

**Re: MURI materials**

Kayla de la Haye

Fri 9/14/2018 5:43 PM

To: George Gerald Vega Yon &lt;vegayon@usc.edu&gt;

George -

1. The network data is in the file you'd set up for me that's a shared dropbox called "study1\_dyad". The raw data is in "study1\_dyad\data-raw"/

This is a dyad level data set for each pair of teammates that are nested in our 42 groups (you'll see the 'group ID' variable here. There are multiple networks measured at two time points (time is labelled as s1 and s3).

2. This is a bit messy.

Essentially there are 3 types of variables: 1) individual variables that are participant demographics, and their scores on the personality and emotional/social intelligence measures; 2) relational variables (self-reported relationships among participants in the same team), and 3) team performance scores ('collective intelligence/CI' scores, and scores on the specific tests used to compute CI).

-All data files (SPSS format) and codebooks are in this dropbox file: MURI USC\Data\Final data set

-The individual-level data set (each row is our n=178 participants) is "MURI\_AllSurveys - FINAL\_073018.sav"

-The group-level data set (each row is a group, n=42) is "MURI\_AllSurveys - FINAL - Group level data\_1"

Jen made a codebook for the group-level data set: "Group-level dataset Codebook 6-5-17.xls"

The description of the variables/coding frame for the **individual data set** is in SPSS. I'm not sure how to export this. I could fiddle with this in SPSS next week to try and work it out if you can't access it.

There are a lot of individual variables assessing personality/social intelligence, that we've distilled to the following key constructs (which I think were clearly outline in the summary of the "profiles analysis" word doc that I emailed you):

RME : this is the 'reading in the mind in the eyes' test score that represents social perceptiveness

SI3Fac1: factor score for 1st factor that represents "socially accommodating"

SI3Fac2: factor score for 2nd factor that represents "socially gregarious"

SI3Fac3: factor score for 3rd factor that represents "socially aware"

FLAbsRel : score from frame line task, that represents holistic thinking

cognitive social structure accuracy score for the individual (I can't find the data for this, which Jen computed).

\*Could you follow up with Jen (email: jennifer.s.labrecque@gmail.com ) about where to find the CSS data and any question you have on the codebook. She managed all the data and data files.

3. We have audio and video of all groups, for the entire time they were doing the tasks. I wanted to use this to code communication networks, but so far haven't been able to. We send the audio files to the army to do automated speaker ID and transcription, but the audio quality is too poor and the data they generated were garbage. I tried for 3 semesters to have students code this (time stamp who is speaking to whom), but it was incredibly slow and they were very inconsistent (v. bad inter-rater reliability). So I pretty much gave up at that point. However, Daniel Tishner, who I think works with Martin Everett + crew emailed me this summer to say he may have some solutions. But I haven't had a chance to follow up with him. I'll forward you his email.

Kayla

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**From:** George Gerald Vega Yon

**Sent:** Friday, September 14, 2018 12:39 PM

**To:** Kayla de la Haye

**Subject:** Re: MURI materials

Hey Kayla, a few questions:

1. Where is the network data? Right now I think that the datasets that you gave me do not include ties, but I'm not sure. I found this folder "MURI USC\Data\Qualtrics\final data\Network data" what are the files that I should be using?

2. Where is the codebook for the datasets that you shared with me?

3. Also, I noticed that there are some datasets of audio recordings... looks interesting. Have you thought about using that to create networks as well?

Best,

George G. Vega Yon  
Research Programmer  
Department of Preventive Medicine  
University of Southern California  
+1 (323) 442-7359  
<https://ggvy.cl>

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From: George Gerald Vega Yon

Sent: Thursday, September 6, 2018 10:50:23 AM

To: Kayla de la Haye

Subject: Re: MURI materials

Hey,

I'll happily lead the social smarts analyses :).

Something should come out of the small networks statistics!

Thanks for the documents, I'll take a look at them asap.

Best,

George G. Vega Yon  
Research Programmer  
Department of Preventive Medicine  
University of Southern California  
+1 (323) 442-7359  
<https://ggvy.c>

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From: Kayla de la Haye  
Sent: Thursday, September 6, 2018 9:25:22 AM  
To: George Gerald Vega Yon  
Subject: MURI materials

George -

I just shared the MURI dropbox with you. There is a lot there from the past 3 years so perhaps a lot you won't need.

In terms of docs I wanted to share with you:

1. Identifying "social smarts" profiles, and how they are linked to team social networks

-the "Profiles analysis" .doc is a summary of ideas that we'd like to explore, and thoughts about analysis strategies

-the PDF of my sunbelt talk reviews the ideas behind this, the data we have, and the first stage of analysis (looking at how each separate social intelligence construct relates to team network structure). The last slides talk about next steps being to look at profiles of social smarts.

-I've attached a .csv and spss file of the individual-level data (i.e., all variables we have at the individual participant level, including information on their team, and information on their position in the team network structures). The spss file has descriptive labels and coding frames for all variables.

-Overall, the priority here is to see if there are any useful clusters/profiles that emerged from the various social intelligence constructs, that could help us summarize "types" of teammates. If so, test if these social smarts profiles help explain the team social network structure that emerges. And last, see if the composition of "social smarts profiles" in teams is linked to their performance. I'd like you to take the lead on the remaining analyses, and to try and get this paper written by the end of the year.

2. If you are able to find some solutions to the "small network" issue, and getting a better metric of hamming distance for our "cognitive social structures" (CSS) in teams, then great.

I've attached the summary of analyses we've done so far with the CSS data.

One of the most interesting findings was that the group "consensus" in CSS (i.e., the hamming distance between each xij pair in the group) was strongly related to group performance: groups with more agreement about their perceptions of the advice network performed better on the test for collective intelligence. But, it seems like this relationship is really confounded with group size (and the bias in the hamming distance scores with these small 3 to 5 person teams).

IF there is a math solution to this, and this result holds, I think we should write a paper on this.

There may be people on the MURI team (e.g., Noah Friedkin, and Francesco Bullo who is a mathematician) who would be good to talk to about these ideas.

cheers

Kayla

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Kayla de la Haye, PhD  
Assistant Professor of Preventive Medicine  
Department of Preventive Medicine  
Keck School of Medicine  
University of Southern California  
2001 N. Soto St., Los Angeles, CA 90032  
Phone: 323.442.8228 | Cell: 310.480.8440  
Web: [https://iipr.usc.edu/faculty.php?faculty\\_id=128](https://iipr.usc.edu/faculty.php?faculty_id=128)