Field research in conflict environments: Methodological challenges and snowball sampling

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Abstract

Conducting research in conflict environments is a challenge, given their complexity and common attitudes of distrust and suspicion. Yet, conflict and methodology are usually analyzed as separate fields of interest. Methodological aspects of field work in conflict environments have not been systematically analyzed. This article addresses the central methodological problems of research conducted in conflict environments. We suggest the use of the snowball sampling method (hereafter, SSM) as an answer to these challenges. The effectiveness of this method has been recognized as significant in a variety of cases, mainly regarding marginalized populations. We claim that in conflict environments, the entire population is marginalized to some degree, making it 'hidden' from and 'hard to reach' for the outsider researcher. The marginalization explains why it is difficult to locate, access and enlist the cooperation of the research populations, which in a non-conflict context would not have been difficult to do. SSM directly addresses the fears and mistrust common to the conflict environment and increases the likelihood of trusting the researcher by introduction through a trusted social network. We demonstrate how careful use of SSM as a 'second best' but still valuable methodology can help generate cooperation. Therefore, the evaluation of SSM, its advantages and limitations in implementation in conflict environments can be an important contribution to the methodological training of researchers. In addition to its effectiveness under conditions of conflict, SSM may, in some cases, actually make the difference between research conducted under constrained conditions and research not conducted at all. Together with our experiences in the field, we supply several insights and recommendations for optimizing the use of SSM in a conflict environment.

Introduction

There is a broad question in the literature regarding the validity of research conducted under less than optimal conditions. On the one hand, scientific research should conform to common principles; it should be systematic, reproducible, reliable, and valid. Adhering to these principles is in essence the difference between research writing and other texts. Thus, scientific research should be conducted in a manner which allows others to both rely on and to reproduce results. On the other hand, there are many cases in social research in which one cannot fully uphold these rigid principles of scientific research. Should we give up the attempts to improve our understanding of those cases due to lack of optimal conditions?

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This general question is critical especially in the context of conducting field research in conflict environments. It often seems that conflict and methodology are considered and analyzed as separate fields of interest. Conflicts are a natural part of human interaction, so we must question how this phenomenon can affect research outcomes and processes. Researchers want to believe that their work will contribute, whether to 'pure' academic knowledge or to the potential of influencing policy. The focus on questions of methodology can promote these goals by facilitating the study of complex research environments of conflict.

A systematic review of the surprisingly few research studies devoted to questions of methodology in conflict environments reveals that there is a real problem, particularly in collecting large-N datasets (Clark, 2006; Romano, 2006). This problem is voiced in Clark's (2006) survey, a pioneering attempt to analyze the methodological training of political scientists in the Middle East. This survey provides a rare database of experiences reflecting the acute need for methodological tools and insights for researchers conducting studies in environments of conflict. Similarly, Romano (2006) points to the fact that research in Middle East conflict zones is usually qualitative rather than quantitative in nature. He sees this as a result of the politically sensitive nature of research in these areas. Further support for the existence of this problem is in Jacobsen & Landau's (2003) evaluation of studies of refugees, forced migrants, and displaced people. Their examination portrays the problematic lack of transparency of researchers regarding their methodological choices and compromises.

This article, born of our experiences in case study research in conflict environments, focuses on this need. Each of us, separately, has experienced planning and executing research in conflict environments. These studies represented different disciplines in social science. They included a geo-political evaluation of Israeli–Palestinian border enterprises following the Oslo peace process (Arieli, 2009a), a political analysis of the lack of involvement of Palestinian and Jordanian business communities in promoting the peace process with Israel (Cohen, 2008; Cohen & Ben-Porat, 2008), and a geo-political analysis of the Israel–Jordan border and of the developing cross-border cooperation since the Israel–Jordan peace treaty (Arieli, 2009b). Although our work stems from different disciplines, we encountered many shared aspects and challenges in our field work in environments where conflict was a dominant feature. Our mutual discussions and study of the theoretical and practical issues of methodology became the foundation for this article.

Clearly, conflict is a phenomenon which deserves extensive attention and research. Yet, the conflict environment poses challenges to the researcher in many ways. As we will review, these challenges include the difficulties related to accessing data, its analysis and interpretation, and its presentation. These challenges affect any researcher in a conflict environment, but especially when he/she is identified with a side in the conflict.

The Snowball Sampling Method (hereafter, SSM) is suggested in the literature as a useful method in a variety of research populations. This is a technique for finding research subjects where one subject gives the researcher the name of another, who in turn provides the name of a third, and so on (Vogt, 2005: 300). In this method, the sample group grows like a rolling snowball. Most of the cases in which SSM has been used are characterized by less than optimal research conditions where other methodologies are not applicable. We suggest that SSM has unique advantages, utilities, and applications for research conducted in conflict environments when used with care. Indeed, the use of SSM in some research environments may be the only effective method and the deciding factor in whether research can be conducted at all. Yet, the link between conflict and SSM has not been analyzed.

The article proceeds as follows. In the second section, we analyze the circumstances of conflict as a research environment and the problems it presents. In the third and fourth sections, we present SSM as an important method of convenience sampling in qualitative research and review its advantages and limitations. In the fifth section, we discuss the contribution of SSM to research in conflict environments. This serves us in presenting our insights and recommendations, derived from our experiences in the field. Although there are many ethical issues regarding the use of SSM in conflict environments, this discussion will be limited to the question of SSM's effectiveness. A summary and discussion are presented in the sixth section.

Conflict environments and implications for research

Conflict environments

A conflict environment is one in which people, whether individuals or groups, perceive their needs, goals or interests to be contradicted by the goals or interests of the other side (Kriesberg, 1998). Group conflict usually concerns contradictory, concrete goals in the areas of territory, resources, trade, self-determination, religious rights, cultural values, and so on (Bar-Tal, 2000). Such

conflict is often accompanied by significant levels of misunderstanding, considerably exaggerating the perceived disagreement and creating a general atmosphere of distrust and suspicion.

A society experiencing conflict is affected as a whole. Conflict has an impact on the circumstances of life for groups and individuals with direct interests and involvement therein, but it also has significance for those seemingly without. Thus, in an environment affected by conflict, all parts of society, including 'normative' sectors, can be highly suspicious of outsiders and express a preference to refrain from exposure. This is opposed to the recognized phenomenon where, in a non-conflict environment, usually only specific populations have distinct tendencies to refrain from exposure to outsiders and are difficult to access for research purposes (as will be outlined).

This atmosphere of distrust could be further aggravated in places and times where freedom is lacking. The lack of political freedom could be the result of a perception of national emergency related to conflict (e.g. McCarthyism) or of the nature of the local regime. This lack of political freedom, for example in authoritarian regimes, increases the difficulty for researchers to engage people to expose their personal circumstances and views. In this vein, Harik (1987: 66–67) claims that the most important explanation for the paucity of political attitude surveys in the Arab world is that the 'political climate for this type of research does not exist'. Tessler & Jamal (2006) see the study of the attitudes, values, and behavior patterns of ordinary citizens as the 'missing dimension' of political science research dealing with the Arab world, due to the political climate in many of those countries.

A threatening political atmosphere could increase the tendency and need of specific, marginalized populations to operate 'underground', far from the public eye. It could also detract from the freedom, openness, and accessibility of society as a whole. We therefore suggest that the above-mentioned dimension of the ordinary citizen is underrepresented in the study of conflict in general. This paucity of research is due to conflict-related sensitivities, a national focus on internal security, and the possibility of political repression. These contribute to an atmosphere of political and societal suspicion, fear, and general distrust which serves to deter both researchers from field work in conflict environments and research populations from cooperating in research studies, as will be shown.

The researcher, whether a party to the conflict or not, faces the challenge of gaining familiarity with and cooperation from the research population in this environment, which may be closed to and mistrusting of outsiders. This challenge may be especially significant for studies which focus on the conflict itself and in some cases even for those not directly related to it. For example, the study of the relationships between Catholic and Protestant business communities in North Ireland requires an understanding of the intricacies of the conflict and its reflection in society (Ben-Porat, 2006).

The above discussion also has direct implications for the issue of trust. Intergroup conflict is usually highly emotionally and cognitively engaging for the societies involved (Rouhana & Bar-Tal, 1998). Even after the resolution of conflict, intergroup relations can be cold and unstable due to a basic lack of societal trust, making the prospect of conducting research a daunting one. In a conflict environment, societies tend to become internally united and self-protective (Bar-Tal, 2000). As a result, high levels of societal suspicion and distrust may be directed towards the researcher as an outsider.

An environment of conflict is not necessarily one of actual war. Rather, it implies a wider range of adverse social situations. Galtung (1969) differentiates between negative and positive peace. While negative peace is simply the absence of war, positive peace means that the structures of domination underlying war are eliminated from the societal condition. This differentiation correlates to some degree to the concepts of 'cold' and 'warm' peace. A cold peace is the stabilization of normalized relations, while a warm peace points to the existence of highly developed transnational ties (Press-Barnathan, 2006). Under conditions of a cold peace, despite the initial resolution of the primary disputed issues, there is the actual possibility of a return to conflict (Miller, 2005). Situations of negative and cold peace have detrimental implications for the prospect of conducting field research.

Main challenges of field work in conflict environments

Social research in an environment of conflict involves several methodological challenges. These are projected onto the researcher's tasks of identifying research populations, mapping subjective perceptions on conflict, gaining familiarity with the needs, interests and concerns of the human research population, and assessing the quality of information received. While the interpretation of data and ethical challenges of research in conflict environments have been discussed, political scientists have reflected less on the strategies they use to collect data in conflict settings (Fujii, 2010).

The main difficulties in recruiting interviewees in conflict environments are lack of contact information

(e.g. whom to interview), a lack of system information (e.g. organizational ignorance), cultural differences (e.g. language barriers), legal, political, and ideological constraints (e.g. contact with foreigners), technical accessibility (e.g. mobility limitations), and, most important, an atmosphere of fear and distrust. According to Clark (2006), these and other technical and ethical concerns are the reason why countries experiencing the most acute political upheavals are least studied in terms of in-depth field research.

A survey conducted in the years 2004–2005 examined the field work training of 55 researchers in political science, specifically regarding their research experiences in Middle East countries (Clark, 2006). Although this survey focuses on the Middle East, its implications are much broader. Clark's interest in the Middle East was due to the unique conditions of the authoritarian and semi-authoritarian political climates there. These political climates create or enhance conditions of fear and lack of trust and therefore pose a challenge to field research. Yet these conditions are exactly the obstacles which researchers face in many conflict environments. Therefore, the analysis of the data from the survey provides valuable insights for the general study of conflict and for the analysis of the prospects of conducting qualitative research in many conflict environments. The survey points to three main findings regarding the researchers' work in these environments (Clark, 2006).

The first is the centrality of the challenge related to the authoritarian political conditions prevalent in the region. This is reflected in political repression, a sense of continuous presence of internal security forces, and various political sensitivities. Another significant contributing factor is the anti-Western (usually in the form of anti-USA) sentiment in many of these countries (Clark, 2006: 418). Together, these conditions were cited by respondents as the main causes of difficulties in locating and engaging cooperation of interviewees.

The second finding is how the political climate affects researchers' choices of countries for study, their interview techniques, and the ethical dilemmas they encounter. Contrary to the intuitive assumption that cultural differences are the main obstacle to conducting field research in a foreign land, it is the conditions of authoritarianism, not unique to the Middle East, which had the greatest impact upon field research. Thus, 47% of the researchers reported that they chose, avoided, or abandoned countries of research based on feasibility issues related to the political climate (Clark, 2006). This problematic reality has dramatic implications and significance for the study of conflict. It explains why countries experiencing the

most acute political upheavals are least studied through in-depth field research.

Finally, the survey confirms the dearth of academic training for conducting field work and highlights areas to which greater attention must be paid. It indicates an acute need to better prepare researchers for the challenges that regularly arise in research under conditions of conflict.

Romano (2006), too, points to the Middle East as a problematic environment for research, due to the violence, mostly political in nature, in this region. Although his article does not focus solely on issues of methodology, he does include several methodological notes such as the recommendation that researchers decide in advance what methods they will use to gather information.

The challenges outlined above are not limited to the Middle East. Focusing on the South African experience, Jacobsen & Landau (2003: 186–187) question the validity of many research studies of refugees and forced migration, owing to questionable uses of methodology. They identify some key methodological problems, such as denied access, lack of response due to mistrust, unfamiliar contexts, security and confidentiality issues, non-representativity, and bias. Their central claim is that despite logistical and other challenges, there is no justification for ad hoc research design, obfuscation or exaggerated research claims. These concerns emphasize the need for a methodological tool which is both academically rigorous and adaptable to challenging field conditions.

Jacobsen & Landau go on to honestly admit their failure to stick to strictly defined sampling and interview strategy, despite their extensive preparations to ensure randomness and representativity. The main problem which repeated itself was the lack of response due to a basic lack of trust toward the local researchers by the potential interviewees.

As we will demonstrate, careful use of SSM, as a 'second best' but still valuable methodology, can help the researcher overcome many of these challenges. Therefore, the evaluation of SSM, with its advantages and limitations in implementation in conflict environments, can be an important contribution to the methodological training of researchers.

Snowball sampling methodology

SSM, or chain-referral sampling, is a distinct method of convenience sampling which has been proven to be especially useful in conducting research in marginalized societies. This method is commonly used to locate, access,

and involve people from specific populations in cases where the researcher anticipates difficulties in creating a representative sample of the research population. It has been suggested that SSM is probably the most effective method to access hidden and/or hard to reach populations (Valdez & Kaplan, 1999). Nevertheless, for reasons which will be outlined below, SSM is usually not, and should not be, the first choice of research methodology when a more representative sampling method is possible.

Berg (1988) claims that regarding SSM, a 'bond' or 'link' exists between the initial sample and others in the same target population. This bond allows the researcher to access additional respondents by way of referral within the circle of acquaintance of the research sample. In this vein, Spreen (1992) shows that SSM belongs to the wider set of link-tracing methodologies. These methodologies use the social networks of interviewees to expand the researcher's potential contacts (Thomson, 1997).

SSM is used in both qualitative and quantitative research. In the former, SSM is used primarily to access potential interviewees. In the latter, the method is used to find participants for surveys. However, it is reasonable to assume that the use of SSM in quantitative research will be less common, owing to the need for large populations. When studying hidden or hard to reach populations, the research sample is usually small and, therefore, the option of conducting a survey will be limited.

SSM has been used in various research contexts and is invaluable when seeking interviewees from populations with specific characteristics which are recognized only by the population's individuals. The literature especially emphasizes the use of SSM when studying hidden or otherwise inaccessible research populations. Hidden populations intentionally or inadvertently shield themselves from public awareness and have little social visibility (Watters & Biernacki, 1989). The membership of these populations is often not easily distinguishable, complicating the prospect of sampling for research purposes (Morgan, 1996; Valdez & Kaplan, 1999). Populations may hide for various reasons, including religious, cultural or social affiliation (e.g. members of extreme religious groups), economic and/or political preferences or activities (e.g. individuals of elite status), or legal or social institutional norms (e.g. kleptomaniacs).

There are also populations which are not hidden but are hard to reach for research purposes. The reasons for their relative inaccessibility are varied and may include social or political status (e.g. high governmental figures), technical or bureaucratic obstacles (e.g. released prisoners), or closed social groups (e.g. gangs).

A systematic review of the literature reveals that SSM has been used to investigate a wide variety of specific populations. As early as the late 1930s, Whyte (1955) employed this method in his classic study of street-corner society. The method has been used in the study of gangs (Patrick, 1973), drug users (Fitzgerald & Hamilton, 1997), HIV/AIDS sufferers (Tabnak & Sun, 2000), prostitution (McNamara, 1994), criminals (Fitzgerald, 1996), slums (Aggarwal, Pandey & Bhattacharya, 2007), and the seriously ill (Sudman & Freeman, 1988). Indeed, the literature regarding the use of SSM in research is rich and varied. Nevertheless, none of these studies is oriented towards the study of conflict. As we will show, SSM has significant advantages for the prospect of conducting research in conflict environments.

Atkinson & Flint (2001) distinguish between the formal and informal role of SSM as a research method. SSM as an informal means of reaching a target population, by creating contacts with a respondent's circle of acquaintances, can be especially useful if the aim of the study is explorative, qualitative or descriptive. In explorative research, for example, SSM is an excellent tool to gain initial knowledge of the research population, thus allowing the researcher to avoid surprises and overcome difficulties in later stages of research. In this vein, SSM could prove to be helpful in both technical and substantial aspects of field research, such as in mapping research populations, testing preliminary research assumptions and hypotheses, or validating research tools.

SSM can also be used in quantitative methodology as a method of sampling in a more formalized and statistical sense when random sampling (e.g. random household surveys) is not possible. In these cases, SSM can be complemented by additional statistical techniques. SSM can and should also be used in accessing and interviewing control groups to further bolster the validity of the research findings.

SSM can serve as either an alternative or a complementary research strategy. It can serve as an alternative strategy, when other usually preferred methodologies are not feasible because of challenging circumstances in the research environment. It can also serve as a complementary strategy to be used with other research methods to increase research efficiency and quality and reduce the chance of sampling bias. Thus, SSM can be complemented by additional sample methodologies, such as quota sampling. In quota sampling, there is an initial stage of preparation in which the research population is analyzed and subgroups are identified and quantified in advance according to their relative size. After this initial preparation, the researcher can try to establish contact,

familiarity, and trust with members of each subgroup in order to initiate the beginning of a snowball sample. These contacts can eventually serve as the first link in a network of contacts to be developed within each subgroup. This combination proves to be better in generating responsiveness of interviewees than the common practice of sending researchers, unknown and untrusted, to seek interviews with research subjects. Thus, Cohen (2008) combined SSM with quota sampling in the effort to sample a wide variety of business people from Jordan and the Palestinian Authority. He eventually established several networks of contacts developed through snowball sampling, each characterized by a specific business activity or region.

The evaluation of SSM, with its advantages and limitations in implementation in conflict environments, is an important contribution to the methodological training of researchers.

Snowball sampling methodology: Advantages and limitations

Advantages
SSM can play a key role in three critical stages of data collection: locating, accessing, and involving hidden and hard to reach populations.

Locating. Through the use of social networks, the researcher is introduced to sectors of societies which would otherwise be difficult to identify. In addition to its effectiveness, SSM is also efficient, helping the researcher locate the appropriate population with a minimum of time, money, and effort.

Accessing and involving. Accessing, involving, and gaining the subjects' cooperation in the data collection processes of research remain significant challenges even after the initial location of potential research subjects. Here, SSM allows the researcher to use past ties and communication with prior research subjects in order to gain access to and cooperation from potential new subjects. This is especially significant in establishing contact with relatively closed populations such as societal elites, gangs, and extremist groups.

A central factor in gaining access to and enlisting the cooperation of subjects is trust. Defining trust as the belief of an individual in the good faith of others and their future intentions (Hosmer, 1995), the belief that the researcher is acting in good faith is fundamental to the establishment of a working relationship with the research subject. Trust can enhance and facilitate

cooperation in an environment of uncertainty and risk, common to populations who fear exposure. The knowledge that the researcher was referred by a trusted person increases the potential for trust and cooperation in providing data. Notwithstanding these significant advantages, SSM has also some distinct limitations.

Limitations
In essence, representativity is the central limitation of SSM. Convenience sampling, by definition, is usually not random or representative, so it often results in selection bias and external and internal validity limitations (Valdez & Kaplan, 1999; Moore & Hagedorn, 2001). That is the main reason why SSM will usually serve as a 'second best' methodology. In SSM, the research subjects are not collected randomly, as expected by 'pure' sampling principles. Rather, they are dependent on the referrals of the respondents first accessed and on the willingness of the research subjects to participate – hence the common claim that most snowball samples are biased and cannot be generalized (Kaplan, Korf & Sterk, 1987; Griffiths et al., 1993). We claim that despite this significant limitation, it is possible to increase the representativity of SSM by sufficient planning of the sampling process and goals, initiating parallel snowball networks and using quota sampling (as described above).

A problematic aspect of relying on referrals is the likelihood of excluding individuals who do not belong to the specific network being accessed (Van Meter, 1990). Therefore, those with wider social networks are more likely to be identified and accessed than others, creating a degree of selection bias. Thus, by relying on referrals, many potential interviewees are 'masked' (Heckathorn, 1997) as they are not exposed or referred to the researcher, either because of gatekeeper bias or because of social network limitations. Relying on links of specific chain referrals would probably result in enlisting respondents of relatively homogeneous affiliation who do not necessarily represent the entire research population, thereby reducing the validity and reliability of the research conclusions.

Problems of representativity can also arise from 'gatekeeper bias'. Gatekeepers, in this context are go-betweens: those who are in the position to facilitate contact between the researcher and potential respondents. These gatekeepers may have their own reasons, personal or otherwise, for referring or not referring the researcher to specific potential respondents (Groger, Mayberry & Straker, 1999).

Another aspect related to representativity is the willingness of subjects to participate in the study. Although

willingness to participate in research is an acute problem in random sampling, it is exacerbated in SSM. SSM is fundamentally used as a method to develop contacts *within* specific populations who often prefer to remain hidden. This desire to maintain a low profile increases the likelihood of unwillingness to cooperate in research efforts. Thus, snowball samples may be more biased toward the more cooperative participants who are willing to participate in the study (Peterson & Valdez, 2005).

The result of these limitations is a possible reduction in the external validity of the research. In addition, by overemphasizing social network cohesiveness (Griffiths et al., 1993), we may also reduce the research's internal validity. These problematic aspects of internal and external validity are illustrated explicitly in a study entitled 'What we didn't learn because of who would not talk to us' (Groger, Mayberry & Straker, 1999).

Atkinson & Flint (2001) claim that the problem of selection bias may be partially addressed by the generation of a large sample and by the replication of results to strengthen generalizations. This solution, however, ignores the fact that sampling mistakes may be repeated even in large populations, if the sampling population remains the same. Notwithstanding these limitations, Peterson & Valdez (2005) generated a randomized community-based sample in their study of Mexican-American adolescent females involved with gangs. They demonstrated that SSM, when used with sound procedures and commitment, can produce valid research results.

SSM and the circumstances of conflict as a research environment

While the contribution of SSM has been emphasized in studying marginalized populations as reviewed above, the literature has not yet fully appreciated the potential contribution of SSM when engaging in research under conditions of conflict. There are substantial differences in the circumstances of societies experiencing various stages of conflict and those of marginalized populations, just as there are significant differences within the seemingly endless variety of marginalized populations (which could include elite groups, people involved in illegal activities, people with specific sexual tendencies, people with diseases, and others as outlined above). Yet, when it comes to conducting research, conflict environments and marginalized populations share many similarities. In fact, we suggest that in conditions of conflict, the entire population is marginalized to some degree, making it hard to reach for the outside researcher.

Given the success of SSM in accessing such groups, we maintain that SSM can be useful in conducting studies in conflict environments. SSM can address conditions of minimal trust arising from uncertainty about the future and allow the researcher to penetrate the research population preoccupied with conflict at both cognitive and emotional levels and enlist its cooperation.

SSM's ability to accomplish the above goals comes from its very definition as a trace-linking methodology, which uses the social networks of interviewees in order to expand the researcher's potential contacts. Thus, the researcher, initially an outsider to the research population, can begin the study with a very small pool of contacts, even as small as a single individual. Despite the tendency of groups in conflict environments to be united, protective, and thus relatively closed to outsiders, as a trusted contact of a familiar person, the researcher is introduced to new contacts as an 'insider', to be somewhat trusted. New contacts, in turn, provide the names of additional contacts, and in this fashion the researcher has access to social circles otherwise relatively closed or impenetrable. Putnam (1993, 1995, 2000) points to this rationale when describing trust as an integral part of social capital and social networks.

Thus, the mechanism through which SSM addresses both marginalized populations and conflict societies is trust, which is the common obstacle to conducting research in these groups. In both cases, SSM allows some degree of access to reticent, suspicious populations who fear exposure. Trust, fundamental to the working relationship between the researcher and the research population, is based on the belief in the good faith of the researcher and his/her future intentions and is established through the social network through which the researcher is introduced. Any definition of trust involves a social relationship in which one person makes himself vulnerable to another who can do him harm if the trust is misplaced (Levi, 2001). In this vein, Williams points out the link between cooperation and dependency. In his words, 'if there are to be continuing practices of cooperation, then people must be motivated, one way or another, to enter into dependent positions' (Williams, 1988: 116). This dependency is a factor of trust.

By penetrating social networks through SSM, researchers have been able to overcome the problem of lack of response rooted in mistrust. This is demonstrated in Jacobsen & Landau's (2003: 199) study of refugees. In light of the lack of response they faced using other methods, they replaced their initial research method with SSM and succeeded in interviewing 750 research subjects, in an otherwise impenetrable research environment.

Romano (2006), too, describes his success, during his research study in Iraq, in expanding the network of his contacts and interviewees by using SSM and being introduced to officials he did not know existed. Only through the use of SSM did he gain access to high-level meetings and important conferences he did not originally know were being held. Similarly, Tessler & Jamal (2006) state that without SSM networks, many civic associations would have been largely inaccessible to them in their field research. Thus, SSM has proven to be effective where other methods may fail in addressing distrust. Yet, these research studies do not systematically analyze the mechanisms through which SSM succeeds in penetrating otherwise closed researched populations and the significance of the contribution of SSM.

In the next section, we will use our experience from the field to analyze the value of SSM in conflict environments.

Insights from the field: The value of SSM in the context of the Israel–Arab conflict

The Israel–Arab conflict as a regional conflict has implications for almost all aspects of Israeli and Arab societal life. It has gone through periods of varying degrees of violence and experienced highs and lows in terms of negotiations and anticipation of its resolution. As Jewish-Israeli researchers, we have had first-hand experience with the difficulties of identifying, accessing, and enlisting the cooperation of specific research populations in Jordan and in the Palestinian Authority, for the purpose of conducting interviews. Arieli (2009a) analyzed Israeli–Palestinian economic enterprises during the years 1998–2000 and distinguished among three types of initiatives focused on the border region: roadside markets, industrial parks, and the casino in Jericho. Using SSM, she was able to gain access to the operators and clientele of these enterprises. Cohen & Ben-Porat (2008) explained the relative lack of involvement of Jordanian and Palestinian business communities in the Middle East peace processes. Using SSM, they established contact with a variety of Jordanian and Palestinian business people and obtained their agreement to participate in interviews. The third case study mapped and analyzed the developing Israel–Jordan cross-border trends since the peace treaty of 1994. Using SSM, Arieli (2009b) interviewed the main active components of cross-border cooperation as the research population. These case studies, each with its own research questions and populations, have the Israel–Arab conflict as a shared dominant feature, a feature that hindered the effort to enlist the cooperation of the target populations.

These three different case studies strengthen our claim that under conditions of conflict or post conflict, the entire population can be considered hidden, hard to reach, and marginalized to some degree. The marginalization explains why it was difficult to locate, access, and enlist the cooperation of the research populations, which in a non-conflict context would not have been difficult to do. Such populations included people from normative sectors of society, business people, scientists, tour operators, and junior local government officials. This phenomenon of societal marginalization appeared to be based mainly on factors of ideology, religion, and/or fear related to the conflict.

It is significant to note that our challenges in the field were especially unique since we were not perceived as external researchers, neutral to the conflict. Rather, we were careful to identify ourselves as Israeli-Jewish researchers and thus were exposed to perceptions regarding the conflict itself. This of course amplified the need for a basis of trust in accessing the Palestinian and Jordanian research population and enlisting its cooperation.

Enlisting cooperation to recruit interviewees in conflict environments, as noted above, involves overcoming many difficulties such as social and organizational familiarity, technical issues, and cultural and linguistic barriers. In addition, ideology and religion are dominant factors in both the decision to participate in a research study and to supply the names of others relevant to the research. In conflict, even SSM can prove to be a limited method in enlisting research participants. Often the main reason for societal marginalization appears to be a fear of identification and exposure. This fear can be of the government, of pressure groups, or of the public. Thus, in specific types of regimes and political cultures where political participation is not always encouraged, the *entire* society often avoids making public declarations about its views and activities. This fear became evident in the repeated requests of interviewees to remain anonymous. Many others refused to participate at all. The presence of this phenomenon is supported by the Director of Research at the Jordan Center for Public Policy Research and Dialogue in Amman. He remarked on the methodological difficulty of interviewing Jordanians on issues of economic public policy and governance:

> Non-Jordanians and/or people based outside the Arab world often do not appreciate the fear that most in the country have of government and their consequent reluctance to speak out publicly on topics such as that dealt with by this paper. (Kardoosh & Burgis, 2006: 3)

Another source of fear can be the researcher him/herself. As an outsider, he or she can sometimes be threatening to individuals from the research population. As our experience has shown, there was a pronounced reluctance towards participation in research studies and resistance to sharing views. Thus, in the initial stages of many contacts, even those established via SSM, we were often asked if we were from the media. Only after providing assurance that we were from academia did the interview proceed and additional contacts were provided. It is interesting to note that when relationships developed with various individuals from the research population, some admitted to initially suspecting that we were from the Israeli, Jordanian or Palestinian *Mukhabarat* (secret services).

SSM directly addresses these fears and increases the likelihood of trusting the researcher by introduction through a trusted social network. This was manifested in our experience every time we approached a new social network related to a specific sector or geographic area. It proved to be almost impossible to approach individuals from the research population through use of methods other than SSM. Thus, initial attempts to approach potential interviewees without a personal referral were largely unsuccessful. People ignored our emails, slammed down the phone when we identified ourselves as researchers, or simply refused to cooperate.

However, SSM does not totally eliminate hesitations about cooperation with the researcher, who is an unfamiliar person. Also, notwithstanding the value of SSM in minimizing fear and allowing the development of trust between the researcher and research population, there is no guarantee that this method will always provide valid and reliable data. Careful monitoring of data is crucial to social research methods. Yet, our experience has shown that there is no real alternative to SSM in conducting research in an environment of conflict. In the next section, we will provide recommendations and suggestions for maximum effectiveness and minimum selection bias in the use of SSM under conditions of conflict.

Insights from the field: Recommendations regarding the use of SSM in a conflict environment

We derived several recommendations from our research experience for optimizing the use of SSM in a conflict environment. As emphasized, this discussion will be limited to the question of SSM's effectiveness, putting aside ethical aspects of this method for future discussions. The conflict dynamics during the various stages of our research studies were central factors influencing the number, the location, and the atmosphere of the

interviews conducted. During periods of crisis in political relations or violence, there was a marked decline in the willingness of Palestinians and Jordanians to participate in our studies and an increased reliance on SSM to locate, access, and enlist cooperation. Our recommendations aim at increasing the effectiveness of the method and minimizing the possibility of selection bias. The suggestions focus on creating and seizing opportunities for interacting with the research population, the representation and conduct of the researcher, and ways to reduce selection bias.

Flexibility, creativity, and daring proved to be invaluable throughout the process of SSM. These traits were critical in creating and seizing opportunities to interact with the research population and in enlisting participants for research. Owing to sensitivities of the circumstances of conflict, we had no option of publicly calling for respondents through the use of conventional methods such as media advertising or university channels. Therefore, we had to be creative and tried to engineer encounters with the research population in untraditional and sometimes difficult locations and situations.

The process of enlisting participants requires that the researcher leave his/her 'comfort zone' and approach the environment of the research population. This effort enlarges the pool of potential respondents and increases levels of trust. In an environment of conflict, this could even require a willingness to take a degree of *calculated* risk. Thus, our research studies would not have been possible without meetings and interviews conducted at border crossings, army checkpoints, and various sites such as markets and factories inside the Palestinian territories during periods of significant instability.

In this vein, professional gatherings such as congresses, symposia, and conventions for scientists, business people, tour operators, and other groups proved to be very productive environments for the effective use of SSM. These meetings facilitate and accelerate the processes of SSM because they offer the opportunity to approach a concentrated pool of specific research populations. Participation in a conference allows face-to-face interaction and leads to immediate referrals within a limited section of the research population in a short period of time. Thus, the researcher, an outsider not usually affiliated with the conference's field of interest, must utilize a degree of flexibility, creativity, and daring to locate and access events such as these and to enlist the cooperation of their participants.

The effectiveness of SSM is also dependent on the conduct of the researcher. Thus, the following suggestions can increase communication and trust between the

researcher and the research population, and even increase the likelihood of cooperation in future studies. While these suggestions apply to all social research studies, they are especially relevant in the context of conflict due to the centrality of trust. Trust is central to the method of SSM. Our experience has shown that integrity, transparency, continuity and sensitivity are the factors which increase trust between the research population and the researcher.

Lack of integrity erodes trust and significantly reduces the likelihood of cooperation. It is therefore critical that the researcher be truthful during all interactions with the research population. Transparency also increases trust. Whenever possible, the researcher should supply the research population with information regarding the research organizers, goals, processes, and results. We noticed that volunteering this information increased the trust and involvement of our research populations in research studies. Sharing our knowledge and demonstrating our familiarity and expertise reduced suspicions about our identity, affiliation, and intentions. For example, the Israel–Palestinian and Israel–Jordanian peace processes were the focus of our research studies. These were understandably controversial issues to many members of our research populations in Jordan and the Palestinian Authority. Despite the sensitivity of these cross-border studies, we found it was always advisable to begin our contact by presenting our Israeli nationality and organizational affiliation, our research subject, and our goals. In cases in which we presented this information belatedly, or in response to a question, we noticed a dramatic decline in many respondents' willingness to cooperate and to refer other potential respondents.

Based on our experience, we also recommend that the researcher continuously maintains a high level of visibility with the target population. The continuity of our relationship with the research population was essential to the development of familiarity and increasing trust, which, in turn, positively affected the respondents' sense of obligation and cooperation. Furthermore, familiarity proved to be central to the likelihood of the development of chain referrals to additional members of the research population. For example, we noticed that repeated encounters with individuals of the research population increased familiarity and facilitated their willingness to cooperate and refer further respondents. Furthermore, unplanned encounters with respondents in different venues (e.g. businesses, conferences, and government offices) contributed to establishing our position as known and trustworthy researchers.

The researcher should also demonstrate maximum sensitivity towards the respondents. Our experiences of conducting research in conflict environments demonstrate that participation in research studies, especially those dealing with sensitive issues such as public policy or politics, could lead to significant consequences endangering the respondents, their family members or their interests. In this context, 'black lists' prove to be significant in deterring Jordanian business people, academics, lawyers, and journalists from cooperating with Israelis. People on these lists are publicly denounced and even boycotted for their involvement with Israeli interests (Cohen, 2008; Arieli, 2009b). Hence, the respondents should feel confident that the researcher appreciates their need for privacy and confidentiality regarding their involvement and any information they supply. Guaranteeing the anonymity of the respondent, as well as that of his/her referrals, has proven to be central to enlisting cooperation in research.

It is interesting to note that this sensitivity and even fear regarding exposure of cooperative ventures between Jordanians, Palestinians, and Israelis were not limited to the Arab participants who could have been in actual danger in case of exposure. Israeli partners, too, were careful in revealing details regarding these cooperative ventures. This sensitivity reflected both their interest in ensuring the continuity of cross-border cooperation and also real concern for the protection of their Arab partners. This diffusion of concern regarding exposure extended even to third-party international and local organizations. Thus, when we approached various NGOs involved in promoting peace, they were usually unwilling to supply specific details regarding activities and participants.

It is critical that the interaction with the researcher is not an unpleasant experience involving any disrespect for the respondent. Therefore, researchers should behave according to the social, religious, and cultural norms of the target population and adopt an empathetic approach towards the respondent and his/her milieu. Conservative and modest dressing, especially in encounters between men and women, is advisable when conducting research in traditional societies.

Finally, the researcher must increase his or her awareness of the leading limitation of SSM, namely, lack of representativity. Awareness of the effect of phenomena such as community gatekeepers can minimize negative effects on the sampling process. To overcome problems with external validity arising from the fact that SSM often draws from a set pool of respondents within specific social networks, we recommend that the researcher

combine SSM with other methods such as quota sampling techniques. In this manner, the researcher would map specific target populations and use SSM to create parallel networks of respondents to ensure representation of participants from different areas and subgroups.

Summary and discussion

This article deals with the challenge of conducting research in an environment of conflict by suggesting the use of SSM. There is an acute problem in conducting research in conflict environments and an obvious need for increased awareness and discussion of the many methodological difficulties and challenges which researchers face. This problem is reflected in both the literature and in our research experiences.

We claim that researchers should not hesitate to describe the difficulties they face and the choices and compromises they must sometimes make in adapting their research strategies to the complex political, social, and security realities of conflict environments. This discussion will increase the transparency and the validity of research findings and contribute to developing appropriate research methodologies for conflict environments and to the policymaking process.

While the value of SSM in social research has been recognized specifically in connection with the study of the lifestyles of marginalized populations and in complementing other research methods, the literature has not yet appreciated and analyzed the potential contribution of SSM to studies conducted under conditions of conflict. We suggest that careful use of SSM has unique advantages for research conducted in conflict environments, primarily because it can help researchers locate, access, and enlist the cooperation of potential subjects.

We claim that under conditions of conflict, the *entire* population is marginalized to some degree, making it 'hidden' and 'hard to reach' for the outsider researcher. This marginalization complicates the task of locating and enlisting the cooperation of research populations who, in a non-conflict context, would not be considered hidden or hard to reach.

We begin by presenting the problem of research in conflict environments, examining the various challenges of recruiting interviewees – lack of contact information, lack of system information, cultural differences, legal, political and ideological restraints, technical accessibility, and most important, the atmosphere of fear and distrust. In addressing this problem, we suggest a method commonly used successfully in a variety of social research

cases but not yet recognized in the context of conflict. We discuss the centrality of SSM as an important method of convenience sampling in research and present and analyze the advantages and limitations of this method in the stages of locating, accessing, and involving hidden and hard to reach populations. We go on to demonstrate how SSM can help the researcher overcome many of the above-mentioned challenges. These discussions of SSM and of conflict environments, together with our experiences in the field, provide the basis for generating several insights and recommendations.

Our insights and recommendations aim to optimize the use of SSM in conflict environments, increasing its effectiveness and representativity. Flexibility, creativity, and daring in creating and seizing opportunities to interact with the research population and in enlisting participants for research are needed. In addition, the researcher should present and conduct him/herself with integrity, transparency, and sensitivity vis-à-vis the research population. Such conduct can facilitate the process of chain referrals needed for SSM by overcoming the basic lack of trust common to the conflict environment. The mechanism of trust is the fundamental element upon which SSM rests, because it is ultimately 'a practice of cooperation' between the researcher and the research population.

A central issue remaining for future research and discussion is the question of data interpretation. This article focuses on the challenges of enlisting cooperation of research populations. We emphasize that the use of SSM could cause selection bias and recommend ways to minimize this challenge. Yet, this is only one aspect of the big question – how should data collected in a conflict environment be interpreted? SSM is indeed invaluable in approaching and enlisting cooperation, but there is a difference between the challenge of engaging the research population and the evaluation of the data generated. To what degree does the use of SSM in creating trusted networks of referrals affect the reliability of the responses generated through this method? These questions remain the basis for future research and discussion.

This article opened with a broad question about conducting research in less than optimal conditions such as conflict environments. While fieldwork is an essential component of research, the complexity of the conflict environment may deter researchers from approaching and studying various social questions from a 'street level' perspective. SSM is an especially useful method for such fieldwork and may make the difference between research conducted under constrained circumstances and research not conducted at all.

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