

Interviews Are Not Small-N Surveys: Upending Assumptions for Better Interview Sampling*

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May 10, 2023

Abstract

Even though interviews have proven invaluable for political scientist, sampling in this context remains mired in misunderstandings. Treated as just small-N surveys, interview samples are often evaluated by applying the principles borrowed from conventional survey research. We argue this practice is counterproductive as it distorts rather than illuminates the function of the sample. We propose an alternative approach where interview sampling is rooted in network theory. Here, the sample is derived by the researcher first (a) accessing a network of potential interviewees and then (b) spreading within it by using the connections among the interviewees. We demonstrate our network approach better accommodates alternative research goals like world building that reflect what practitioners actually do.

*We would like to thank the participants of our panel at PolMeth 2020 as well as the International Methods Colloquium in 2021 for their valuable feedback.

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Introduction

Interviews stand alone in their capacity to inform researchers about situations from first-hand accounts of people on the ground. Whether learning about Medicaid from those reliant upon the system ([Michener, 2018](#)) or learning about nuclear proliferation from elites responsible for crafting policy ([Bell, 2021](#)), interviews have proven invaluable in fortifying knowledge for political scientists. Yet, prominent in the field it may be, the subject of sampling in the context of interviews remains mired in misunderstandings, particularly so when attempting to communicate across methodological communities. At its worse, such misunderstandings foster the perception that the interview sample lacks analytic rigor and, by implication, is less valuable to the broader research enterprise. Not only do we disagree, but these persistent barriers prevent us from taking advantage of opportunities for cross-community fertilization to deepen our understanding of interview samples.

Following the growing literature bridging the different methodological communities, we start from the premise that, despite the diversity in tools, there is indeed a shared standard ([Brady and Collier, 2010](#); [King, Keohane and Verba, 2021](#); [Gerring, 2001](#); [Blair et al., 2019](#); [Humphrey and Jacobs, 2015](#)). The question is how to articulate such a shared standard for interview sampling whose assumptions reflects what practitioners actually do. In taking on this challenge, our paper pushes back on the tendency to treat interviews as just small-N surveys. Although we embrace formalization as a worthwhile goal—indeed, this is our objective in this project—using the logic of conventional survey sampling as a template is counterproductive. It presumes the goal is to estimate a parameter of a population where the estimand is clearly articulated (e.g., the proportion of the population that supports some policy). This is often not the case for interview samples, however. Goals vary and when they do, the analytic tools build around population parameter estimation are not well equipped to offer guidance on evaluating interview samples. Building on the works of qualitative researchers, we propose a more flexible framework that is able to accommodate different goals by placing interview samples in the context of networks.

Our starting assumption is that the interview sample is drawn from a set of interconnected people who collectively form a network, one whose structure and members are only partially known to the researcher. Rather than collect it all at once, the sample is gathered in stages. It is a process where researchers first access and then traverse the network of potential interviewees. Methods like rapport building and cold contact offer access while chain-referral techniques provide the means to penetrate the network ever more deeply. In this respect, interview sampling is tantamount to a contagion process in a network. Upon entering the population, it reaches people by traveling along the connections that exist among them. Once framed in these terms we can take advantage of the rich toolbox network analysis offers to better model and analyze the performance of interview samples even when the goal is not population parameter estimation.

We demonstrate the merits of our framework by turning our attention to an important goal of research, namely world building. Here, the researcher is not interested in estimating a particular quantity. Instead, using interviews, the goal is to acquire a broad knowledge base about the foundational pieces—such as the setting, actors, events and motivations—that make up and animate the social world the researcher is trying to understand. The portal into that world are its inhabitants, the population of potential interviewees who are connected to each other. World building, therefore, requires the researcher to traverse this network as they assemble their interview sample. The key question is which of the many possible paths through the network are best suited to advance the goal of world building. In other words, we treat the network as a map with the interview sample describing the route the researcher takes to traverse it.

Although there is a rich literature on the role of sampling in qualitative research, it has largely focused on case studies ([Geddes, 1990](#); [Collier and Mahoney, 1996](#); [George and Bennett, 2005](#); [Gerring, 2004](#); [Seawright and Gerring, 2008](#); [King, Keohane and Verba, 2021](#)). Our contribution is in extending this important dialogue on sampling to the context of interviews. We do this by offering an alternative mental model whose theoretical underpinnings

are rooted in network theory rather than conventional survey sampling.

1 Small-N Survey: A Misleading Analogy

Although President Donald Trump enjoyed the support of a loyal base throughout the four years leading up to the 2020 US election cycle, he was also exceptionally unpopular among the general electorate. Was there an appetite among previous Trump voters to jump ship and switch to his opponent, and eventual successor, Joe Biden? This was one of the pressing questions occupying the media landscape and Charlotte Alter – journalist and senior correspondent at Time Magazine covering the campaign – decided to offer her take in a short Tweet, writing: “Hello from the suburbs of Milwaukee, where I have met zero people so far who are not voting the way they voted in 2016” ([Alter, 2020](#)). The criticism was swift and perhaps best captured by political scientist, Jennifer Victor, who admonished Alter’s remarks when noting: “There are 3.5 million registered voters in Wisconsin...Why would you think talking with a few dozen people in suburban Milwaukee would be instructive about 2020?” ([Alter, 2020](#)).

This anecdote captures the problems when interviews are used as tools for inference. If the goal is to estimate a parameter of a population – i.e., proportion of vote switching in Wisconsin during the 2020 presidential election – Alter committed several errors anyone familiar with statistics would readily recognize. For one, the sample was too small. Even if she had interviewed more people, a deeper problem would have persisted because her sample was not representative. Short of covering the entire population, a non-representative sample is likely to yield a biased estimate. This basic principle lies at the heart of survey research and there is a large literature devoted to this topic to help researchers obtain proper samples with which to make valid inferences. Interviews, in contrast, frequently suffer from samples that are small and non-representative, which makes them appear as a poor substitute for rigorous surveys. Put more generally, when engaging in population parameter estimation,

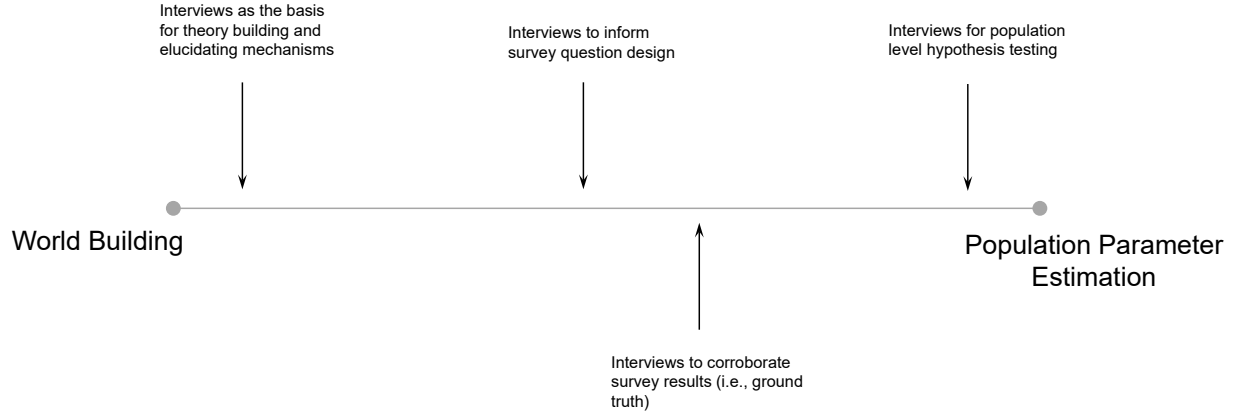


Figure 1: The graph displays the continuum of interview goals anchored by world building and population parameter estimation on each end. Interview goals that lie between those two extremes are placed in proximity to their distance to either pole.

interview samples are subject to the same statistical requirements as survey samples and too often, they fall short (Lynch, 2013, p. 32). Not surprising, then, interviews are sometimes dismissed as just small-N surveys with limited use.

Although the above criticism is warranted in the context of parameter estimation, interviews are actually rarely used for such purposes. This is not a provocative claim, but a banal point commonly known among interview based researchers. Even a cursory review of the field quickly reveals that parameter estimation is rarely centered as a goal. A more productive view is to think of research goals as a continuum with population parameter estimation lying on the outer most extreme as shown in Figure 1. There are some scholars who undertake massive interview projects with the goal of parameter estimation, but they are the exception, not the norm (Lamont, 1992). It is the other end of the spectrum—what we call *world building* and is the focus of this study—that is much closer aligned with interview based research. Indeed, we consider it fundamental to any research endeavor.

When scholars begin a new research project, they are often venturing into new intellectual territories. Whether it is a PhD student starting their dissertation or seasoned scholar looking to break into a new research topic, both are ignorant about the particular social world they are seeking to study. Who are the relevant actors comprising this world? How do they

interact with each other? What are they after and how do they go about it? What norms or rules circumscribe their behavior? At the outset, researchers often lack an understanding of these most fundamental elements undergirding the phenomena they are interested in. World building are the steps they take to answer these fundamental questions ([Biernacki and Waldorf, 1981](#), p. 145). It is the process where researchers acquire the rich knowledge base of the setting and circumstances to build a mental model of “everything that can happen between people” ([Castronova, 2018](#), p. 130).

Compared to parameter estimation, world building is much broader in scope and does not readily reduce to a set of estimands.¹ We may think of it metaphorically as a journey wherein the researcher starts with only a hazy picture and, through interviews, arrives at a higher resolution of the world they are interested in. Figure 2 provides a visual representation contrasting these two end-states. On the left-hand side, we see a barely discernible map corresponding to the researcher’s knowledge of the world at the beginning of the process. At this early stage, the researcher’s mental model is clouded with uncertainties informed by naive assumptions. On the right-hand side is the map at the end of the process after completing the interviews. The neighborhoods, homes and layout are now legible to the researcher who is, as a result of the interviewees sharing their knowledge, able to piece together the building blocks of the world they are interested in. This shift in the researcher’s mental model is what we mean by world building. It is the act of sketching out—to borrow from the literature on fiction—the “formal aspects, design and ontological rules, and infrastructures that hold [that world] together and organize its data” ([Wolf, 2018](#), p. xix).

This sketching process is certainly not the exclusive domain of interviews. Researchers can utilize archives, secondary sources or any other preexisting materials with which to lay the foundations for the world they are trying to better understand (see [Lynch, 2013](#); [Kapiszewski, MacLean and Read, 2015](#), chap 5). Yet, interviews tend to be commonly

¹Although one could insist on framing world building in terms of estimands, there is little analytic traction to be gained here. As Devin Caughy put it, world building would have to be thought of as estimating some extremely high dimensional estimand.



Figure 2: Description

used especially among researchers doing field research. Indeed, in a survey administered to political scientist, [Kapiszewski, MacLean and Read \(2015, p. 190\)](#) found that “81 percent of field research projects reported [making] significant use of interviews,” which was the highest percentage among the different data-collection techniques they asked about in the survey. These findings may, in part, be because interviews are particularly well suited for the purpose of world building as they “yield rich insights into people’s biographies, experiences, opinions, values, aspirations, attitudes and feelings” ([May, 2001, p. 120](#)). [Small \(2009, p. 24\)](#) calls this the discovery of emergent knowledge—the ability through interviews to “justifiably state that a particular process, phenomenon, [or] mechanism...exists.” Such insights help fill in gaps, highlight erroneous assumptions and identify new avenues to probe. That is, by engaging interviewees in “an inter-change of views” ([Kvale, 1996, p. 2](#)), researchers can refine their mental model of the world.

Besides setting out a different goal, the importance of world building is that it spells out a different kind of relationship between researchers and their sample. In a typical survey for parameter estimation, each person is an observation placed in a row of a data matrix with the columns—i.e., the observations’ characteristics—approximating the distribution of the larger population of interest ([Brady and Collier, 2010](#); [Mahoney and Goertz, 2006](#)). Adding more observations with the proper sampling procedure ensures the columns of the data matrix

approximate the population ever more closely. In isolation, no individual observation offers much value to the researcher. A row in a data matrix, no matter the number of columns, simply is not informative until paired with the larger sample.

This stands in stark contrast to the sample in world building. An interviewee is not an observation; they are not a row in a data matrix who, when isolated, provides little value. Instead, an interviewee is a portal into another world. They are citizen of the world the researcher is trying to understand. It is through the interviewee the researcher is granted access into this otherwise inaccessible world. It is through the interviewee the researcher is able to make sense of the various elements of the world that would otherwise be indecipherable. In other words, the interviewee is a guide for a world that appears to the researcher as foreign land. In this context, posing a question is not necessarily meant to yield a measure that can be assigned to the interviewee ([Mahoney and Goertz, 2006](#)). Instead, a question prompts the guide to adumbrate different neighborhoods of the world and thereby make them legible to the researcher. Each question begets more knowledge and more knowledge enables the researcher to ask more poignant questions to further improve the resolution of the world they are trying to understand ([Small, 2009](#)). Interviewees are thus like a broad light beam that illuminates the parts of the world they know about.

It is critical we articulate world building as a distinct goal from population parameter estimation because the evaluative logic of one does not readily map onto the other. Consider the mantra that a bias sample produces wrong answers. Although a non-representative sample places some limits on the researcher's ability to engage in world building, the drawbacks are not nearly as severe as they are for parameter estimation. In the latter, a biased estimate is a wrong estimate because it does not represent the true population parameter value. Contrast this with a researcher who interviews only professors to understand the world of academia. Despite the bias, the researcher is still able to credibly reconstruct parts of that world. It will be limited in scope as it will focus largely on those parts of academia professors inhabit, but the sample remains useful despite its bias. Had those interviews been used

for parameter estimation, they would have to be treated as small-N surveys and criticized accordingly. For world building, however, the analogy of interviews as small-N surveys is at best a misleading and at worst a serious distortion of the research endeavor.

2 From Random Samples to Network Dynamics

Sampling is central to empirical research. As the ancient parable of the Blind Men and the Elephant makes clear, we learn about the world only by sampling and analyzing pieces of it. The better the sample, the more credible the study. The question is how the quality of the sample ought to be evaluated. For interview-based research, the answer can be quite confusing. The typical textbook would recommend the researcher use snowball sampling, which is a “method for gradually accumulating respondents in a sample based on recommendations from earlier interviewees” (Lynch, 2013, p. 41-42). The procedure is quite intuitive. Recruit an initial set of interviewees; prompt them for referrals to other potential interview subjects and—like a growing snowball—repeat the process of asking new recruits for referrals until the desired sample has been reached. Widely adopted, snowball sampling has become the bedrock for interview based research. The problem arises when the quality of the sample is put into question by the wider research community.

Critics usually point to the random sample as the gold-standard. As the Monte Carlo algorithm so powerfully illustrates, random draws in sufficiently large numbers will eventually come to mirror the underlying population distribution. This property makes the random sample an incredibly useful data-collection strategy especially for parameter estimation. Yet, what about world building in the context of interviews? Does a data-collection strategy based on random draws yield the same kind of benefits? The short answer is no. To unlock the inferential powers of the random sample, one must possess a sampling frame identifying all the members of the population of interest prior to conducting the research (Lohr, 2019). This ensures each member has an equal probability of being selected. As such, the random

sample takes as given that the population is known.

This very premise, however, is what makes it incompatible with much of interview-based research. The predicament for interview-based researchers is that their sample often comes from a hidden population ([Salganik and Heckathorn, 2004](#)). There is no clear sampling frame because the population is unknown. At its most extreme, such populations are composed of individuals who deliberately try to remain hidden (e.g. drug-users or members of criminal organizations), but this need not be the case. Populations can be hard to reach for no other reason than the researcher’s status as an outsider who knows little about the people they wish to interview. Even when researchers know the profile of interviewees they wish to target, they may still not know the individuals who fit that profile. Indeed, the act of collecting the sample is itself often a discovery process where more members are gradually identified all while the roster of the entire population remains largely allusive.

This is precisely why snowball sampling is such a popular strategy. In using referrals, it leverages the interviewees themselves to identify fellow members and thereby help uncover the otherwise hidden population. Snowball sampling thus embraces the fundamental reality from which interview samples arise. Random sampling, on the other hand, does not. After all, to successfully sample from a hidden population, one must start with the premise that the population is indeed hidden. And here is where the random sample fails. Moreover, absent an estimand, the benefits conferred onto random samples is simply unwarranted. Its properties certainly make it a superb tool when operating in the domain of population parameter estimation, but there is no theoretical grounds on which to assume it performs equally well in other domains like world building. When applied rigidly without properly considering the research goals, the random sample could very well perform worse than alternatives strategies ([Salganik and Heckathorn, 2004](#); [Seawright, 2016](#)). Although a powerful data-collection tool, the efficacy of the random sample has scope conditions and we should be careful not to ignore them.

A Network Perspective

The aforementioned critiques raise an important question. If unable to fall back on the random sample as the default option, how else can we interrogate interview samples in the context of world building? What alternative theoretical framework can be brought to bear? Building on the works of scholars like [Small \(2009\)](#), we propose an approach rooted in network theory to better characterize and evaluate interview samples. Key to our effort is linking the aforementioned goal of world building with the procedure of snowball sampling.

Towards this end, we proceed with the general theoretical approach we proposed above: We imagine the researcher to be a foreigner to a world they wish to understand. The portal into that world are its inhabitants, the potential interviewees who by virtue of living in that world can describe its different parts. During an interview session, the interviewee effectively acts as a tour guide for the world that would otherwise be inaccessible to the researcher. The purpose of snowball sampling is to give the researcher the opportunity to encounter additional inhabitants and thereby learn more about the world.

Our contribution is in placing snowball sampling on firmer theoretical grounds to better capture how it gives researchers access to new inhabitant and thus yields new knowledge. We start from the premise that an interview sample is drawn from a set of interconnected people (i.e., the inhabitants) who collectively form a network, one whose structure and members are only partially known to the researcher. Rather than collect it all at once, the sample is gathered in stages. It is a process where the researcher first accesses and then traverses the network of potential interviewees. This is made possible by the snowball procedure, which operates on the same principles as a viral contagion process in a network. The researcher enters the population and—like a virus—spreads by traveling along the connections that exist among the people. In other words, a snowball sample is the path the researcher charts through the latent network. [Figure 3](#) illustrates this where, after each successive period, the snowball sample penetrates the latent network ever more deeply and in so doing, uncovers the world. There is thus a clear link between the latent network, the snowball sample and

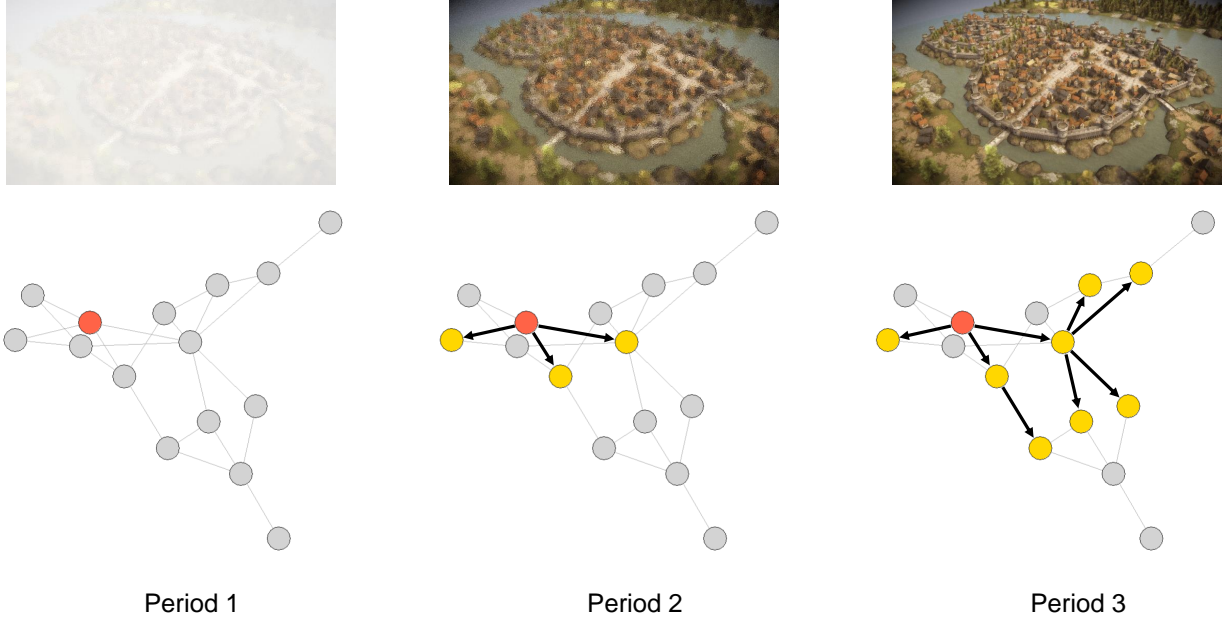


Figure 3: Linking latent network, snowball sample and world building. Note: snowball sampling ignores redundant ties. If $A \rightarrow B \rightarrow C$, then the link $C \rightarrow A$ is dropped since A is already in the sample, thereby underestimating the density of the latent network.

the knowledge gained thereof.

Figure 3 also highlights where we differ from the conventional literature on snowball sampling. Scholars rarely engage the latent network despite the fact that without it, snowball sampling would cease to work (Larson and Lewis, 2020). After all, referrals are only possible because potential interviewees are connected. Undergirding every snowball sample, then, is a latent network and our goal is to bring it to the surface. We want to make the latent network visible and thereby subject to analysis. Consider, for instance, the idea of sample saturation—the moment when additional interviews cease to provide new information and instead just echo what was said in previous interviews (Hennink, Kaiser and Marconi, 2017). Saturation is critical because it marks the point at which the researcher can stop the sampling process. It is also fundamentally a network property. What initially appears as saturation writ large may instead be the researcher trapped in a particular dense sub-community of the network. The fact that dense linkages among people yield redundant information is a

well-documented phenomenon in field of network analysis ([Granovetter, 1973](#); [Larson and Lewis, 2017](#)). Yet, unless we foreground the latent network, we will not be able to tap into this vast knowledge and thus be limited in our ability to analyze saturation and many other issues around snowball sampling.

We therefore propose an empirical study that we believe is the first of its kind. Using the university campus as our research site, we plan to simultaneously uncover the latent network and the way knowledge is distributed across it. Our discussion above has highlighted two critical points. First, knowledge about the world is distributed among the members of the latent network. Second, a given snowball sample represents only one of many possible paths through the latent network. The goal for our empirical study is to capture both, the latent network and the knowledge contained therein. We want to draw the entire “network-knowledge” landscape so that we can characterize all the possible paths along which snowball sampling could travel. [Figure 4](#) illustrates the key dimensions involved in this effort. For each interviewee, we want to be able to identify (a) the parts of the world they are able to reveal and (b) their location in the latent network.

We see the University of Minnesota Twin Cities (UMTC) as the ideal setting for such an empirical study. Here, the world we want to learn about is the UMTC campus. The portal into that world are its inhabitants, the students. The premise is to treat students as potential interviewees who can help us learn about the world by sharing their knowledge of the campus. In this respect, our study seeks to replicate what is already a common sight across colleges in the US, namely an admissions guide giving a campus tour for visiting prospective students and their families. Only in our case, the visitor is the researcher and the tour guide is any one of the students enrolled at UMTC. There are two points in particular that make this site particularly well suited for our purpose. First, students’ knowledge base differs depending on where they tend to spend their time on campus. This ensures that they will vary from each other in what they can reveal about the campus. Two, not only do students vary in their knowledge, but they are also connected to each other via friendship



Figure 4: Individual’s knowledge of the world and their place in the latent network. Colors with the corresponding numbers indicate sub-communities within the broader network.

ties. That is, there is a latent network linking students to one another. The UMTC campus therefore allows us to capture the key dimensions of interest: the latent network and the way knowledge is distributed therein.

To collect our data, we will use a survey instrument consisting of a mapping exercise and a name generator. The steps are as follows:

1. **New Recruits:** Provide QR code or digital link for students to enter our survey platform.
2. **Background Information:** Students are presented with a set of question that allows us to ascertain their basic profile – e.g., their major, whether they lived or are currently living on campus, how long they have been enrolled. . . etc.
3. **Mapping Exercise:** Students are presented with an aerial map of the campus with the opportunity to highlight general areas and specific buildings. For each highlighted piece, they will be prompted to share what they know about it.

4. **Latent Network/Name Generator:** Students are prompted to share the emails of UMTC students they consider to be their friends. We record these emails as links between students. Note, snowball sampling does not record these links and thereby underestimates the density of the latent network. We also extend an invitation to those students, thereby starting the process anew at point 1.

After consulting with U-Spatial—the Geographic Information System institute on campus—about how best to proceed, we have settled on Qualtrics as the platform where we will embed aerial views of the campus for our mapping exercise. We are close to having a beta version ready and plan to circulate it among a select few volunteers for feedback. We anticipate several rounds of such feedback iterations over the coming months.

Our plan is to run the official data collection effort throughout the fall semester of 2023. We will roll it out in early September 2023 following a two-pronged strategy. We will invite students we already know while also hanging up posters across the campus with the QR code to our survey platform. As laid out in the list above, we will iterate through points 1-4 as long as we continue receiving emails of new participants or we reach the end of the fall semester.

As for the mapping exercise, the UMTC campus is bisected by the Mississippi river with the East Bank (the bigger part of campus) and West Bank residing on each side. See Figures 5 and 6 for the images we plan to use. We will ask student to provide us with two types of knowledge:

- **General Knowledge:** Participants highlight and describe what they consider general areas of campus. Figure 7 displays one such possible example in gray. Participants can highlight as many areas as they see fit.
- **Detailed Knowledge:** Participants select specific buildings on campus and provide us with information about the building. Suppose, for instance, a student majoring in Molecular Biology. Such a student could offer information on what departments we

would find in the building, how many floors it has, etc.,. The more detail the better. This same person may similarly know details about the student union and gym, thus producing the map resolution shown in Figure 7

- **Default:** Anything not described by participants will, by default, be considered as no knowledge—thus marked in black in Figure 7.

Our goal, then, is to generate a map like Figure 7 for each participant. Post data collection, the idea is to integrate the maps with one another so that we can examine how much one learns when putting the knowledge base of two or more students together. If the referral chain moves from student $A \rightarrow B$ and their two respective maps are nearly equivalent, then the researcher will have learned very little new information. We can extend the chain $A \rightarrow B \rightarrow C \rightarrow \dots(N)$ and perform the same analysis to measure how much new information the sample provides.

Once collected, the data will allow us to take advantage of the rich toolbox that network analysis offers to better model and analyze interview samples. Our project is build on the following premise: To access the world of interest, the researcher must access the interviewees; to access the interviewees, the researcher must access the latent network. Knowledge, interviewees and the latent network as thus deeply intertwined in interview-based research. Our project recognizes this entanglement and will be the first of its kind in its attempt to draw the entire network-knowledge landscape. It will set the grounds for further studies where we take what we learn here and apply it to more “real world” scenarios. That is to say, we think of the UMTC study as the preclinical trial before moving to other more complicated settings. Lastly, we plan to make the data publicly available upon anonymizing it. Not only could other scholar use it to test out their ideas, but the data would also be of great pedagogical value. There is currently no resource where students learn about interview sampling with the latent network, world knowledge and snowball sampling all brought together.



Figure 5: University of Minnesota, East Bank.

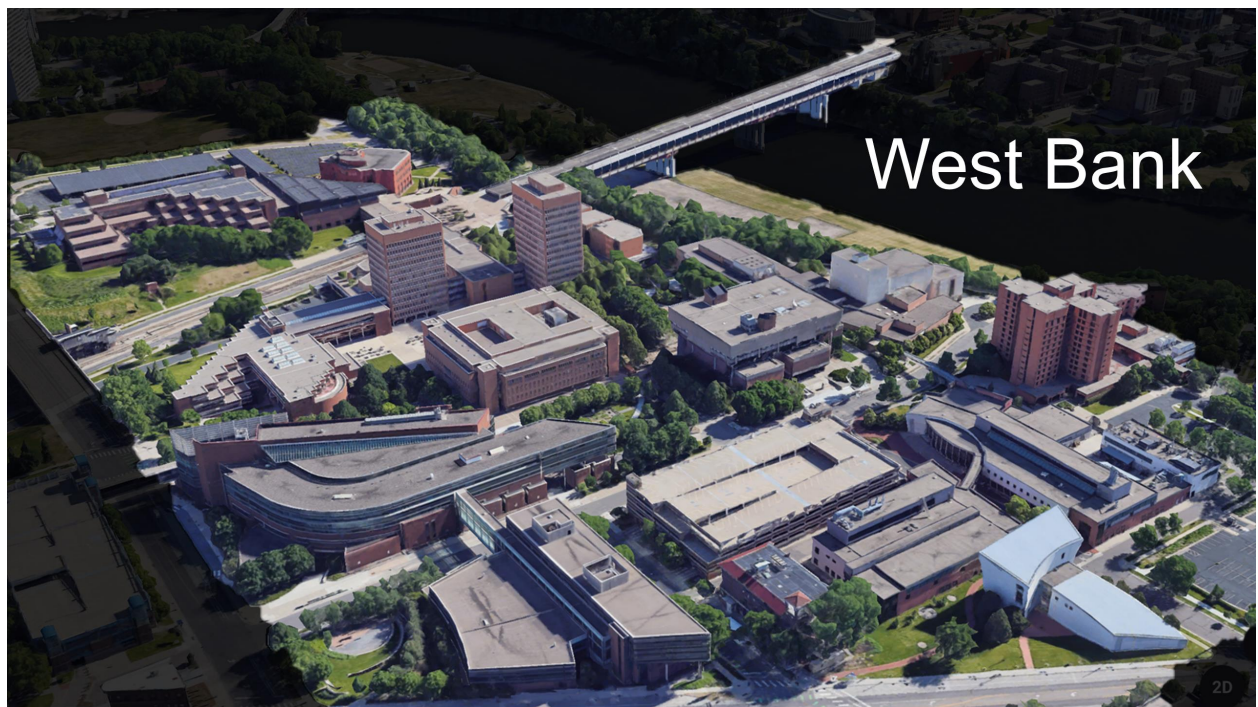


Figure 6: University of Minnesota, West Bank.

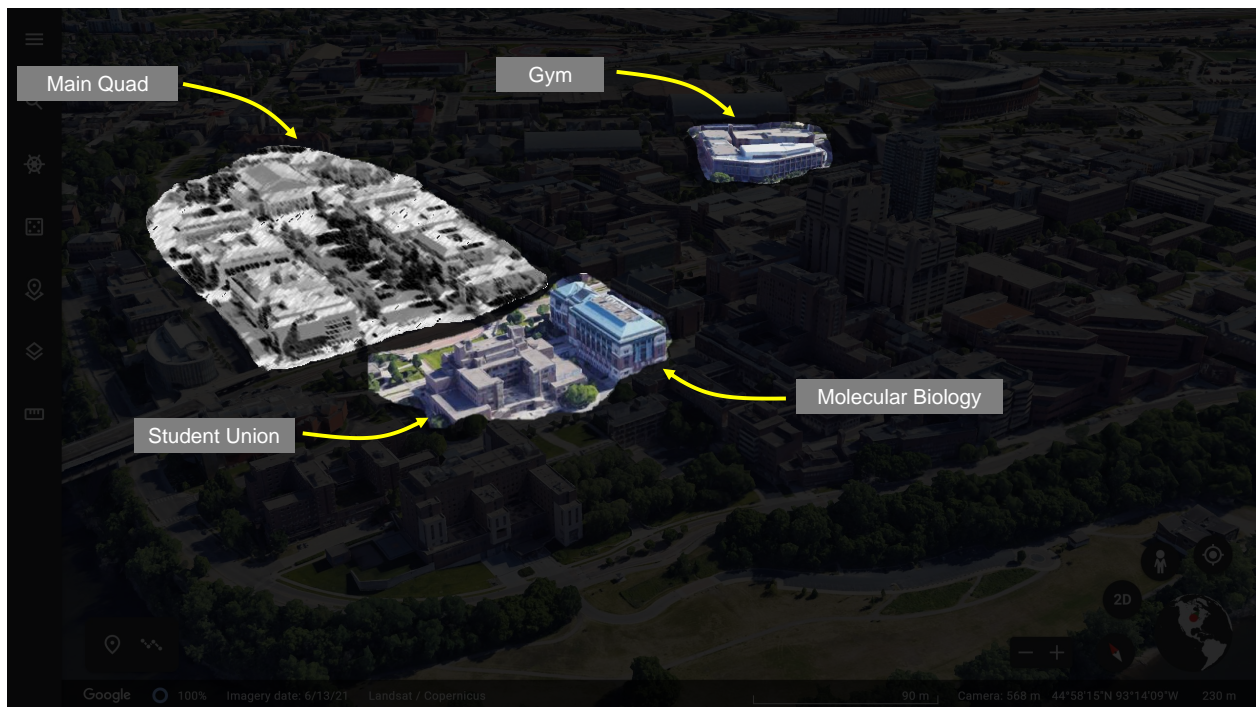


Figure 7: A potential map generated by a participant where the fidelity of the map corresponds to general (gray), detailed and no knowledge (black).

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