

Social Networks across the Lifecourse and the Development of the Niakhar Social Networks Survey Instrument

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Extended Abstract

Social learning and social influence (or social pressure) through interpersonal channels have been thought to play a major role a myriad of demographic phenomena including the acceptance and use of contraceptives, the pace of family building, morbidity, migration decisions and the use of medical services. As such, network influences have potentially important policy implications for the implementation of a wide variety of public health initiatives. More basically, they speak to broad and fundamental currents of social theory.

The present research represents an important advance in demographic network analysis. In virtually all previous network designs it has been necessary to ask the focal individual (or ego) whom they interact with (their alters). The respondent is then asked to provide information about the named alters. This design is highly problematic in at least three ways. First, because gathering information about alter characteristics is time consuming, collecting even a small amount of data is expensive and interview length may test or exceed respondents' willingness to cooperate. This limits the number of alters one can identify from a practical standpoint to a handful (in previous demographic work, typically between three and five), although we know that social networks are much, much more extensive than this. The second, related problem is that under this highly constrained format the types of social networks examined are necessarily also limited. Previous network demographic research has looked at respondent reports of social interactions concerning only one or two substantive topics (use of birth control and knowledge of AIDS being the most prominent). It is highly likely, however, that information gained from individuals with whom respondents interact on a daily basis, or who are otherwise important in their lives, shape their views on these topics whether or not respondents recall them when asked about some topic. Third, and perhaps more importantly, it has been demonstrated conclusively that respondents often do not provide accurate information about alters, and the information they do provide may be systematically biased.

We aim to resolve many of these problems by combining traditional survey network methodology with identification of network members in the Niakhar Demographic Surveillance System, in the Fatick Region of Senegal. The Niakhar DSS, administered by *L'Institut de recherche pour le développement* (IRD), has maintained detailed, prospectively collected longitudinal data on demographic and epidemiological phenomena on a contiguous population of over 30,000 individuals for the last 24 years. Linking respondents to alters through the DSS allows us to gather relatively unbiased information concerning a tremendously increased number of alters than has ever previously been possible in the demographic network literature.

The goal of the first phase of the project, described here, was to probe the depth and breadth of social network ties in the study area to come to a better understanding of the structure of ties in this particular cultural and societal context. We then used this information to develop a sophisticated name generating survey instrument capable of capturing both deeper and wider social networks than has previously been possible network demographic research.

In the present paper, we describe the qualitative fieldwork conducted to assess the breadth of networks in cultural context in the study area, the development of the pilot survey instrument, and the process of linking named alters in the instrument to the DSS database.

In the qualitative phase of the project, we conducted 5 focus groups and 24 in-depth interviews with respondents stratified by and gender. Interviews and focus groups were semi-structured. Respondents were asked to list and talk about individuals and their relationships to them concerning over 30 domains of interaction as previously identified used as name generators in the broader social network literature. These domains of interaction included reference groups, ties of temporal prominence (for example, who people spend the most time with, talk to the most), functional ties (such as keeping money, taking care of ones family, help when sick) and hierarchical relationships (e.g., religious and political ties) .

Based on the results of this research, described in depth in the full paper, we ascertained the most important domains for identifying the largest proportion possible of total network ties discussed within each strata, and refined them to a total of 14 name generator questions. These questions, included as appendix A, form the core of the survey instrument that was then fielded over a sample of respondents in the study area. They include questions concerning people with whom alters share confidential information, different dimensions of material support, relations at distance, proximal relations structured by age, formal and informal gatherings, temporal prominence and reference.

In addition to the name generators, the instrument contains numerous fields designed to help identify each named alter uniquely to the DSS identification number. Working closely with the IRD Senegal and computer scientists at the DSS, we developed a list of 9 questions for this purpose, aimed at isolating residential location and individuals within residences. Analysis of a variety of subsets of these identifying fields as drawn from separate data from the IRD Senegal yielded over 99% unique alter identification in the DSS database.

We also discuss in this paper the name elaborator questions that conclude the instrument, aimed at defining social proximity, affinity, prominence of each particular alter to the respondent. These include measures of the frequency and time spent in interaction with respondents, a psycho-physical question concerning prominence of each alter relative to others in their total network, and a question designed to test an underlying assumption of virtually all previous ego-centric demographic research, that name generators identify all members of a respondent's network with the particular characteristic is probed.

Appendix A. Name Generators in the Niakhar Network Pilot Survey

[GN1] Let's get started. I'd like you to take a moment and think about the people closest to you, to put their names in your head. I'm going to ask you about each of them in turn – starting with anyone you want, could you tell me their last name and first name? [After Response] Are they known by any other names?

[GN2] Thank you. Now I'd like to know specifically about the people who are so close to you with whom you can share secrets. These could include new people you haven't already mentioned, or people you have already mentioned as well. It's my job to keep track of the names you give me, but if you mention somebody here that you've already mentioned, let me know and I'll make a note of it. Could you give me the name of the first of these people who comes to mind?

[GN 3] Thank you. Now, I'd like to continue by asking about the people who will come to your aide when you need it no matter what, people who you can go to with your problems and they won't say anything to anyone else, or people for example you could for example call them in the middle of the night or at any time and they would come to help without asking why. Again, these could be the same people you've already mentioned, different people, or both.

[GN 4] Thank you. Next I'd like to talk about the people who you would trust to take care of your family if you were away. Could you think about this for a moment and then give me their names? Again, these could be the same people we've talked about before,

[GN 5] Thanks again. Next, I'd like to ask about people you feel close to but don't live around here? If this brings others to mind, could you give me their first and last names? Again, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people.

[GN 6] Ok, next I'd like to ask about other people who you are close to or you wish you could see more often but may live far away, say, in Dakar, Koupentoum or elsewhere in the Terre Neuves, in your natal village if it isn't here, the region of St. Louis for example, or even outside the country. Again, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people. Could you give me the first and last names of these people?

[GN 7] Ok, thank you. Now I'd like to ask about people who you are close to and who are your kin, or people you have taken them as kin, perhaps as mother, brother or sister, but who aren't blood relations. Again, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people. Can you give me the names of any people like this?

[GN 8] Thank you. Now I'd like you to think now about people you are close to who are in the same age grade as you- maybe who you grew up with, went to school with, went away together to work with, (for men; were in the same cas d'hommes). Again, these could be the same people we've talked about before, different people, or a mix of people

we've talked about before and new people. Can you give me the names of people like this?

[GN 9] Thank you . Next, I'd like you to think of any people you hang out with on a regular basis when work is done (leisure), pour discuter, s'amuser, debat, fair du the, joue aux cartes ou au sports.... Comme ca.. , As with the previous questions, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people. Can you tell me the names of people like this, who you spend time with on a regular basis?

[GN 10] Thank you. Now I'd like to ask about people you spend time with on a regular basis to work with. For example, could you give me the names of people you might get together with on a regular basis to work together, either informally, or as part of an association? As before, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people. Can you give me their names?

[GN 11] Thank you. Now I'd like to ask about people you talk to on the phone the most often. This could be in the cabine, a phone in your house, or a mobile phone that either you or someone else owns. As with the previous questions, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people. Can you tell me the names of the people you speak to on the phone the most often?

[GN 12] Now I'd like to ask you about people you might get together with in a group for the sake of organizing ceremonies or religious activities (either on the traditional side or the muslim/Christian side), making money such as in a mutual credit association or some other club. As with the previous questions, these could be the same people we've talked about before, different people, or a mix of people we've talked about before and new people.

[GN 13] Now I'd like to ask about people who you spend the most time with on a normal day? Could you please give me the names of these people? These can again be the same people mentioned before or different people.

[GN 14] Now I'd like to ask you about people who you know, who might be close to you but might not be, but who you know and whose manner of living interests you, or who you think has a good comportment, who could give good advice, or whose opinion you think is important. These can again be the same people mentioned before or different people. Could you please give me the names of these people?

[GN 15] Finally, is there anybody else whose has occurred to you since we've been talking whose name you could have mentioned but didn't?