds_Fam



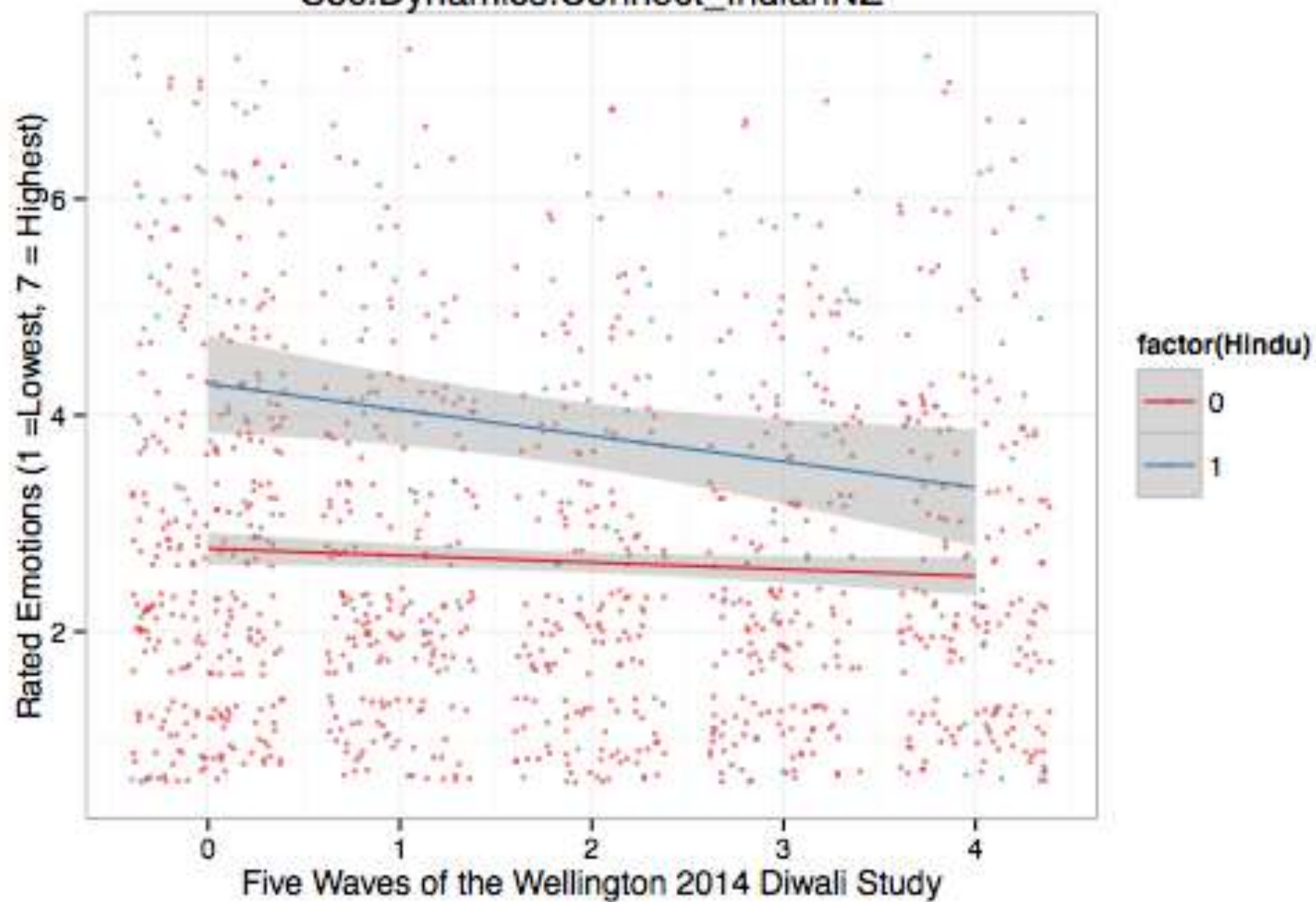
Soc. Dynamics:Connect_Diwali



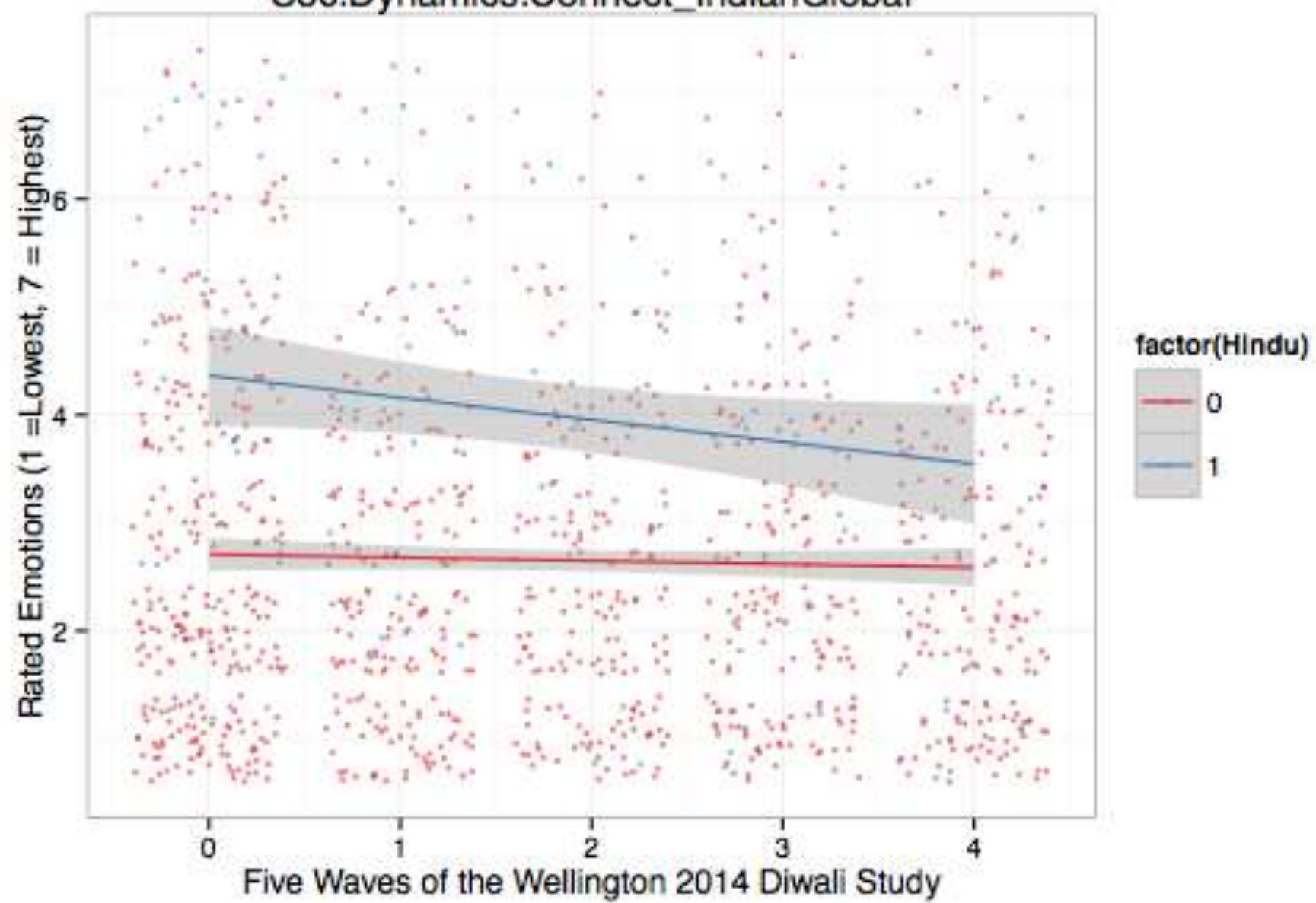
Soc. Dynamics:Connect_IndianWell



Soc.Dynamics:Connect_IndianNZ



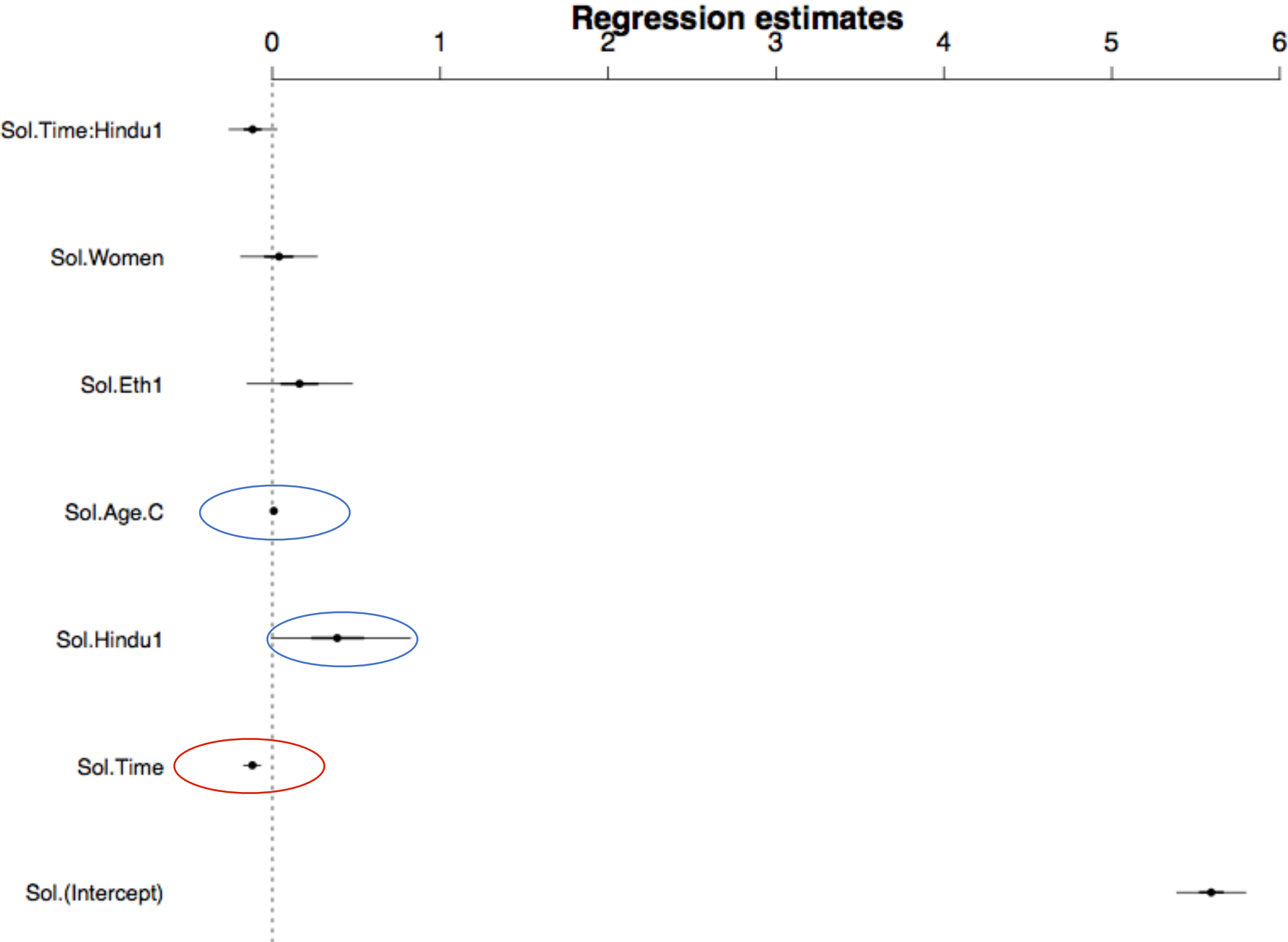
Soc.Dynamics:Connect_IndianGlobal



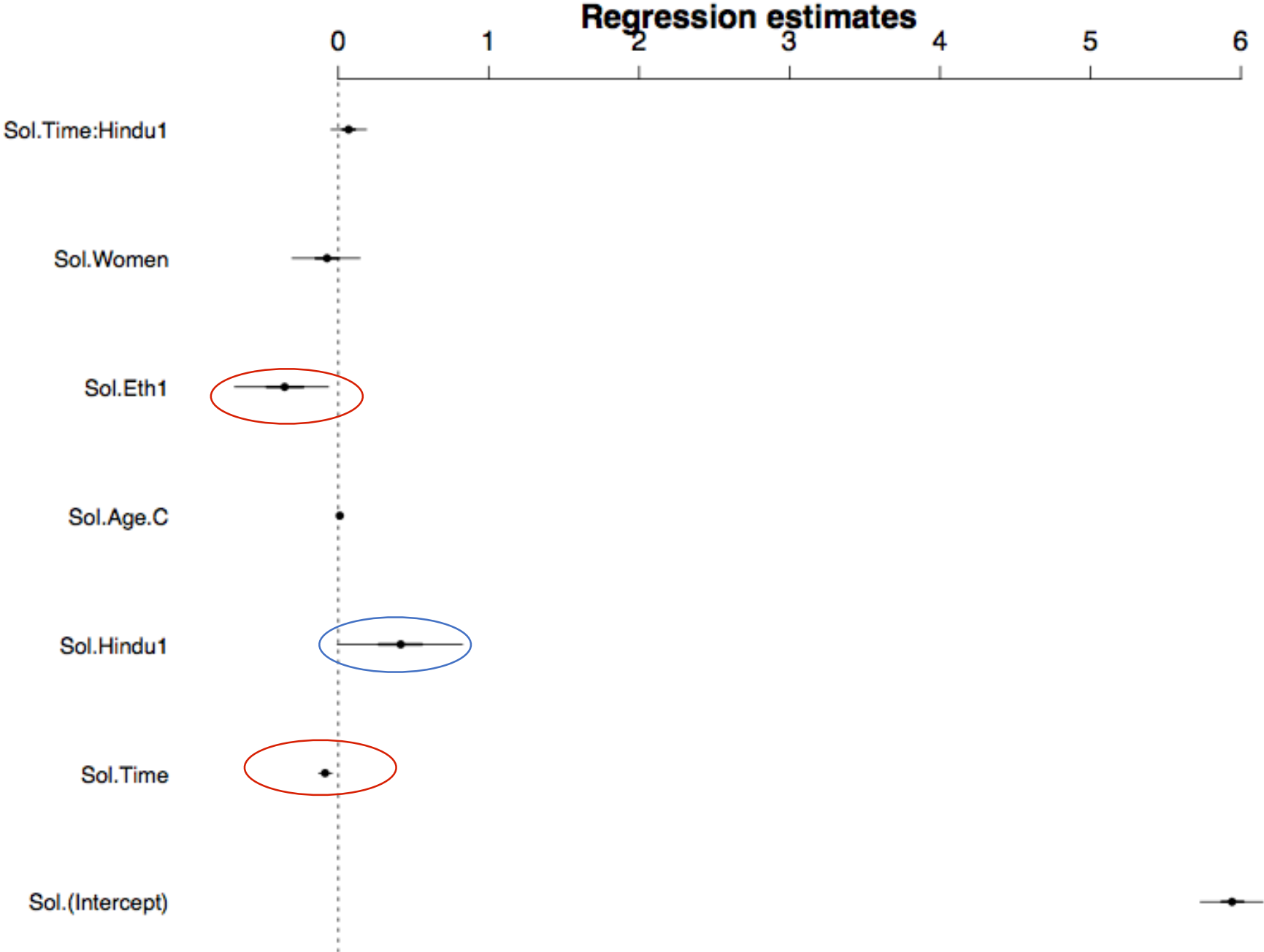
Key point:
religious commitments
look to be important

Formal model results
(necessary)

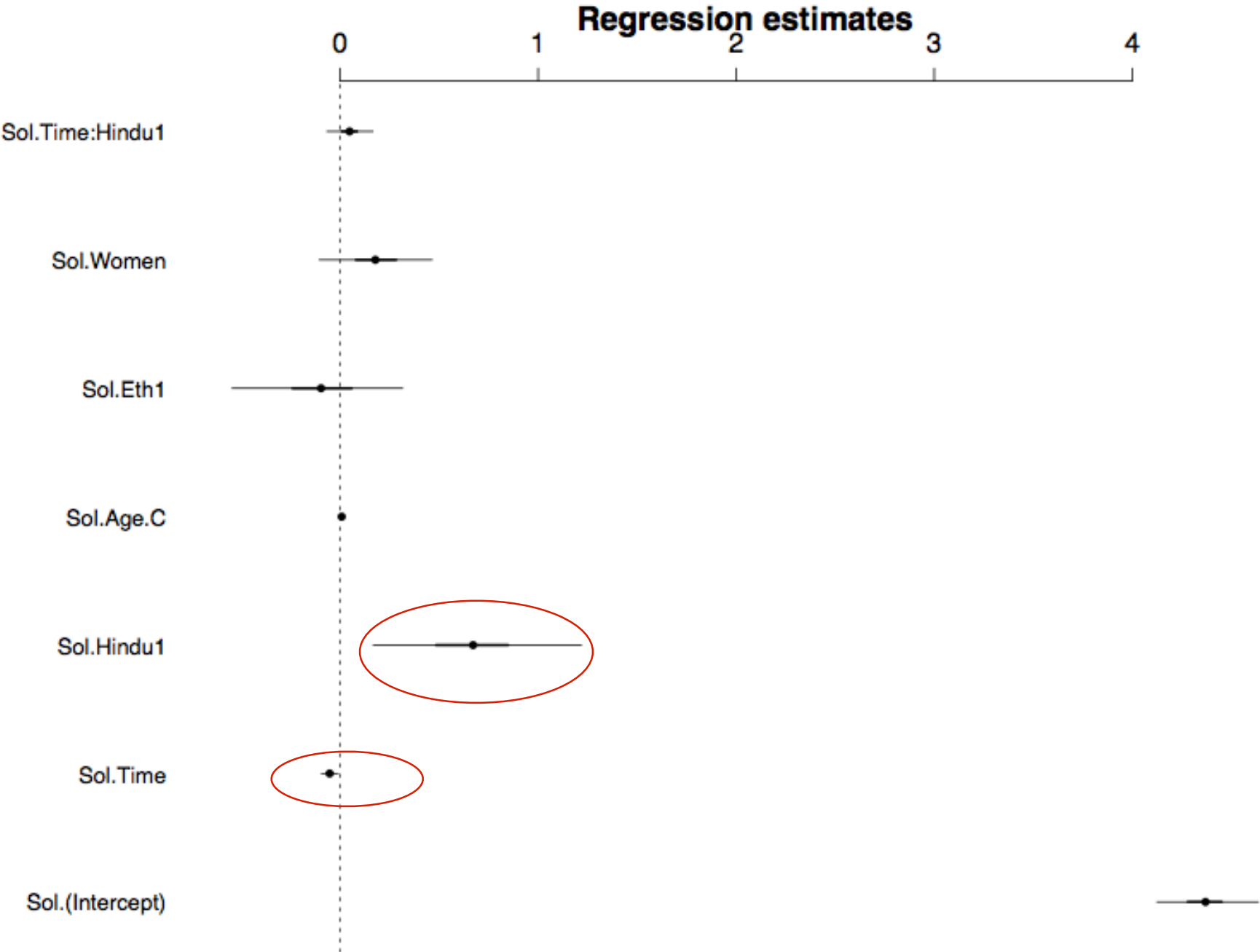
Happiness



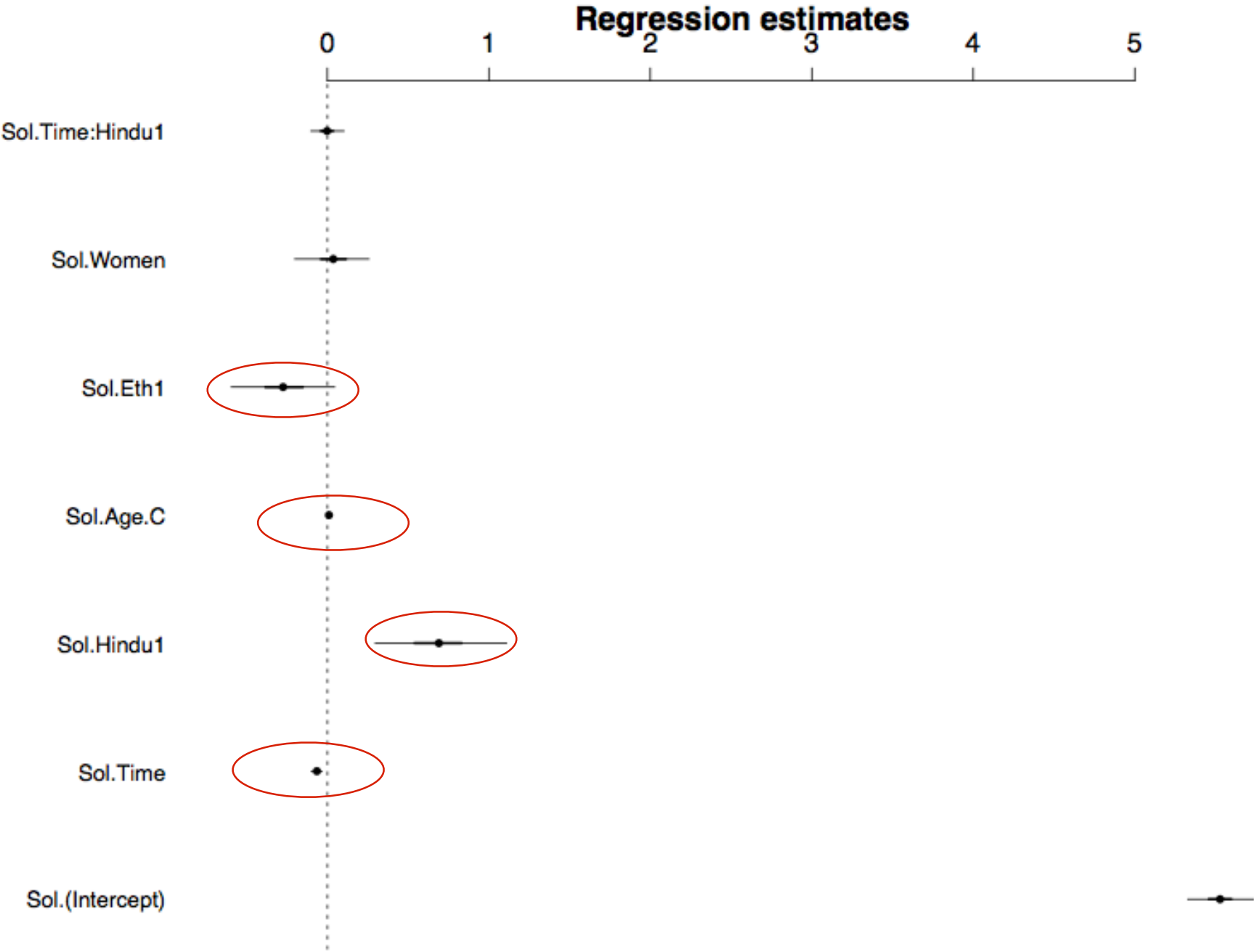
True Self



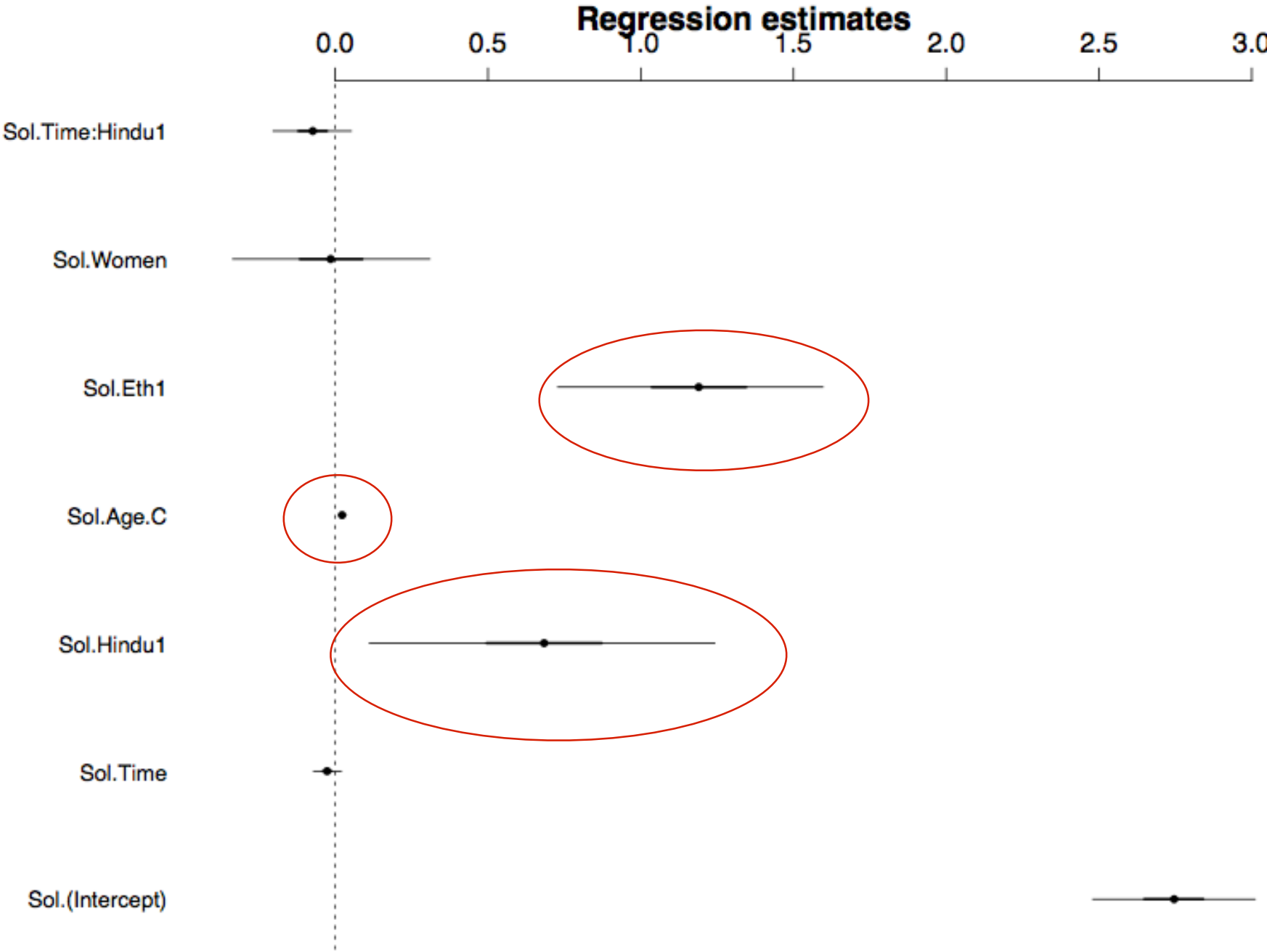
ConnectionWorkers



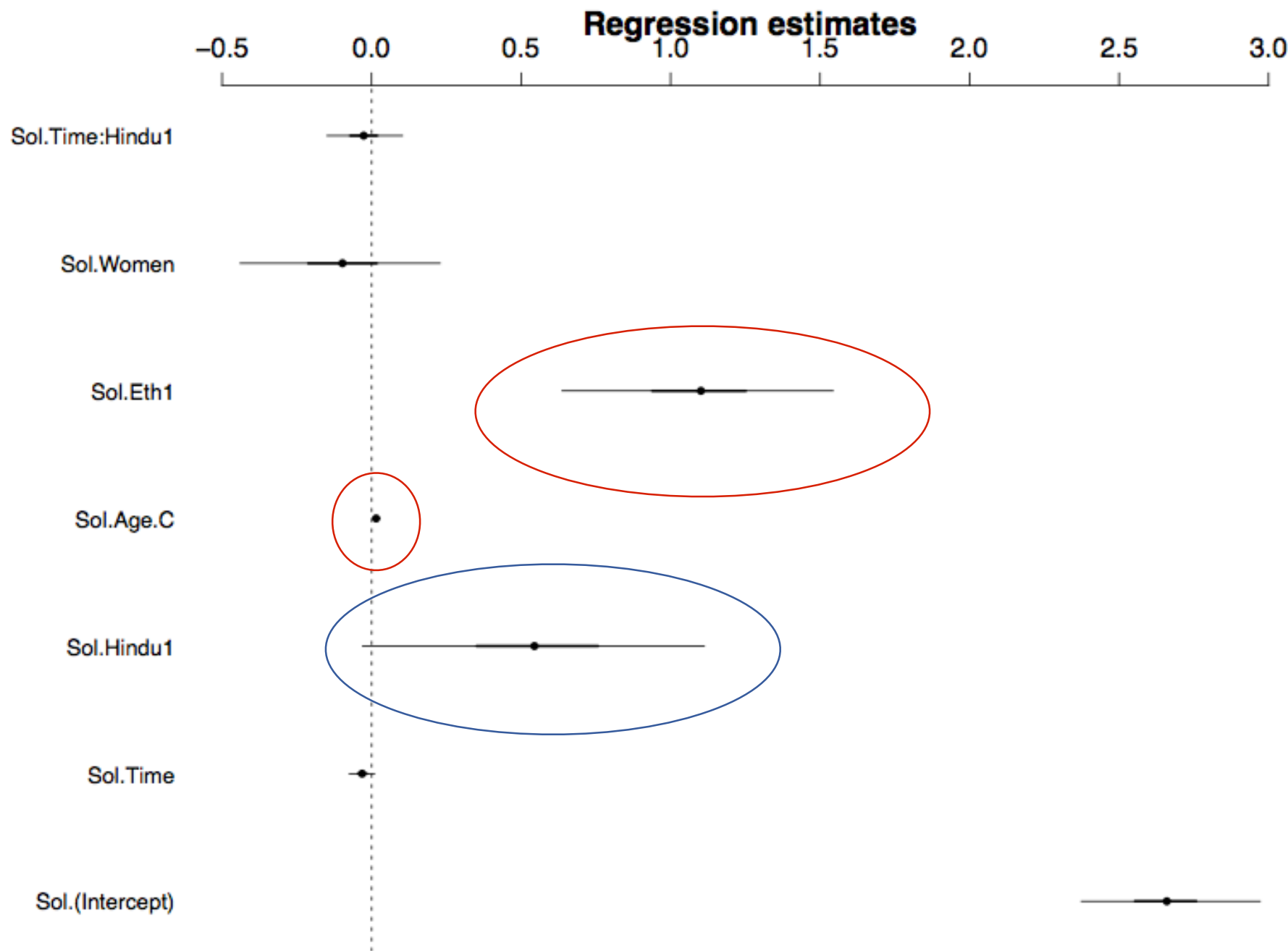
ConnectionFriendsFamily



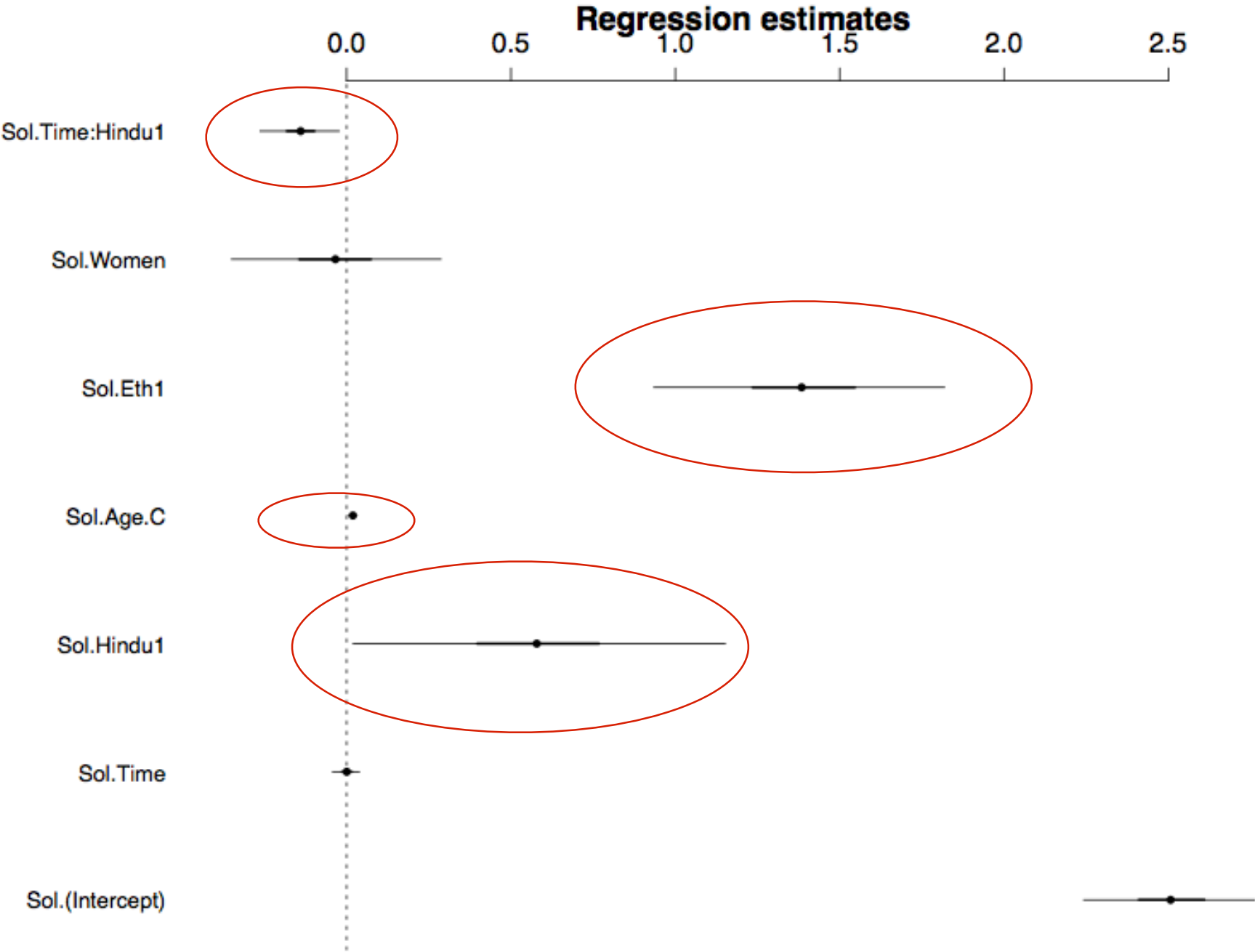
ConnectionIndiansWellington



ConnectionIndiansNZ



ConnectionIndiansGlobal



Summary of findings

- Diwali associated with an increase in happiness for everyone (Hindus probably start higher)
- Diwali is associated with an increase in a sense of being in touch with your true self, (Hindus might probably higher)
- Diwali is associated with an increase in connection to workers (Hindus start higher).
- Diwali is associated with an increase in connection to family (Hindus start higher).
- Indians, Hindus, and older people feel greater connection to Indians in Wellington, New Zealand, and Globally. Diwali is only associated with putting Hindus more in touch with Global Indians than they might otherwise feel.

Implications: theories about what rituals do

- Diwali in NZ affects participants' sense of well-being, whether or not a participant is religious.
- Diwali in NZ affects participants' sense of connection to co-workers, whether or not a participant is religious.
- Diwali in NZ affects participants' sense of connection to co-workers, whether or not a participant is religious.
- Diwali increases a sense of connection to the global Indian community, but we see this only in people who are Hindu.

Outline

- ~~What might rituals do? (10 mins)~~
 - ~~Evolutionary theories~~
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Implications: applying knowledge

- Some preliminary evidence of multi-cultural social capital
- BUT, it looks as though Religious Affiliation matters. Having a sacred meaning is associated with bigger effects.

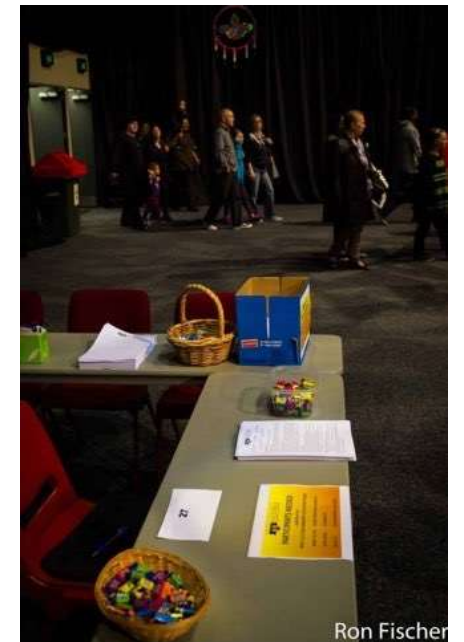
Future Directions

- Immediate
 - Publish studies with Indian collaborators using measures of religious identification.
 - Present results to stakeholders.
- Longer term:
 - Further studies with Indian communities in NZ
 - Better health, well-being, and work measures
 - Extend scope: secular rituals in NZ
 - Integration of ritual studies with longer term studies (NZAVS)
 - Comparative projects (involving historians)

Special Thanks



- NZRI <http://www.victoria.ac.nz/hppi/centres/india-research>
- Murali Kumar: community action trust NZ:
<http://www.catnz.org.nz/AboutUs.html>



A collaborative effort



Ron Fischer



The end



Ron Fischer