

## Changing Social Networks: A Study of the Networks of Women at the DOE National Laboratory Women in Science Summit of November 2015

J. Stockard, February 15, 2016

In November 2015 COACH sponsored a Women in Science Summit at Argonne National Laboratory that brought together 29 women scientists from 14/17 laboratories. At the end of the summit a short questionnaire was distributed that asked attendees about the extent to which they knew other participants before the meeting and their intentions to stay in contact with others after the meeting. Twenty-four of the 29 participants responded. The analysis reported here is limited to the 24 who provided data, thus providing a symmetric table for analysis. Figures 1 and 2 show the networks in a graphical form, and Table 1 provides a statistical summary of the responses to these two questions. The labels at the nodes of the diagram identify individual attendees by their lab affiliation. If this report is distributed to others the labels should be modified so that no one can be identified.

*Overall there was a remarkable lack of connectivity between participants for the different DOE Laboratories. On average, the participants knew only two other attendees before the summit (Figure 1). Four people were isolates and several only knew those from their own institution. Only three people, all senior women, knew five or more attendees. In total, there were 47 ties in the network, 8.5% of the total possible number of ties ( $24 \times 23$ , for 24 people with 23 possible ties each).*

The responses to the second question, diagrammed in Figure 2, contrast sharply with those to the first question and are diagrammed in Figure 1. Figure 2 is much denser, with a total of 228 out of the possible 552 ties, for a density of .413. Respondents indicated a desire to keep in contact with 3 to 22 of the other attendees, with an average of 9.5. Some people indicated a desire to follow up with only a few of those they had met, but some, clearly, were quite enthused and indicated a desire to stay in contact with many other attendees.

Table 1  
Social Networks of Participants in the Argonne Summit

	Knew Before the Summit	Plan to Stay in Contact
Minimum	0	3
Maximum	6	22
Average	2.0	9.5
Total	47	228
Density	0.09	0.41

The data in this table are based on the nominations of each of the 24 respondents.

Figure One: Sociogram – Ever Met Other Person Before the Summit

- BNL
- LLB2
- PRINC
- SLAC

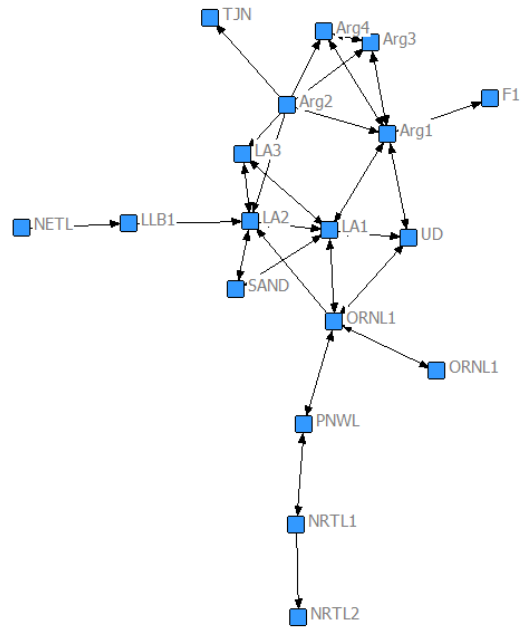
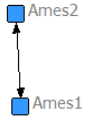
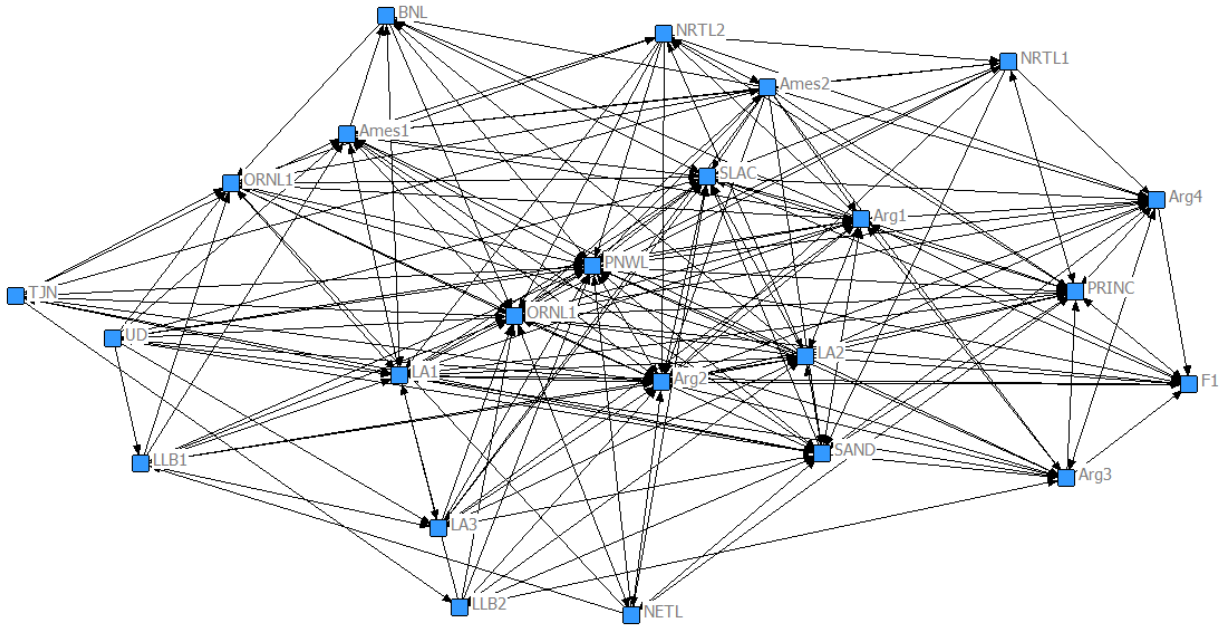


Figure Two: Sociogram – Planning to Stay in Contact After the Summit



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