Strength of weak ties and breaking your bubble

Assignment 6

Spring 2017

Sociology 204 (Social Networks)

1) What is an issue you would like to discuss in precept? [7 pts]

Strength of Weak Ties

2) Imagine a network where all ties are either strong, weak, or absent. Further, assume that the forbidden triad---a strong ties between A and B, a strong ties between B and C, and an absent tie between C and A---does not exist. Finally, assume that every person has two or more strong ties. Which of the following must true? [10 points]

A. All weak ties are bridges.

B. All bridges are weak ties.

C. Both A and B.

D. Neither A or B.

Mark Granovetter’s paper “The Strength of Weak Ties”, published in 1973, makes a prediction about the relationship between tie strength and friend circle overlap. Could it possibly be the case that this theoretical prediction made before you were born might apply to your personal network? We are going to use the friendship data that exists in Facebook in order to test this prediction, and we should keep in mind that Granovetter had never seen (or even imagined) Facebook when he made his prediction.

On page 1361, Granovetter defines tie strength as follows: “the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie.”

Further, on page 1362 Granovetter defines friendship circle overlap – we will call it “overlap” – between A and B to be the number of friends that A and B share divided by the total number of distinct people to whom A and B are connected. For example, if A has 100 friends, B has 120 friends, and A and B share 20 friends in common, then the overlap would be 0.10 [20/(100 + 120 - 20)].

3) Of your friends on Facebook, think about 5 friends to whom you have the **strongest** tie according to Granovetter’s definition. Then calculate your degree of overlap [10 points]

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| --- | --- | --- | --- |
| First name | # of friends | # of friend in common | Overlap |
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4) Of your friends on Facebook, think about 5 friends to whom you have the **weakest** tie according to Granovetter’s definition. Then calculate your degree of overlap [10 points]

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| --- | --- | --- | --- |
| First name | # of friends | # of friend in common | Overlap |
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5) Describe a procedure to randomly select 10 friends from your list of friends on Facebook. Because we are doing science here, your procedure 1) should result in a true random sample where all of your friends have an equal probability of inclusion and 2) should be described clearly enough so that another scientist could replicate it. [5 points]

6) Use the procedure in Question 4 to generate a list of 10 randomly selected friends. For these 10 randomly selected friends, complete the table below. [10 points]

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| --- | --- | --- | --- |
| First name | # of friends | # of friends in common | Overlap |
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7) Comparing your **strongest** ties to your **weakest** ties, does your data support Granovetter’s prediction? Use numbers to support your conclusion. [5 points]

8) Comparing within your **randomly selected** friends, does your data support Granovetter’s prediction? Use numbers to support your conclusion. [5 points ]

9) Comparing your strongest ties, your weakest ties, *and* your random ties, does your data support Granovetter’s prediction? Use numbers to support your conclusion. [10 points ]

10) Do any of your **weak** ties that have higher overlap than your **strong** ties? If yes, what might explain these outliers? [5 points]

11) Do any of your **random** ties that have higher overlap than your **strong** ties? If yes, what might explain these outliers? [5 points]

*Optional*: Facebook now has a “lists” feature that allows you to curate smaller groups by foci. In You can view recommended lists by going to [www.facebook.com/bookmarks/lists/](http://www.facebook.com/bookmarks/lists/). There are also generic lists, like “close friends” and “acquaintances”, and Facebook actually tries to recommend people for you to put into those lists. Look at their suggestions – are you “strong ties” recommended for your “close friends” list? Are your “weak ties” recommended for your “acquaintances” list? Judging by whom Facebook *does* suggest, what factors do you think they use to make those recommendations? [2 bonus points]

Break Your Bubble

12) Propose a plan for breaking your friend’s algorithmic filter bubble on Facebook. The goal of the procedure is to reshape your friend’s Newsfeed algorithm so that it provides a balanced information diet. More specifically, your friend’s feed should be ideologically similar to the content that is being shared on Facebook (as measured in Figure 1 in the Bakshy et al. paper). To make this more concrete, your procedure should be implementable by someone in your precept. After describing the procedure, you should also explain why your procedure will work, and this explanation should be understandable to someone in your precept.

* Your procedure should be general enough so that anyone in your precept could implement it (e.g. No instructions like “start commenting on Uncle Joe’s posts”) but specific enough to follow without ambiguity (e.g. No instructions like “like a bunch of liberal posts”)
* Your procedure and explanation should reflect an understanding (or informed hypothesizing) of how the Newsfeed algorithm works based on the readings.
* Your procedure and explanation should be clearly written and understandable.

[18 points]

Rubric:

* Right level of specificity (3 categories: unsatisfactory, good, excellent)
* Reflects understanding of how the algorithm works\* (3 categories: unsatisfactory, good, excellent)
* Clear and easy to follow (3 categories: unsatisfactory, good, excellent)

13) Please complete the online survey that you and your classmates have created. We will post the link on piazza soon. At the end of the survey, we will ask for your netID so that we can insure that you have completed it. Did you complete the survey? [10 points]

[yes] [no]