Aida Alvinius
Swedish Defence University, Sweden

Bengt Starrin
Karlstad University, Sweden

Gerry Larsson
Hedmark University College, Norway
Swedish Defence University, Sweden
DOI: https://doi.org/10.18778/1733-8077.12.3.02

Reflexive Serendipity. Grounded Theory and Serendipity in Disaster Management and Military Research

Abstract Grounded Theory (GT) is a research method that allows the researcher to make discoveries without *a priori* knowledge, and allows *an open mind not an empty head*. The use of this method is also desirable for serendipity to occur in the research process. This article therefore aims to chronologically present how serendipity has grown over time in the use of the GT method in a field of research focusing on highly demanding conditions such as disaster management and military operations. We will discuss a new concept, namely, reflexive serendipity, which encompasses the conditions required for making discoveries in the interview analysis. These may be contextual aspects and the role of the researcher, which includes having an open mind and the necessary perseverance and discipline to be able to succeed with GT and serendipity.

Keywords Grounded Theory; Serendipity; Reflexive Serendipity; Military Sociology; Disaster Management

Aida Alvinius (Ph.D., Karlstad University, Sweden) is a researcher in sociology at the Department of Security, Strategy, and Leadership, Swedish Defence University. She has published articles, chapters in books, and research reports within the field of organization, collaboration, and leadership, sociology of disasters, and military sociology.
email address: aida.alvinius@fhs.se

Bengt Starrin (Ph.D., Karlstad University, Sweden) is a researcher in sociology and professor of social work at Karlstad University. His main research fields are sociology of emotions, social welfare, and public health. He has published several books and articles on poverty, unemployment, sociology of emotions, and qualitative methods such as Grounded Theory.
email address: bengt.starrin@kau.se

Gerry Larsson (Ph.D., Goteborg University, Sweden) is a licensed psychologist, professor of leadership psychology at the Swedish Defence University, and professor of Hedmark University College, Norway. During 2004-2009 he also served as the Vice President of the university. He has published more than 140 journal articles, 90 books or chapters in books, and more than 530 research reports.
email address: Gerry.Larsson@fhs.se

Grounded Theory (GT) is a research method originally invented by two sociologists, Glaser and Strauss (1967). GT may be defined as: "the discovery of theory from data systematically obtained from social research" (Glaser and Strauss 1967:2). This method provides researchers with a unique tool for theoretical development and differs from other *qualitative* methods for two major reasons. First, it is "unencumbered by explicit expectations about what the research might find, or by personal beliefs and philosophies" (Pole and Lampard 2002:206), therefore allowing the researcher to make discoveries without *a priori* knowledge and allowing *an open mind not an empty head* (Dey 1999). Regarding the application of GT, Glaser (2014a) had this to say:

> GT helps us to see things as they are, not as we preconceive them to be. Even without a GT, having a GT orientation helps us spot preconception when applied. We do not know how to apply GT until preconceptions are spotted in the participants' behavior and attitude. GT orients us to seeing our behavior and the behavior of others as data; we are able to see these things as they are, not as we wish them to be. Without preconceptions our minds are free to see things as they are so we can apply with trust in a favorable outcome. [p. 48]

The advantages of an "open mind" attitude in the data analysis may have contributed to the growing popularity of the GT method in a variety of social science and behavioral science areas. Locke (2001), for example, points out that the chances are very high that you will find a citation for Glaser and Strauss (1967) in almost any qualitative research article in the domain of management and organization studies.

A second major advantage of this method is that it provides the desirable conditions for unexpected discoveries, that is, serendipity or happy accident. The concept of serendipity was coined in 1754 by the British author, Horace Walpole, in a letter to a good friend, Horace Mann. The inspiration for naming the phenomenon comes from a Persian tale about three princes from Serendip, who, thanks to their sharp minds, made a number of unexpected discoveries, associations, and connections (Bosenman 1988). Horace Walpole drew a parallel with this story and realized he had found a new word to describe the actual phenomenon of making an important but unexpected discovery. Since then, the word has spread and is applied in all kinds of contexts.

However, it was the American sociologist, Robert Merton, who—in his book *Social Theory and Social Structure* (1957)—developed the concept further in a research context. Merton describes serendipity as an unexpected discovery that should be part of the scientific work involved in developing a theory or creating new hypotheses. Bosenman (1988) has compiled a few definitions of serendipity, for example: making providential discoveries by accident, the faculty of finding valuable things not sought for, and an aptitude for making desirable discoveries by accident.

The meaning of serendipity to the research process is the endeavor to be open to new and unforeseen results, that is, to be able to see beyond your line

of enquiry. Intuitive discoveries should nevertheless continue to be studied scientifically in order to be able to confirm results. In medicine, two of the most famous serendipitous discoveries were penicillin and X-rays, but even chocolate chip cookies came about by happy accident (Van Andel 1994). Serendipity is also referred to in behavioral science studies and has even led to paradigm shifts in several research projects, for example, when Human Relations schooling arose out of Scientific Management, on the basis of the altered view of humans as social beings rather than machines that must produce and deliver products (Rosengren and Arvidsson 2002).

In ethnographic studies, Fine and Deegan (1996) differentiate among three kinds of contexts of discovery, which are as follows: 1) *Temporal serendipity*—happening upon a dramatic instance. This involves an ability to find new sources of data—of being *in the right place at the right time* in order to observe some events, crucial for further observation and analysis. 2) *Serendipity relations*—the unplanned building of social networks. Finding proper informants (also experts and informants from a given observed area) and being in good relations with them is extremely important for making discoveries. These relations are often established accidentally. They, themselves, may be worthy of analysis, as a kind of empirical data. 3) *Analytical serendipity*—discovering concepts or theories that produce compelling claims. This is connected to merging qualitative data with already existing theories or forming proposals to modify them. A researcher may then discover some basic metaphor or narrative strategy which allows him/her to conceptualize a problem.

Previous research has also identified a number of individual factors that contribute to the likelihood of serendipity to occur. These include emotional intelligence (Collins and Cooper 2014), sagacity in terms of penetrating intelligence, keen perception and sound judgment (Bosenman 1988; Erdelez 1999), creativity (Ansburg and Hill 2003; Dorfman et al. 2008; Memmert 2009), and openness (Rivoal and Salazar 2013). A connection between creativity and madness has also been suggested (Kyaga et al. 2015).

GT's association with serendipity has been described by a number of researchers over the years. Glaser and Strauss (1967:2) have commented on Merton's concept by defining it as the following: "an unanticipated, anomalous, and strategic finding that gives rise to new hypothesis." The concept is included in the Five "S's" characterized by Glaser, which describe the nature of GT: "the subsequent, sequential, simultaneous, serendipitous, and scheduled nature of Grounded Theory" (Glaser 1998:15). Other researchers who have discussed GT and serendipity in social sciences contexts include Fine and Deegan (1996), Konecki (2008), and Bryant and Charmaz (2007). The latter draw an interesting conclusion: "If it wasn't always apparent that GTM (Grounded Theory method) is all about serendipity, then it certainly is now" (Bryant and Charmaz 2007:23).

An empirical study which particularly focuses on reflections about GT and serendipity is Konecki's (2008), where he describes the phenomenon of serendipity in the research case of the "social world of pet owners." Konecki claims that serendipity in the process of GT is a result of the way researchers code data, prioritize data, and how they determine which are the most important core variables. Konecki says that this takes a long time, which is also a prerequisite for arriving at completely unexpected conclusions. We have not succeeded in finding similar studies in other empirical contexts.

This article focuses explicitly on serendipity and GT in a particular context where no such previous studies were found, namely, a dynamic environment associated with crisis, war, and chaos and in which life and limb are at stake. The purpose is to give a chronological presentation of the growth of serendipity over time in the use of GTM. Particular focus is given to organizational factors in disaster management and military operations.

Demanding Conditions—A Description of Context

The demanding conditions considered here refer to the specific tasks of Swedish emergency response organizations and the Swedish Armed Forces. Demanding situations include crises, war, and armed conflict, as well as extraordinary events, and how society may respond to these kinds of challenges on a national and international level. This article focuses on Swedish situations and the Swedish authorities that had to cope with demanding circumstances in both domestic and international contexts. Specifically, the examples from disaster management used are the tsunami catastrophe in South East Asia (2004), a hostage drama in a Swedish prison (2004), and a major chemical spill at a Swedish Harbor (2005).

Where a military context is discussed, it concerns Swedish defense staff serving on international missions for military observation, peace-keeping, and peace-enforcement purposes. Typical military collaborative tasks highlighted in this study focus on liaison, negotiation, and intelligence gathering, observations and situation outlook reporting. All of these activities are conducted under imminent danger to life and limb (Klep and Winslow 1999; Alvinius 2013).

Method

Methodological Approach for the Research Project

Grounded Theory Method (GTM) has developed since Glaser and Strauss published their book in 1967. Nowadays there are basically three general and different approaches to the GT methodology. Thus, it is no longer possible to write about GT as if it were the single, standardized method. Glaser's classic GTM differs from Strauss and Corbin's (1990) version, and both are dissimilar to Charmaz's (2014) constructivist version. To specify our own stance, we have tried to follow the Glaserian approach to choosing, doing, abstracting, and writing GT and have been inspired by several works by Glaser (1978; 2011; 2014a; 2014b; 2015) in trying to specify our use of GT.

Methodological Approach for This Paper

The methodology adopted for this paper is autoethnography—a relatively recent qualitative approach to research whereby the researchers themselves are

the "subjects" of study (Ellis and Bochner 2003). In this instance, this means a review of a long-term project analyzed using GT and what this methodological approach means to the research process in the long-term. Doing so involved the three of us, as researchers in our distinct projects, considering our observations and experiences in the process of research on leadership in demanding conditions. All three have experience of using GT as a method of analyzing data, which will be described in the next section.

Initial Studies Endeavoring to Use GT

The methodological discussion concerning the connection between GT and serendipity is based on a number of civilian studies in 2005-2007 financed by the former Swedish Rescue Services Agency (now: the Swedish Civil Contingencies Agency) and military studies in 2008-2009, sponsored by the Swedish Armed Forces. The civilian studies aimed to increase the understanding of direct and indirect leadership and decision-making by managers and management teams, as well as that exercised within their own organizations and in collaboration with others. The studies sought to inductively answer questions concerning the importance of experience for leadership and decision-making in connection with larger incidents, and also considered the perceived stress involved, both for the individual and within their organization. The military studies concentrated on military leadership during international missions, with special focus on civil-military cooperation. Here, questions concerned experiences of collaborating with different actors and at different organizational levels.

Methods in the Original Studies

Informants

The original studies were all based on qualitative interviews with people in leading positions, who had experience of conducting crisis management efforts and international military missions. According to the guiding principles of generating theory from empirical grounds (GT) which Glaser and Strauss (1967) and Glaser (2011) developed, the selection of authorities and informants in the three initial studies was made so as to achieve as wide a variation of experience as possible.

In all, 71 people were interviewed (10 women, 61 men). The selection can be described as a convenience sample. More specifically, this means that with the help of already selected individuals, we came into contact with others who had leading positions in crises. Although this was initially done within the project in 2005, we switched to theoretical sampling in 2007. According to Morse (2007), convenience sampling in GT and qualitative research is more generally used for two reasons. Firstly, in the beginning of a research project—to identify the scope and major components, and secondly—to locate individuals (crisis managers in this case) who are available and have experienced or observed the researched phenomenon. Thus, in 2007, we switched to theoretical sampling according to Glaser (1978) for the selection of participants (liaison officers) because of the identified needs of the emerging concepts and theory.

For further information on the distribution of informants and organizations, see: Tables 1 and 2.

Table 1. Overview of informants from civil disaster management.

Organization	Involvement in rescue operation	Number of informants	Female/ Male	Their position (during the rescue operation)
1. The Swedish Rescue Services Agency	Tsunami	5	1/4	• Director-General • Head of Operational Management • An emergency service function called Focal Point • Two Crisis Managers
2. A local rescue service organization	Sulphur spill Hostage-taking	11	2/9	• Incident Commander • Chief Fire Officer (CFO) • Chief Fire Officer (CFO) on Duty • Overall Incident Commander • Incident Site Officer • Chief of Staff • Full-Suit Fire-Fighter • Information Officer
3. An emergency treatment unit	Sulphur spill	4	1/3	• Chief of Emergency Treatment • Officer on Duty • Incident Site Medical Officer • Emergency Medical Officer
4. Swedish Armed Forces	Tsunami	6	0/6	• Logistics Coordinator • Medical Doctor on Duty • Liaison Officer sent from Operative Unit (OPU) and located at the Swedish Rescue Services Agency • Two Managers for the operational section on duty • Head of the Logistics Department
5. National Board of Health and Welfare	Tsunami	6	2/4	• Director-General • General Manager of Administration • Head of Social Services Department • Head of Crisis Management Department • Two Operative Managers
6. A regional public prosecution office	Hostage-taking	2	1/1	• Two Chief Prosecutors
7. Regional Police Department	Sulphur spill Hostage-taking	11	1/10	• Head of the Police Department in charge of law and order • Three Chiefs of Staff • Two Negotiators • Two Police Incident Officers • Adviser to Strategic Commander • Information Officer • Liaison Officer
8. A prison establishment	Hostage-taking	5	1/4	• Director-General • Three Detective Inspectors • Chief of Security
(N) informants		**50**	**9/41**	

Source: Self-elaboration.

Table 2. Overview of informants from an international military operation.

Organization	Number of informants	Female/ Male	Their position (during the international military operation)
1. Swedish Armed Forces	20	0/20	• Military observers (3 persons) • Liaison officers (11 persons) • Contingent commanders (4 persons) • Military attaché (1 person) • Police officer (1 person)
2. The Ministry of Foreign Affairs	1	1/0	• First Secretary of the Swedish Embassy
(N) informants	**21**	**1/20**	

Source: Self-elaboration.

Initial Analysis—Open and Selective Coding

All interviews were recorded and written out in full before being analyzed, according to a GT approach (Glaser and Strauss 1967). The first step in the analysis work consisted of so-called open coding, which implies identifying significant elements, that is, codes in every individual interview. For example, they could be about certain patterns of thought, feelings, or behavior relating to the subject questions in the interview. At the start of the research process, we began analyzing the transcribed interviews. Here is an example of a quotation:

> I'll be completely honest; it didn't work at all [the staff]. Unfortunately, it left a lot to be desired.

This quotation, together with several others, was coded as *Internal Cooperation Within the Police Force*. Continuing with the constant comparative method, step two in the analysis work consisted of assessing and later identifying codes with similar meanings. In the example above, *Internal Cooperation Within the Police Force* was sorted into the category of *Cooperation*. In the third step, the category *Cooperation* then came under the superior category *The Task of the Internal Arena*. A fourth and final step involved comparisons between superior categories, categories, and codes, resulting in a hypothetical model describing the core variable of the collaboration—a balancing act between the need for structure and the need for freedom of action.

Selective Re-Analysis—The Road to Serendipity

All the interviews were analyzed again, using a more selective approach. By re-analyzing the existing data, our ambition was to qualitatively identify more overall concepts so as to realize the purpose of the investigation and thus contribute to theoretical development and understanding of the phenomenon studied. This leads us to a discussion of the selective coding and the likelihood of arriving at a serendipitous discovery.

The Discovery of the "Link" Concept in Disaster Management and Re-Analysis of the Same Data

The purpose of the first civilian study was to develop a theoretical understanding of leadership during a complex rescue operation following a major disaster (the 2004 tsunami) in a foreign country. The results were published in the *International Journal of Emergency Management* (Alvinius, Danielsson, and Larsson 2010a). The main conclusion from this study was the identification of a core variable: a balancing act between the need for structure and the need for freedom of action. Leaders who strive to create structure at the expense of freedom of action are less inclined to delegate and more likely to wear themselves out. Conversely, those who strive to create great freedom of action bypass many links in the organizational chain, thus "short-circuiting" the organization as a whole. The first serendipitous discovery occurred in this first study when the researchers were analyzing data together and started discussing the concept of individual roles labeled as "links" that arose in one of the interview excerpts.

> Initially, the Swedish Armed Forces had a liaison officer, who knew the military speak and system, placed among the Rescue Services staff. I had discussions with the liaison officer there, and he was familiar with our stuff. What I'm most satisfied with is being able to establish the contacts, so the Rescue Services personnel and the Armed Forces personnel had a common entry point, and that was me. So, I had a lot of discretion and saved the individual administrators a lot of times.

This individual worked for the armed forces, but because of the unexpected tsunami event, was given a collaborative role in another organization. From this case, the researchers concluded that managing contradictory needs for structure and freedom of action becomes easier when link functions and roles arise in the formal hierarchy during an emergency situation. An important conclusion was that boundary spanners or links—liaison functions—and individuals are of great significance when restraining factors, such as geographical distance, scope of disaster, and lack of disaster experience, are present.

This serendipitous discovery led to a selective re-analysis of the existing data with a view to qualitatively identifying and evaluating context-specific and common factors associated with links. Two new concepts arose from the re-analysis, further refining the definition of a link. These results were published in chronological order after the first one in the *International Journal of Organisational Behaviour* (Alvinius, Danielsson, and Larsson 2010b). The aim of that particular study was to gain a deeper understanding of the concept of links within the framework of emergency response agencies during severely demanding operations.

The following definitions and two overarching categories arose: Spontaneous or Planned Links established in connection with accidents and catastrophes that serve as bridges in the collaboration between or within liaising organizations. These links may be horizontal and vertical in terms of the direction of processes (e.g., communication/information/decision-making/liaison).

Vertical links describe the role of acting between various hierarchical levels within an organization or between organizational leaderships at a political level. Horizontal links describe the role of acting between organizations or between individuals at the same level within one and the same organization/authority.

A Planned Link is related to an individual's organizational role and is most often approved and accepted by superiors. Planned Links refer to individuals with collaboration tasks within their responsibility and mandate, such as liaison officers or negotiators. This linking function may have appeared successful in a previous event, which led to the establishment of this kind of link in the organization. Planned Links can be decision-makers who are able to act outside the framework of the organization because they possess organizational acceptance and have a wide experience of managing disasters or unexpected events. Individuals with planned link functions in crisis situations belong to the ordinary chain of command during regular day work and may have a managerial position during ordinary working conditions.

Spontaneous Links appear to arise when required by the extreme situation. This could happen when the areas of responsibility, authority, competences, experiences, and resources fail. Spontaneous Links often emerge in the field and enjoy the immediate trust of people close by, for example, Planned Links. A typical Spontaneous Link could be a volunteer language translator during a disaster. To make the collaboration process possible, Spontaneous Links rapidly need to gain trust, but they also run the risk of being rejected if they are not part of an organization involved. The need for Spontaneous Links disappears once the crisis is over.

What we learned from this study is that links contribute in diverse ways to effective operations by enabling exchange between individuals and groups. When functioning at their best, these links provide the rigid structure of bureaucratically organized emerging-response agencies, with the creativity and flexibility required. In short, the two kinds of links contribute to organizational adaption to environmental conditions.

Taxing conditions can place demands on competent people when support is required in order to fulfill a task. The task, which is not predefined, involves coordination, collaboration, and support, but includes purposes connected to the extreme situation, such as sizing up the situation, sense-making, estimating the allocation of resources and other competencies. In the case of the hostage-taking, it turned out that a church minister was of assistance when the hostage's family needed support:

> I picked someone from the support group and our prison pastor...but we were so lucky because another minister from Mariefred lived on the top floor [in the building where the hostage lived]. He was their neighbor...so those three travelled together—our support person, our prison pastor, and the other minister went and met his [the hostage's] wife and family to inform them.

Because of requirements to publish our work in scientific journals, we have tried to identify theoretical gaps in the literature regarding collaboration and leadership in crisis management. During our collection of published references, we came across an organizational concept, namely, boundary spanners. This concept is similar to our Planned and Spontaneous Links, but our theoretical contribution to the knowledge of boundary spanners is the discovery of the spontaneous parts.

The concept of boundary spanners refers to individuals who are able to provide linkages which do not exist in organizational charts; boundary spanners facilitate the sharing and exchange of information and link their organizations with the external environment (Aldrich and Herker 1977; Webb 1991; Burt 1992; Williams 2002).

Discovering the concepts "planned" and "spontaneous" links and their relation to boundary spanners led us to further theoretical sampling. Little research has been done on planned and spontaneous links *and* boundary spanners in the Swedish civil crisis management and military contexts at that time, so we chose to expand the study by conducting a further 21 interviews with individuals who had acted in some kind of liaison capacity (the main task of planned links and boundary spanners), but only in the military context (in contrast to the crisis management situation mentioned above).

This then became the object of further study in the military context, which revealed how planned links actually manage collaboration and how they treat spontaneous links (because spontaneous links were not part of the organization). We wanted to identify connections between those two types of links. During this analysis, another serendipitous or accidental discovery was made in regard to the link between sociology of emotions and military sociology, focusing emotion strategies on an individual and organizational level, collaboration in the military context, and boundary spanning/linking, leading to the study published in the *International Journal of Work, Organisation, and Emotion* (Alvinius et al. 2014). The purpose of the enquiry was to examine the processes of confidence-building and emotional management tactics among boundary spanners in a multinational, military peace enforcement context. The study shows that boundary spanners strategically utilize a variety of emotional management strategies in order to fulfill the demands laid upon them by their collaborating counterparts in the hostile environment and by their own organization. The original thoughts of how planned links actually manage collaboration and how they treat spontaneous links under stressful conditions led to the discovery of different types of emotional strategies (called smoothness strategies) that planned links use to manage different collaboration actors, including spontaneous links. Three interrelated dimensions of smoothness were identified: cultural, structural, and smoothness in risky situations. By acting "smoothly" an adaption to the dynamic environment can be achieved. Our study shows that boundary spanners utilize emotional management in order to fulfill the demands partly laid upon them. By acting "smoothly" at an individual level, the bureaucratic organization is thus adapted to its dynamic environment (Alvinius et al. 2014).

Cultural smoothness means an ability to handle cultural codes, manners and customs, rituals, et cetera in order to avoid conflicts or tensions. The following quote exemplifies the discovery of the cultural smoothness boundary spanners needed in their international service:

> But also, you could see those who had a knack of adjusting to this, you know, joining in and cheek-kissing right, left, and center, and so on. If you find that difficult, maybe you shouldn't be working as a liaison officer, if you can't take it; you have to be able to loosen up, you have to, you know, when in Rome, do as the Romans, so to speak.

Structural smoothness means an ability to understand and handle structures of power, status, hierarchy, et cetera, as illustrated by the excerpt below:

> If they cancel meetings, it's not right to accept it with a smile and say: "Well, OK, we'll see you next week, if you're busy now." You might have to play up your rank perhaps, appear to be a little offended, slam your fists on the table, or say, this is not acceptable to me—it's completely unacceptable that you won't meet with ISAF.

And finally, smoothness in risky situations implies an ability to appraise the significance of various external demands, which may prompt emotions such as fear, anger, frustration, or shame, et cetera in all collaborative actors.

> He was upset because we closed this restaurant due to the increase in drugs. But, I often thought it worked, I had quite a calming effect on the people I went in and talked to.

Summary of the Process

Original studies of leadership and collaboration in crisis management discovered "links" which, upon selective re-analysis, were further defined as "planned" or "spontaneous." The concept was theoretically developed under the umbrella term "boundary spanner" with our additional contribution of a new dimension labeled "spontaneous." We have done further studies of planned links and their connection to spontaneous links in a military context in which a new discovery was made, that is, that emotion strategies are at work in collaborative tasks characterized by threat and danger to life and limb.

Discussion

The purpose of this paper was to give a chronological presentation of the growth of serendipity over time in the use of GTM. Particular focus was given to organizational factors in disaster management and military operations, such as identification of the concepts "planned" and "spontaneous" links and developing the already existing "boundary spanner" concept. Besides the chronological presentation of the results, a concept developed in anthropology, namely, reflexive serendipity (Rivoal and Salazar 2013), is now introduced in a new context. Here, reflexivity denotes a kind of "interpretation of interpretation" in the research process (Alvesson and Sköldberg 2000). According to Rivoal and Salazar (2013), reflexivity, openness, and serendipity are key characteristics of anthropology. We would argue that the same is also true within sociological, psychological, and other behavioral sciences using GT as a method.

Reflexivity is also defined by Calás and Smircich (1992) as the relationship between "the knowledge" and ways of "doing the knowledge." The discussion in this article is devoted to problematizing the role of the researcher in working with GT and serendipity.

As Glaser himself expresses it in his book, *Basics of Grounded Theory Analysis: Emergence Vs. Forcing* (1992), the sociological analysis should emerge from the empirical material—the material should not be forced out of any particular pre-determined frame of ideas. Approaching the collected data without pre-determined ideas and analyzing them from several perspectives makes this type of discovery possible—it has to take its time. Although critical voices have been raised in response to the popularity of GT and the use of the "discovery" concept (Thomas and James 2006), we have given a chronological description of how obtaining knowledge and producing knowledge through reflexive serendipity can occur.

Context Factors Increasing the Likelihood of Serendipity

The discussion in this section concerns demanding contexts in which the informants are exposed to completely new situations and experiences. Indeed, environmental or contextual factors are said to contribute to noticing and discovering, and there is a wealth of evidence demonstrating that contextual factors, which are in some way unique or stand out, will be noticed (Theeuwes 1994), for example, sudden visual or audible changes in the environment (Egeth and Yantis 1997). It has also been documented that researchers and observers will react to emotionally loaded or meaningful words on the unattended channel (this is commonly known as the *cocktail party effect*) (e.g., Wood and Cowan 1995; Shapiro, Caldwell, and Sorensen 1997). Many of our informants experienced a unique event in crisis management, which led them to reflect on their experiences and thus contributed to new discoveries in the analysis. This is not unusual. As one informant from the tsunami catastrophe expressed it: "So this is possibly a once-in-a-lifetime thing that we hope we can avoid in the future."

Prerequisites for Reflexive Serendipity

The discoveries of "Spontaneous and Planned Links as Boundary Spanners" and "Boundary Spanners' capacity for emotion management" arose true to method, fitting like a glove to GT as a craft. The above-mentioned discoveries were further developed on a foundation of deep knowledge of the field—analytical serendipity as described by Fine and Deegan (1996) in the sense of the researcher being able to conceptualize a problem through deep theoretical knowledge. An existing theory may thus be developed, as it was here.

Our wish, then, is to contribute with the concept of *reflexive serendipity* in this new context, as it takes into account the individual preferences, qualities, and knowledge of the researcher in their work with GT in the analysis. For optimal reflexive serendipity within GT, a great deal is also required of the individual in the role of researcher—namely, a combination of an open mind, interest, commitment, and dedication besides the perseverance and discipline

to make a given analysis clear for publication. If the researcher only has perseverance and discipline, they will not see anything new. Much also depends on the interests and perseverance of the researchers, their willingness to collaborate within a research team, the decisions made in the observation and analysis, as well as in the long, time-consuming research process. This combination has not been emphasized as much in the studies of researcher factors contributing to serendipity that were cited in the introduction.

Strengths and Limitations

The advantage of recycling data in this manner is that it is a way of gaining a deeper understanding of the phenomenon under study. A possible disadvantage is that the process is endless. However, reflexive serendipity within GT is characterized by modifiability, which means that (instead of gathering new data) old data are constantly being recycled. This can be an advantage and a disadvantage at the same time.

Another aspect is that circumstances can change to the degree that the entire analysis alters when a number of anomalies enter the equation. Social media are one such anomaly. The conclusions we came to in 2005—before Facebook and similar sites took off—would look different today. For this reason, further study with additional data from the outside world is important for the sake of knowledge, but also for the method.

References

Aldrich, Howard and Diane Herker. 1977. "Boundary-Spanning Roles and Organization Structure." *Academy of Management Review* 2:217-230.

Alvesson, Mats and Kaj Sköldberg. 2000. *Reflexive Methodology—New Vistas for Qualitative Research*. London: Sage.

Alvinius, Aida. 2013. *Bridging Boundaries in the Borderland of Bureaucracies: Individual Impact on Organisational Adaption to Demanding Situations in Civil and Military Contexts*. Doctoral Dissertation. Karlstad: Faculty of Arts and Social Sciences, Department of Social and Psychological Studies, Karlstad University Studies.

Alvinius, Aida, Erna Danielsson, and Gerry Larsson. 2010a. "Structure Vs. Freedom of Action: Leadership During the Rescue Operation Following the 2004 Tsunami." *International Journal of Emergency Management* 7(3/4):304-322.

Alvinius, Aida, Erna Danielsson, and Gerry Larsson. 2010b. "The Inadequacy of an Ordinary Organisation: Organisational Adaptation to Crisis Through Planned and Spontaneous Links." *International Journal of Organisational Behaviour* 15(1):87-102.

Alvinius, Aida et al. 2014. "Emotional Smoothness and Confidence Building: Boundary Spanners in a Civil-Military Collaboration Context." *International Journal of Work, Organization, and Emotion* 6(3):223-239.

Ansburg, Pamela I. and Katherine Hill. 2003. "Creative and Analytic Thinkers Differ in Their Use of Attentional Resources." *Personality and Individual Differences* 34(7):1141-1152.

Bosenman, Martin F. 1988. "Serendipity and Scientific Discovery." *The Journal of Creative Behavior* 22(2):132-138.

Bryant, Anthony and Kathy Charmaz. 2007. *The Sage Handbook of Grounded Theory*. London: Sage.

Burt, Ronald S. 1992. *Structural Holes*. Boston: Harvard University Press.

Calás, Marta and Linda Smircich. 1992. "Writing Gender Into Organizational Theory: Directions From Feminist Perspectives." Pp. 227-253 in *Re-Thinking Organizations: New Directions in Organizational Theory and Analysis*, edited by M. Reed and M. Hughes. London: Sage.

Charmaz, Kathy. 2014. *Constructing Grounded Theory*. Thousand Oaks, CA: Sage.

Collins, Christopher S. and Joanne E. Cooper. 2014. "Emotional Intelligence and the Qualitative Researcher." *International Journal of Qualitative Methods* 13:88-103.

Dey, Ian. 1999. *Grounding Grounded Theory Guidelines for Qualitative Inquiry*. San Diego: Academic Press.

Dorfman, Leonid et al. 2008. "Creativity and Speed of Information Processing: A Double Dissociation Involving Elementary Versus Inhibitory Cognitive Tasks." *Personality and Individual Differences* 44(6):1382-1390.

Egeth, E. Howard and Steven Yantis. 1997. "Visual Attention: Control, Representation, and Time Course." *Annual Review of Psychology* 48:269-297.

Ellis, Carolyn and Arthur P. Bochner. 2003. "Autoethnography, Personal Narrative, Reflexivity: Researcher as Subject." Pp. 733-768 in *Collecting and Interpreting Qualitative Materials*, edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Erdelez, Sandra. 1999. "Information Encountering: It's More Than Just Bumping Into Information." *Bulletin of the American Society for Information Science and Technology* 25(3): 26-29.

Fine, Gary A. and James Deegan. 1996. "Three Principles of Serendipity: Insight, Chance, and Discovery in Qualitative Research." *Qualitative Studies in Education* 9(4):434-447.

Glaser, Barney G. 1978. *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory*. Mill Valley, CA: Sociology Press.

Glaser, Barney G. 1992. *Basics of Grounded Theory Analysis: Emergence Vs. Forcing*. Mill Valley, CA: Sociology Press.

Glaser, Barney G. 1998. *Doing Grounded Theory: Issues and Discussions*. Mill Valley, CA: Sociology Press.

Glaser, Barney G. 2011. *Getting Out of the Data: Grounded Theory Conceptualization*. Mill Valley, CA: Sociology Press.

Glaser, Barney G. 2014a. "Applying Grounded Theory." *Grounded Theory Review. An International Journal* 13(1):46-50.

Glaser, Barney G. 2014b. *Applying Grounded Theory: A Neglected Option*. Mill Valley, CA: Sociology Press.

Glaser, Barney G. 2015. *Choosing Grounded Theory: A GT Reader of Expert Advice*. Mill Valley, CA: Sociology Press.

Glaser, Barney and Anselm L. Strauss. 1967. *Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.

Klep, Chris and Donna Winslow. 1999. "Learning Lessons the Hard Way—Somalia and Srebrenica Compared." *Small Wars & Insurgencies* 10:93-137.

Konecki, Krzysztof T. 2008. "Grounded Theory and Serendipity. Natural History of a Research." *Qualitative Sociology Review* 4(1):171-188.

Kyaga, Simon et al. 2015. "Bipolar Disorder and Leadership. A Total Population Study." *Acta Psychiatrica Scandinavica* 131(2):111-119.

Locke, Karen. 2001. *Grounded Theory in Management Research*. London: Sage.

Memmert, Daniel. 2009. "Noticing Unexpected Objects Improves the Creation of Creative Solutions—Inattentional Blindness by Children Influences Divergent Thinking Negatively." *Creativity Research Journal* 21(2/3):302-304.

Merton, Robert K. 1957. *Social Theory and Social Structure*. New York: Free Press of Glencoe.

Morse, Janice. 2007. "Sampling in Grounded Theory." Pp. 229-244 in *The Sage Handbook of Grounded Theory*, edited by A. Bryant and K. Charmaz. London: Sage.

Pole, Christopher J. and Richard Lampard. 2002. *Practical Social Investigation—Qualitative and Quantitative Methods in Social Research*. Harlow: Pearson Education Limited.

Rivoal, Isabelle and Noel B. Salazar. 2013. "Contemporary Ethnographic Practice and the Value of Serendipity." *Social Anthropology* 21(2):178-185.

Rosengren, Karl E. and Peter Arvidsson. 2002. *Sociologisk metodik*. Stockholm: Liber.

Shapiro, Kimron L., Judy Caldwell, and Robyn E Sorensen. 1997. "Personal Names and the Attentional Blink: A Visual 'Cocktail Party' Effect." *Journal of Experimental Psychology: Human Perception and Performance* 23(2):504-514.

Strauss, Anselm L. and Juliet M. Corbin. 1990. *Basics of Qualitative Research*. Newbury Park, CA: Sage.

Theeuwes, Jan. 1994. "Endogenous and Exogenous Control of Visual Selection." *Perception* 23(4):429-440.

Thomas, Gary and David James. 2006. "Re-Inventing Grounded Theory: Some Questions About Theory, Ground, and Discovery." *British Educational Research Journal* 32(6):767-795.

Van Andel, Pek. 1994. "Anatomy of the Unsought Finding. Serendipity: Origin, History, Domains, Traditions, Appearances, Patterns, and Programmability." *The British Journal for the Philosophy of Science* 45(2):631-648.

Webb, Adrian. 1991. "Co-Ordination: A Problem in Public Sector Management." *Policy and Politics* 19(4):229-241.

Williams, Paul. 2002. "The Competent Boundary Spanner." *Public Administration* 80(1):103-124.

Wood, Noelle and Nelson Cowan. 1995. "Cocktail Party Phenomenon Revisited: How Frequent Are Attention Shifts to One's Name in an Irrelevant Auditory Channel?" *Journal of Experimental Psychology: Learning, Memory, and Cognition* 21(1):255-260.

Alvinius Aida, Bengt Starrin, and Gerry Larsson. 2016. "Reflexive Serendipity. Grounded Theory and Serendipity in Disaster Management and Military Research." *Qualitative Sociology Review* 12(3):28-42. Retrieved Month, Year (http://www.qualitativesociologyreview.org/ENG/archive_eng.php).