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Local Search and Rescue Teams in the United States

Arguably one of the least appreciated actors in disaster response is local search and rescue (SAR) teams, despite their importance in saving lives. In contrast to fire and police departments, federal Urban Search and Rescue (US&R) taskforces, the Red Cross, the Salvation Army, and other well-known disaster response organizations, local SAR teams have not received much recognition or support at the national level. This is the case even in the contemporary context in which "homeland security" and "improvements of resiliency" in American institutions are buzzwords. Their "invisibility" is also reflected in the dearth of research literature about them in the field of emergency management and the social sciences of disasters. An exception to this is the work by Lois (1999), who looked at the dynamics of a local SAR team and provided an in-depth view of the authority structure and the slow advancement of new members in the hierarchy of the group. Earlier, Drabek (1981) also provided insights by surveying local SAR teams in Washington and Wyoming to better understand attitudes towards regulations, agency jurisdictions, SAR funding, and issues of legal liability. While these efforts begin to explore important questions in this understudied field, the current

study attempts to give a summary view of the main features of this network of responders.

Purpose

In the following paper we describe a preliminary effort to carry out a national survey that would shed light on organizational features of local SAR teams. It is important to note that this effort has important precursors in the data collection efforts proposed by Drabek and the SAR Research Project Advisory Committee. More than twenty years ago, Drabek reported that 46% of his respondents in the state of Washington "thought that a national SAR data collection system would benefit their organization" (1981, xxii). And in the first of many recommendations proposed by the SAR Research Project Advisory Committee, it was agreed that a "comprehensive emergency response database" should be created (Drabek 1981). While some attempts are being made at present to address respondents' perceived need for a national response database (for example, a SARNews.com newsletter described an international database that began in 2003), it is the case that there is still the need for a data set which focuses on SAR team attributes. The following sections describe the methodology and results.

Methods

The dataset used in this report was collected between January 2005 and April 2006.[1] It includes information on 1150 local search and rescue teams. It was created as part of a larger US&R project which focused on organizational and institutional features of the federal system, but generated questions regarding the capabilities of local SAR teams and their relationship with federal US&R taskforces. The information comes from team websites and the web pages of the National Association for Search and Rescue (NASAR) and NetPets (a website of canine teams), as well as subsequent contacts with teams (see below). Google and other search engines were also utilized to locate teams on the internet. Data was collected on the following 12 variables: team name, year founded, website, resources/equipment, capability, training, funding, address, contact person, phone number, email, and range of geographic response area. Capabilities are defined as the skills and knowledge necessary to use appropriate equipment as well as technical abilities a SAR team has acquired to perform a certain type of rescue. Training is defined as routine group preparation and instruction in the field of SAR. It contains three variables: standards a team follows, frequency of training, and duration of team training sessions.

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[1] Requests for electronic copies of this dataset will be considered on a case-by-case basis. Address all requests to

The training category records membership in professional organizations such as the NASAR and the Mountain Rescue Association (MRA). Funding, which refers to some form of resource given to a SAR team, is broken into eight subcategories. The response area variable taps the extent that teams respond to incidents outside of their immediate area. The remaining variables include contact information and the state and city in which the teams are located.

The most problematic variable was the training category. Training programs varied in terms of difficulty, certification requirements, team status based on training, expectations, definitions of basic versus advanced SAR, amount of time spent training, and other factors that could not be systematized in this study. Training varied among teams, and the categories they used to measure training were rarely similar. Two variables, frequency and duration, were created to manage the numerous forms of training schedules. Frequency is measured by the number of times per month a team trains, while duration is the number of hours per month. Since some teams gave a vague description of time spent training (e.g. 20-30 hours), we reduced the data into common groupings by using the minimum figure that the teams provided.

We tried to verify the information on the websites. Many of the

Web sites did not include information on all variables of interest to us. In an attempt to improve the quality of the data we emailed any team with available contact information and asked them to provide us with missing details. In subsequent emails we also asked some teams to clarify their definition of certain terms, such as large animal rescue and disaster response.[2] This often led to a number of interactions with particular teams, and many teams expressed interest in seeing the final database and/or final reports. As of mid-November 2005, 12% of teams had responded through email, and by February 2006 15% of teams had responded (see below). Missing data was the most consistent problem we faced. Needed information was not always available on the websites, and in some cases website links had expired or email addresses were inoperative. 48.6% (n=559) of teams in our database did not have email addresses or had inactive ones. It is thus the case that the majority of the information we used in this report could not be verified and that the variables we collected have

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[2] The process of defining each of these variables involved using our own ideas, outside sources, and several definitions provided by local SAR teams. Since these teams do not define all terms used on their websites, we matched our definitions and their terms. While we tried to provide a uniform approach, we realize that this may not have been accomplished in every case.

large percentages of missing cases. Despite these shortcomings, the information provided in this report is of value since so little is known about this network of responders.

We conducted external reliability checks on the dataset. It was compared to a database that included 394 national SAR teams listed by dbS Productions (producers of SARNews.com), a national association devoted to SAR. The intention was to ascertain the completeness of our list of teams and the quality of the information we had collected. 14% (n=54) of the teams in this dataset were not in our dataset. We subsequently located information on the 54 missing teams, and they were added to our data. Based on these results, and extrapolating from them, we estimate that we missed about 10 to 20 percent of SAR teams nationwide.

Findings

The teams

There are 1,150 local teams in our dataset, ranging from one team each in North Dakota and Hawaii to 79 teams in California. The teams' forms vary from less than a dozen loosely organized members to a large number of members operating in a highly structured bureaucracy. Local SAR teams are generally made up of community volunteers and are primarily non-profit organizations. In one case study, it was found that

volunteers prided themselves of independence from the government and their focus on life saving missions (Lois 1999). The volunteers in these teams are often members of EMS, fire, police, and sheriff departments, and participate in local SAR teams in addition to their full time positions. Although some teams are very selective and require previous certifications or skill testing before becoming a member, for the majority of teams no previous experience is required; many teams are composed of teachers, businessmen, lawyers, and other occupations unrelated to emergency response (Ventura County Star 2003). As one website stated: "Skills: Willingness to help others. No other skills required" (VolunteerMatch 1). Teams typically encourage anyone interested to apply. Even age varies within teams, as shown from the 25 declared "explorer" teams recorded in our database. These are youth teams such as Boy Scout troops and University clubs, which may have an adult as a mentor and teens and young adults as participants. By observing the variations in size, structure, and formation, it is clear that these teams are very complex.

Founding

Local SAR groups, while often beginning during a crisis (as opposed to formally established as a result of planning), have been recorded for over a century and a half (see www.comspark.com/esarc/history.htm for an

example of an informal SAR search party in 1847). The earliest team in our dataset was founded in 1926. There has been a steady increase in the number of SAR teams over the last decades, with larger numbers of teams founded in the 1980s (n= 75) and 1990s (n=114) when compared to previous decades (see figure 1). Perhaps, as others have similarly argued is the case for social movement organizations in the United States, the increasing prosperity of the country, as well as the influential organizational effort of NASAR (in particular, educational training courses and SAR certification starting in 1989 (http://nasar.org/nasar/support_nasar.php), are responsible for this upward trend in the founding of local SAR teams. Also important are the outside events that act as catalysts to team founding. The MRA state on their website that "Many search and rescue teams were formally organized shortly after their community suffered a disaster or missing persons catastrophe, in which there was previously no system or organization for this type of service" (www.mra.org/mra_info.pdf). Corroborating this statement, many teams in our study – especially wilderness or mountain rescue teams – cite local incidents that sparked the idea for a local SAR team. Other teams said it was due to major, well-known disasters, such as a Southern California team forming after Hurricane Andrew, and other teams forming around the country after September 11th. Our variable measuring "years founded" was

compared to the number of national presidential disaster declarations during 1953-2003 (www.fema.gov), to see if these declarations facilitated founding. Interestingly, the two lines roughly coincide in their high and low points, so that they appear to be related (see Figure 2).[3]

Training

There are both national and regional SAR associations. Many of the training standards that local SAR teams use come from these non-profit professional associations which primarily focus on sharing information, education, training standards, and/or multiple team coordination. Some of the most prominent national associations include NASAR, MRA, and the American Rescue Dog Association (ARDA). At the regional level, SAR Councils also operate. These councils are not designed to spearhead national issues, but rather to advance coordination, information, and training within the surrounding area. Local SAR teams or individual people may be members of these national or regional associations. On the other hand, non-members can access guidelines which are often available online or in published form. These training standards are more comparable to

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[3] The comparison is limited since presidential disaster declarations did not begin until the 1950s and the earliest local team in our data was founded in 1926; there is a 25-year gap that cannot be analyzed.

suggestions rather than obligations for members, non-members, individuals, and teams.

As derived from team websites and email responses, it appears that teams generally use NASAR or MRA as a guideline while modifying some parts of the program to fit the needs of their teams. Some local teams also borrow training ideas from FEMA's US&R taskforce system. For instance, one team in California developed their standards through a combination of FEMA, MRA, and NASAR guidelines. 73% (n=838) of the teams in our database follow NASAR, FEMA, MRA, or other organizational training standards. 3.6% (n=34) of the teams follow standards from two or three of the aforementioned training categories.

Some teams have their training lesson plans available online to share with the public. In general, if teams are located in the same region and have good relations, they may hold joint training sessions and/or take turns hosting training field exercises. In addition, teams commonly offer their classes to other teams or to the public for a fee, both to generate funding and to promote uniform standards. Local SAR teams promote SAR training skills in the general public as well. According to Drabek (1981: 233), 19% of Washington respondents and 20% of Wyoming respondents agreed that volunteer SAR groups are responsible for educating the public in SAR.

Thus, a common web link found on local SAR websites is for the "Hug A Tree" program in which volunteers promote survival skills in the woods for young children. While search and rescue activities are the priority for these teams, safety education and accident prevention are extra duties assumed by many of these volunteers.

Over time and largely outside of government regulation and support, regional and national networks of local SAR teams have emerged and created their own SAR community. Within this community they share not only training standards, but they also influence (whether directly or not) each other in terms of technical tasks, equipment, organizational strategies, coordination, and support. Approximately 30% (n=337) of local SAR teams in our study affiliated themselves with at least one of the dozens of SAR regional and national organizations. The New York State Federation of SAR Teams is an example of a regional network. Its website presents a user-friendly map for official agencies to locate the general area of the incident. A pop-up appears listing the closest twenty teams in the state. Once the team is selected, another screen appears, citing essential information such as the activation phone number, skills, equipment, and contact persons with non-emergency contact information. While some local SAR teams "just show up" at the site of an incident, increasingly the professional norm is for

them to wait and be asked to assist at the scene by a national coordinating organization or state and federal officials. Thus, Louisiana Governor Kathleen Blanco requested numerous local SAR teams' assistance through the Bear SAR Foundation, a coordinating organization, during Hurricane Katrina in 2005 (http://www.bearsearchandrescue.org/). Similarly, many teams – especially for wilderness or mountainous type missions – are contacted through Sheriff's departments, fire departments, state police, or game and fishery departments. For instance, in New Hampshire the state police or the Department of Game and Fish have responsibility in rural areas, whereas in urban areas fire departments have primary responsibilities. They may decide to call on local SAR teams depending on whether these organizations have their own technical rescue teams and the nature of the incidents (Mountain Rescue Association). Local SAR teams are distinct from federal teams in that while most will respond to disaster situations when called upon, teams usually respond to local, crisis type situations, such as emergencies. Nevertheless, even when a rescue does not qualify as a disaster, the process can become complex. For example, a lost backpacker in Denali National Park in Alaska required around fifty park searchers and seven additional SAR teams and agencies, three of which had trained canine capabilities (*Anchorage Daily News* 2005).

Capabilities

Canine rescue is the most popular capability (33%) among the teams for which we have information, which may be due to the long history and positive feedback canine teams have had in the United States since air-sniffing canine SAR began in the 1960s (American Rescue Dog Association 2002). Canines are unique in that they can be incorporated into almost any response. Some teams use their canine teams in response to building collapses, avalanches, wilderness missions, etc.

Water rescue, which includes flood incidents and swift water, was the second most popular capability (25%, n=291). Technical angle and wilderness searches were a close #3 and #4 in popularity, respectively. Mountain rescue and snow/ice rescue are two of the oldest capabilities of local SAR (both date back to the 1926 team in our dataset). Not only do the older teams commonly declare these as some of their areas of expertise, but many teams attribute their establishment to a local missing person or persons in mountainous or wilderness settings. Mine rescue is an interesting capability, both because teams tend to specialize in it exclusively and also because they often consist of volunteer mine company employees. It ranked #5 in the number of teams that claimed it. The mine community has at least 187 SAR teams that are listed in the Department of Labor's Mine Safety and

Health Administration website (http://www.msha.gov/MineRescue/MAP/ASP/minerescuehome. asp). 12% of teams also claimed disaster response capabilities,[4] making this the 6th most common capability in our dataset. The urban SAR capability among local teams was the 7th most popular, with 135 teams, or 11.7% having it.

While our database show that local SAR teams frequently have canine teams responding to local incidences, the future path of SAR capabilities is difficult to predict. Teams specializing in urban SAR have been increasing in recent years, and a large jump is noticeable from 1990-2005. In our sample, about 55% of teams with urban SAR capabilities were founded during these 15 years, which may be in part due to the creation of the FEMA US&R taskforce system in the early 1990s.

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[4] We gathered data concerning a total of 28 capabilities: water (such as flood response), underwater (dive and scuba), ice (rescuing a person who is not completely submerged under a sheet of ice and can be pulled to safety), canine, mounted posse (horse), ski patrols, mountain, avalanche, alpine, snow/ice conditions (a.k.a. winter capable), snowmobile, technical angle/rope, wilderness, urban SAR, confined space, hazmat, cave, desert, farm (large animal or heavy machinery), motorcycle/bicycle, ATV/4x4, rural, suburban, rough terrain, underground/mine, aerial (helicopter), nighttime conditions, and disaster response.

Funding

Local teams vary in their funding sources. The three most popular methods of obtaining funding for these teams were donations, sponsors, and fundraising. One-third (n=377) of the teams use donations as a funding source, and they reach out to the community through their own website or donation web pages (such as Network for Good, where we found several additions to our database). For example, one team in Pennsylvania has donation jars by certain cash registers and stands outside of chains such as Wal-Mart to collect donations. 23% have sponsors; teams customarily advertise the company sponsoring them on their website. Fundraisers account for almost 13% of funding, with teams selling SAR products and merchandise displaying team logos. About 8% have members contributing their own money to the team. Similarly, a small percent of teams in our dataset charged fees for their rescue services; combined with training fees this category represented only 4% of funding. Local teams that do charge for their services do so to compensate for the use of equipment and other costs of operations. For example, a team in Utah has struggled with the problem of funding local missions as tourism grows more popular. At least seven states allow counties to charge victims for rescues. When these victims do not pay the bill, some teams have resorted to the service of collection

agencies (*The Associated Press* 2004). Other people, however, oppose this practice since it may cause missing people to die rather than call for help (e.g. one couple stranded in a lake after their boat turned over refused assistance until the rescuers told them the county would not charge them for the rescue (*The Associated Press* 2004). A second option used in some cases is to impose SAR taxes on the residents of the county in which a team is headquartered. In Utah, a bill was passed in 1997 that created a fund to reimburse counties for local SAR services. The money is drawn from hunting and fishing licenses as well as from boat and off-road vehicle registrations (*The Deseret News* May 24, 2004). 5% of teams received county funding and a little under 4% received federal, state, or city support. 5% received grant support. The most striking fact about the source of funding for these teams is that while they are involved in most of the search and rescue activities that take place in the country in any given year, they do not receive much support from government. This is a sobering fact considering that NASAR estimates that over 50,000 SAR missions occur each year and 90% are performed by these unpaid volunteers.

Conclusion

The findings of this study are in need of replication. A much more comprehensive study of local SAR teams is needed. Far more detailed

information could be obtained through face-to-face and telephone interviews, and mail questionnaires, using a representative, random, national sample of this population, Researchers could then understand why teams develop, the demographics of people that compose teams, their relationships with first responder organizations, the extent to which they are trained in the incident command system and in other key instrumentalities in the response period of emergencies, crises, and disasters, and what seems to work as far as integrating local teams with other organizations at the site of incidents.

Local SAR teams have contributed greatly to security and safety in the United States. Previous SAR research has indicated that local teams are unique in that they have a quicker response time than the FEMA US&R teams while also having more sophisticated equipment and training than emergent volunteers (Trainor 2004). Despite their importance, the government, as well as the academic and emergency management communities, has often overlooked local SAR teams. While some teams may be specifically designed to handle smaller scale local events, other teams may be interested in furthering their relationship with government teams. Integrating interested local SAR teams into multi-organizational disaster and emergency responses could provide additional resources to the SAR sites. In turn this may allow for increased state and federal programs

that provide a source of funding to local teams. If the national response doctrine changes to incorporate local teams in multi-organizational response, and if the government provides them with funding, then perhaps team capabilities, equipment, and training could be improved.

The local SAR community that we attempted to document in this study represents a national network of first responders that is an important resource to the nation. It is an example of civil society that to this day is often ignored in efforts to increase the resilience of social institutions in the post 9/11 period. This was demonstrated in the response to the Columbia Shuttle accident, in which local SAR teams were not as involved as they could have been in the federal response if more thought would have been given to their organization and integration in large operations. Thus, an important matter of public administration that needs attention is for the federal and state governments to strengthen this and other networks, such as the churches and other religious organizations that have played such an important role in the recovery of the Gulf Coast in the aftermath of the Katrina catastrophe, while preserving their independence, voluntarism, and local roots.

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Figure 1

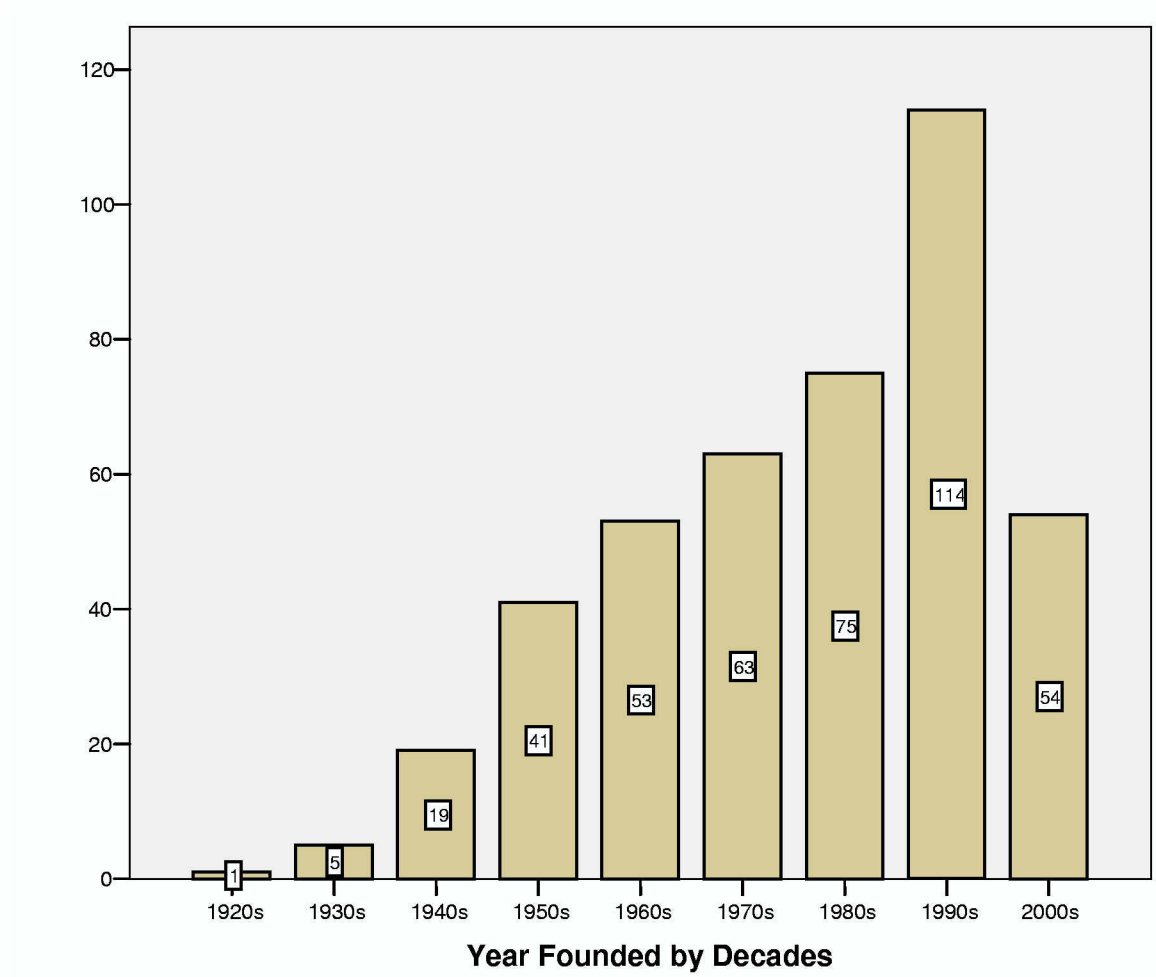
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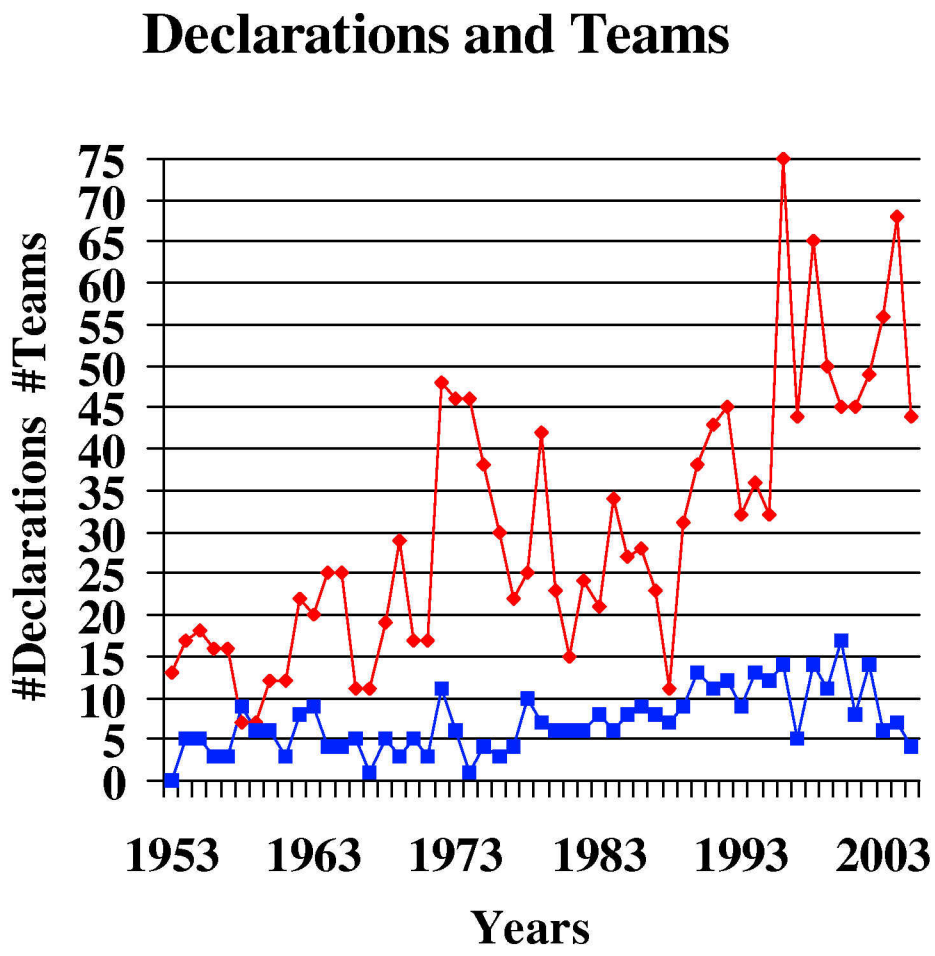
Figure 2


Declarations and Teams
#Declarations #Teams
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