Toward ethical guidelines for network research in organizations

Stephen P. Borgatti [a,*], José-Luis Molina [b,1]

[a] *Department of Organization Studies, Carroll School of Management, Boston College, Fulton Hall, 140 Commonwealth Avenue, Chestnut Hill, MA 02467, USA*
[b] *Universitat Autònoma de Barcelona, Barcelona E-08193, Spain*

Abstract

All sociological/anthropological research (network or otherwise) in organizations (particularly corporations) is complicated by the need to obtain consent not only from the potential respondent but from the organization itself. Whereas in ordinary research there are essentially two parties that must come to agreement – the researcher and the respondent – in the organizational research there are three. In addition, the fact of organizational hierarchy means that the employee's participation in the research entails considerably more risk than in other situations. At the same time, social network research involves special challenges due to the lack of anonymity at the questionnaire level and the sensitivity of some of the questions. This paper seeks to lay out some of the issues and to propose a set of standard guidelines for ethical research on networks in organizations. It is hoped that developing a set of standard guidelines and forms will help Institutional Review Boards (IRBs) to allow network research. Examples of proposed forms are included as appendices.
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1. Introduction

When we conduct sociological or anthropological research on the population at large, we must obtain permission from our research subjects – our survey respondents – to collect

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* Corresponding author. Tel.: +1 617 552 0450; fax: +1 617 552 4230.
  E-mail addresses: borgatts@bc.edu (S.P. Borgatti), JoseLuis.Molina@uab.es (J.-L. Molina).
[1] Tel.: +34 93 581 12 39; fax: +34 93 581 11 40.

data from them. Procedures for doing this in non-coercive ways have long been worked out through the use of informed consent forms, and adherence to these procedures is enforced by Institutional Review Boards (IRBs). But the case of collecting data in organizations (particularly corporations) is somewhat different. This is because permission is also needed from the organization itself, which has an interest in preventing the distraction of its members. Typically, the price of admission involves some kind of *quid pro quo*—the researcher obtains her data, and the management of the organization receives a report tailored to their needs. In short, the researcher exchanges some data-based consulting for the right to collect data. In addition, it is quite common for academics to do paid consulting engagements from which they also obtain data for publication. This introduces dangers for the respondents because management may make job or personnel changes (e.g., firing non-central workers) based on the network analysis. In fact, in the case of a consulting engagement, this may be the explicit purpose of the research, at least from the point of view of management.

The use of network analysis to make organizational and personnel changes also introduces dangers for the academic field of social network research because knowledge of the dangers of filling out a network survey will lead organization members to resist participating, or to answer in self-serving ways. The first response makes research more difficult, and the second introduces threats to validity.

As a result, it behooves social network researchers to think carefully about ways that respondents in organizational surveys can be protected, because in doing so we preserve our own futures (Borgatti and Molina, 2003). Of course, none of these issues is entirely unique to network research. However, as we outline below, there are elements of network research design that exacerbate the problems. In addition, we believe that the newness and surprising power of network analyses cause both researchers and potential research subjects to seriously underestimate the risks of participation.

In the pages to follow, we assume (unless otherwise stated) that research in organizations involves giving data/analyses to management. Thus, our concern is with the ethical problems raised by this situation, and possible ways of dealing with these problems. Note that our concern is with protecting the individual respondents and with the long-term health of the field, and not with the organizations involved, which is a different topic.

2. Threats and counter-measures

The single most powerful device for protecting research subjects (and the quality of data) in any survey research is anonymity. If respondents do not have to reveal their identity at any time, their protection is, in principle, guaranteed, and they can feel free to give truthful answers. In practice, however, anonymity is not guaranteed as many respondents can be uniquely identified by combinations of attributes—e.g., there is only one person in the area who is upper class, male, between the ages of 25 and 34, and of Hawaiian descent. Normally, this is not a serious problem because population sizes are large enough and because there is no way to actually match up the cases in the study with actual identities without interviewing each person in the population and classifying them by region, class, gender, age, descent and so on, which is a practical impossibility.

However, in organizational research there are some issues. First, organizations are typically quite small, so that even a small number of attributes can uniquely identify individuals. Second, demographic information on each person is often available in the human resources database or is common knowledge because everyone knows everyone else. Hence, it can be fairly easy to identify anonymous respondents. Third, managerial action can be taken against whole departments that fare "badly" in the measures collected by the survey. So even if individuals are identified only by department or team, if the members of a group do not score as highly on survey measures as management desires, they could take corrective action such as disbanding the whole group or laying people off.

Note that the problems just outlined are generic to all organizational survey research and not specific to network research. However, confidentiality of individual responses is even more problematic in network research in organizations. This is because survey respondents must give their names on the surveys in order for the researcher to be able to construct the network of who has ties with whom. Thus, the first layer of protection – anonymity of response – is missing. What can be offered instead is anonymization—essentially a promise that once the data are collected, the researcher will replace all names with pseudonyms or id codes so that no one but the researcher will know whose data is whose. This is routine for publication of network research, but importantly it is not the usual practice with respect to the report the researcher gives to management. This is because the network analysis is orders of magnitude more useful to management if it contains the actual names of the actors.

For example, one of the most powerful (and dangerous) uses of social network analysis is in the context of action research projects (e.g., Argyris et al., 1985). In this context, the research is explicitly part of a transformation process in which the group is shown data about itself, such as network diagrams, and asked to react to it. Experience suggests that this technique serves as a powerful catalyst for change (Cross et al., 2002). It is dangerous, however, because of the powerful emotions it engenders in a group setting and this can put the researcher in the position of practicing therapy without a license.

Even when data are not being fed back to the group, management prefers to know who is who on the charts and metrics because it provides a path for action. For example, one of the authors worked with a government health and social services agency which contained a job role called "case coordinator". The job involved overseeing the care of individual clients and in particular ensuring that the care they received from many different specialists in the organization was coordinated together. Management felt that case coordinators should be highly central in the organization's informal networks of advice, friendship and communication. In the analysis, it was found that two of the case coordinators were considerably less central than the others. As a result, the two case coordinators were asked to improve their "networking".

Another standard device for safeguarding respondents is the consent form. In ordinary research, consent forms serve as a kind of guarantee to the respondent that they will receive whatever incentive for participation was offered, even if they choose to quit the study part way through. This eliminates the coercive element implicit in giving material rewards to participants. It also serves to let respondents know what they are getting into—what they will be asked to do. Ordinary consent forms are adequate when dealing with the general population because the researcher has no power over people except through the offering of

incentives. But in organizational research the consent form is considerably less effective as management can and often does direct employees to participate. Every employee knows that refusing to sign the consent form will be seen as uncooperative and could have consequences, regardless of what it says on the researcher's form. Further, non-participation cannot be anonymous since the list of participants can be compared with the roster of employees.

This situation occurs in both the *quid pro quo* case (where a researcher exchanges a report to management for the right to collect data) and the consulting case (where a researcher is paid to do a network analysis), but it is especially complex in the consulting case. Research on a corporation performed as part of a consulting engagement with that organization is not subject to IRB review. Respondents do not need to be given consent forms and can in fact be ordered (coerced) by management to participate in the study. And managers can do what they want with the data, including making firing/promotion decisions. Interestingly, if a researcher then obtains permission from the corporation to publish analyses of the data, it will have been without respondent consent or even knowledge. Academic norms would require that these data be fully anonymized of course and this does indeed seem like adequate protection for the individuals, but without individual consent.

The case of network research in organizations has an additional wrinkle, which is that non-response does not guarantee omission from the study. For example, the fact that a person chooses not to fill out the questionnaire has no effect on whether others mention that person when they fill out their surveys. One of the authors of this paper was involved in a consulting engagement in which a woman chose not to cooperate (and sent a nasty letter about the survey). But one of the questions on the survey was 'who do you have conflicts with', and interestingly quite a few respondents listed this woman as someone they had conflicts with. Thus, her decision to opt out of the study did not prevent the conclusion that she was a problem, as she may have hoped. In another case, a respondent asked to identify members of an MBA course with whom she maintained social relations chose to select *all* persons listed on the questionnaire. This effectively disguised her own feelings about others but did not affect others' responses about her. Hence, her indegree score (often interpreted in terms of power and influence) was unchanged.

One way to handle such cases is to eliminate non-respondents from the network data altogether, so that they do not appear in the study at all. This is almost certainly what respondents have in mind when they refuse to participate in a network study, and are likely to feel betrayed when they find they still appear in the analyses. Technically, though, the researcher is within his rights to include the non-respondent because the perceptions that others have of the non-respondent belong to them (the perceivers) and if they choose to divulge those perceptions in a survey, the subject of those perceptions has no say in it. In addition, eliminating the non-respondent does reduce the validity of the analyses, which has its own ethical problems if the analyses are claimed to be a true representation of the network.

There is also the problem that it will be obvious to all respondents (in the case of roster-style questionnaires), or at least those respondents who mentioned the non-respondent (in the case of open-ended surveys) that the non-respondent chose not participate. One way of mitigating this problem is by circulating a consent form before creating the questionnaire, then using a roster-style questionnaire that contains just the names of those willing to participate. People receiving the questionnaire will not necessarily know whether the reason

a name is missing from the roster is because they chose not to participate, or because they did not fit the researcher's sampling frame.[2]

Consent forms normally include a statement of the risks of participating in a study. In medical studies, this is a critical element. In survey studies, the risks usually involve the embarrassment that would result if anonymity/confidentiality procedures were to fail, or the discomfort that might result from being asked disquieting questions. As a result, very simple statements to this effect provide adequate protection. In the organizational case (and specifically the case where management will obtain some form of the data), however, the risks are greater. Perceptions held by management and/or coworkers about an individual may be altered by the study, and could have a dampening effect on the individual's career (including being fired). Thus, the consent form has to be a little bit more explicit. In addition, because network analysis is not terribly familiar to most respondents, it may be quite difficult for them to foresee the pain that the analysis of such simple data as 'who do you talk to' can bring. Thus it would seem necessary in the organizational network case to expand the consent form to include examples of network analysis so that potential respondents can make a fully informed decision.

Our personal experience with writing truly informed consent forms is instructive: we hate to do it. This is because it feels like we are giving away the store, and because it makes us wonder why anybody would fill out the network questionnaire. We would be much more comfortable hiding this information from the respondent. This is the surest sign that conducting a social network study without truly informed consent is deceptive and wrong.

Of course, the fundamental issue in writing a consent form is to make clear how the data will be used, which involves divulging who will see what data and in what form. In the case of ordinary sociological research, this is really a contract between the researcher and the respondent in which the researcher agrees to handle the data in certain ways that protect the respondent, such as anonymizing it. What is different about the organizational case is that if data are given to management, the researcher cannot personally guarantee how the data will be used. Indeed, the researcher cannot simply hand over data to management and claim no responsibility over how it is used. Effectively, management needs to be a party to the agreement represented by the consent form.

One way to accomplish this in practice is for the researcher and the organization to agree in writing on exactly what data management will be allowed to see, and what kinds of decisions management will be allowed to make based on these data. This management disclosure contract (MDC) should be signed by management and by the researcher, and a copy of the signed form can then be included with the consent form signed by the respondent. Of course, in the end the organization could violate the agreement and make decisions not allowed by the MDC—organizations do sometimes break the law. If so, victims of their decisions would be at least be in a position to seek legal relief.

Part of the ethos surrounding concerns with respondents' rights is the notion that researchers essentially exploit respondents because we take something valuable for our own

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[2] This device can be made more convincing by explicitly only using a sample of those who give consent. Of course, sampling network data may introduce validity problems, depending on the kind of analysis to be done.

careers from respondents (i.e., the data) and give the respondents a mere token in return. In fact, it is likely to be a net loss for the respondent because even if the process of participating is not upsetting in any way, the loss of time is probably more valuable than the reward the researcher provided. This is doubly true of network surveys because respondents often regard their perceptions of others as secrets, particularly negative perceptions, and may not enjoy giving them up. Consequently, it seems right for network researchers to recompense respondents particularly well and do what they can to exchange value for value. One natural way to achieve this is to give the respondent some feedback regarding their network position, as in the NetMirror system developed by Molina (Borgatti and Molina, 2002). Particularly in the case of organizational work, this can take the form of developmental advice on "improving" their network assets. The difficulty of course is that giving each respondent individualized feedback is prohibitively time-consuming, but it may be a price we have to pay. Ideally, social networks as a field would develop software that would make it easier to provide individually-tailored feedback to each respondent.

3. Research guidelines

It is very easy to construct research guidelines that protect respondents. For example, anecdotes circulate concerning IRBs that have adopted a simple and effective way of protecting respondents: disallowing network research. One of the authors of this paper has a colleague in a psychology department who prevented her Ph.D. student from collecting network data on advice-seeking because "asking people to name names is unethical." While disallowing network data collection certainly safeguards research subjects, it does not serve the larger goal of enabling network research to continue into the future. What is much harder to do is to construct guidelines that simultaneously protect respondents and permit researchers to do the kind of research they need to do. In this section, we take a stab at developing such guidelines. All the guidelines presented are aimed at the case where survey methodology is employed to collect data directly from organization members, as opposed to using organizational database information on who has collaborated on what projects.

3.1. Critical items

3.1.1. Management disclosure contract (MDC)
Management and the researcher write up an agreement that indicates (a) what data (and in what form) management will see, and (b) how the network data and analysis will be used by the organization. It is, of course, exceedingly difficult to write these in a way that organizations will accept. The reality is that it is the organizations that have the power, not the researchers. An example of an MDC is provided in Appendix A.

It is important to note that the contents of the MDC are open—whatever is mutually agreed upon by management and the researcher is valid. As long as the contract states clearly who will see the data and how the data may be used, it is doing its job.

3.1.2. Truly informed consent (TIC) form

The notion of truly informed consent means that participants see the management disclosure contract mentioned above and are given an example of the kinds of outputs management will see. In addition, we suggest that the researcher also sign the consent form to reinforce the view that it constitutes a contract between the researcher and the respondent. An example of a TIC form is provided in Appendix B.

3.2. Desirable items

3.2.1. Anonymization and aggregation

Whenever possible, management should not see any data collected from respondents that have not been anonymized or aggregated to the group level.

3.2.2. Uncoerced participation

When possible, researchers should solicit participation themselves rather than receive help from management, which can be seen as an indirect order.

3.2.3. Respondent give-back

Although painful for researchers who do not have tailor-made software, giving individualized feedback to respondents regarding their network position is extremely desirable as it converts what may be seen as an exploitative exchange into an equitable exchange of the kind advocated by Dillman (1978).

3.2.4. True opt-out option

The organization member has the right to exclude herself from the study as a whole, such that data collected from others about her is ignored and she does not appear in any analyses.

3.2.5. Pre-survey consent

The researcher creates a roster-style survey containing only the names of those who agreed to participate.

4. Conclusion

Many academics who engage in simple survey research are inclined to think that the ethical threat represented by this kind of research tends to be overblown by IRBs. Asking a probability sample of North Americans about their attitudes toward the environment just does not seem very threatening. The academics right. But the case is different for research in organizations, and particularly for network research in organizations. In this article, we have suggested that the addition of management and its interests into the equation makes respondent participation in the organizational setting more risky, and this is true for both network and non-network research. As a result we have called for expanding the standard consent form – which we view as a simple contract between researcher and participant – so that it essentially becomes an agreement between all three parties, namely researcher,

participant and management. In addition, we have suggested various design features that can make network data collection a better experience for respondents and, in so doing, help ensure the future of network research.

Appendix A. Sample management disclosure contract

A.1. Study authorization

This document authorizes Steve Borgatti and Jose Luis Molina to conduct a social network study at Management Decision Systems (hereafter "the company") during the period January 1, 2005 to March 1, 2005.

A.2. Rights of the researchers

The data – properly anonymized so that neither individual nor the company are identified – will form the basis of scholarly publications.

A.3. Rights of the company

In addition, the researchers will furnish the company with a copy of all the data. The company agrees that these data will not be shared among the employees and will only be seen by top management. The company agrees that the data will not form the basis for evaluation of individual employees, but will be used in a developmental way to improve the functioning of the company.

A.4. Rights of the participants

The participants of the survey – the people whose networks are being measured – shall have the right to see their own data to confirm correctness. They may also request a general report from the researchers that does not violate confidentiality of the other participants regarding what was learned in the study.

Appendix B. Sample truly informed consent form

B.1. Introduction

This is a social network study in which we will try to map out the communication network of the organization.

B.2. Goals

The academic goal of this study is to understand the factors that determine who talks to whom. We want to understand what factors hinder communication, and which ones facilitate

communication. The organization's goal in this study is to improve communication in areas that need it.

B.3. Procedures

You will be asked to fill out an online survey about who you interact with regularly, along with background information about yourself, such as training, department you're in, and so on. It should take about 30 min to complete. In order to map out who talks to whom, we will need you to give us your name when filling out the survey. Once the data have been collected, we will construct social network maps like this one:
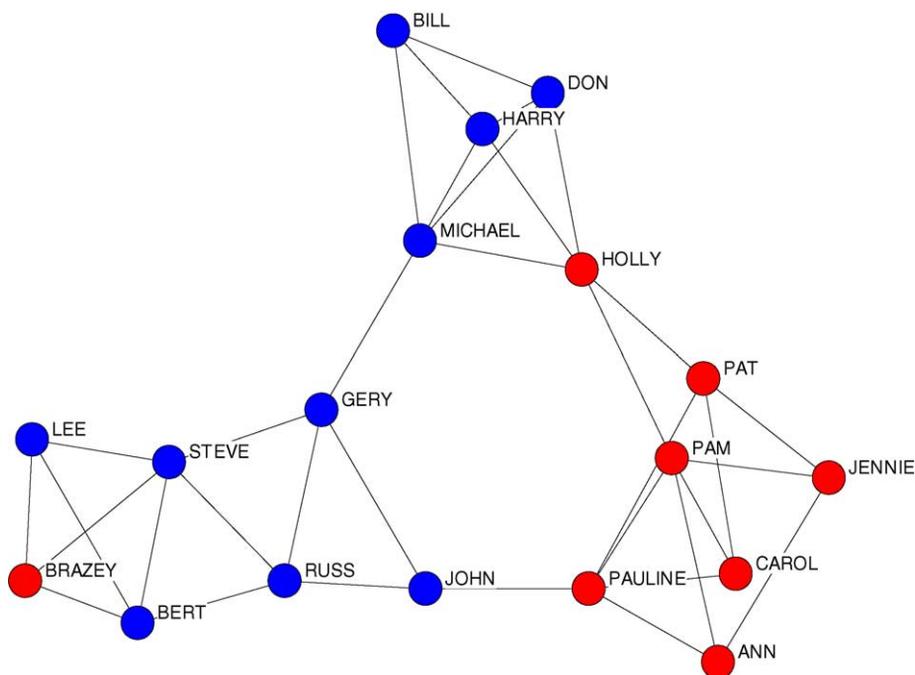
Note that the maps contain each person's name. These maps will be shown to management (specifically, all officers in the organization), but will not be shown to others in the organization. In addition, we will calculate network metrics such as calculating the "degrees of separation" between pairs of people (i.e., the length of the network paths from one person to another).

B.4. Risks and costs

Since management will see the results of this study, there is a chance that someone in management could consider your set of communication contacts to be inappropriate for someone in your position, and could think less of you. Please note, however, that the researchers have obtained a signed agreement from management stipulating that the data

will be used for improving communication in the company and will not be used in an evaluative way.

B.5. Individual benefits

We will provide you with direct, individualized feedback regarding your location in the social network of the organization.

B.6. Withdrawal from the study

You may choose to stop your participation in this study at any time. If so, you will not appear on any of the social network maps and no metrics will be calculated that involve you. Note that management has agreed that participation in the study is voluntary.

B.7. Confidentiality

As explained above, your participation will not be anonymous. In addition, all of top management will be able to see results of the study that include your name. Outside of top management, however, the data will be kept confidential. Any publicly available analyses of these data will not identify any individual by name, nor identify the organization.

B.8. Participant's certification

I have read and I believe I understand this Informed Consent document. I believe I understand the purpose of the research project and what I will be asked to do. I understand that I may stop my participation in this research study at anytime and that I can refuse to answer any question(s). I understand that management and only management will see the results of this research with individuals identified by name. I hereby give my informed and free consent to be a participant in this study.

Signatures:

_____

Date   _____

                                  Consent Signature of Participant

                                  _____

                                  Print Name of participant

B.9. Researcher's certification

I agree to conduct the study in accordance with the constraints imposed by this document.

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Signature of Researcher

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