

Conversation with Nilupa Gunaratna¹

Gary Shapiro^a and Katherine Condon^b

^a*Chair New Projects Committee, Statistics Without Borders (SWB)*

^b*Interview Editor, SJAOS*

E-mail: kcondoniaos@gmail.com



The Conversation series in SJAOS focuses on work and endeavors that go beyond a particular individual with statistical interest. In this Conversation conducted on February 26, 2016 between Nilupa Gunaratna and Gary Shapiro, with assistance from Katherine Condon, we learn about Nilupa's experiences with Statistics in the Community (StatCom) at Purdue University's Department of Statistics, as well as Statistics Without Borders (SWB) to create continuing and sustainable volunteer organizations. Nilupa currently serves as the Communication Director for SWB. During her graduate school years, she served as StatCom's third Director.

¹The views and opinions expressed in the conversation are those of the interviewee and do not necessarily reflect the policy or position of the Statistical Journal of the International Association for Official Statistics nor IOS Press.

Interviewer: You are probably the only person in Statistics Without Borders (SWB) management who has some prior relevant experience and training through the work you did in formalizing Statistics in the Community (StatCom) program at Purdue University. Could you tell us a little about how you learned about the program while in college, as well as any projects that you volunteered for and are particularly proud of?

The StatCom program at Purdue University's Department of Statistics was the first of its kind. It is a student-run volunteer organization that started in 2001.² Although I was not one of the founders, I was lucky to get involved early on just as the group of volunteers wanted to formalize into something like an organization. It was started by a graduate student, Nels Grevstad, who had an interest in doing pro-bono statistical consulting and saw the need for this at both the local and state level. [Nels was ahead of me, but we overlapped in the years we were at Purdue.]

However, when it came time for Nels to graduate, a decision had to be made as to whether this work would end with his graduation, or it would continue. If it were going to continue, then it needed to become more formalized into an organization. We had to think about how to ensure continuity and sustainability. One of the

²Statistics in the Community (StatCom) is an entirely student-run service at several universities including Purdue University that provides free, professional statistical consulting to local, governmental, and nonprofit organizations. For more information about Statistics in the Community, see both the Resources section at the end of this piece and the following references, Gunaratna [1] and Gunaratna et al. [2].

ways that we developed the organization's sustainability was to develop procedures and a manual of operations. We also decided on our organizational structure and on which types of clients we would focus. In addition, to help the organization's continuity, we established the next three student directors. As a result, I was asked to be that third director. While it was in the future, it allowed an opportunity for peer training, and we all realized the importance of establishing a pipeline of leadership.

Also at about this time, there was a lot of good mentorship from the American Statistical Association (ASA), such as from Fritz Scheuren who was the ASA's President (2005). Fritz was traveling around to various universities' statistical departments. We met with him and told him about our program and he was very excited. He encouraged us to tell people about our program and we wrote a couple of articles for *Amstat News* [1,2], as well as made presentations to spread the word. To expand the organization model outwardly to other universities, in 2006, I led the ASA Strategic Initiative (with support from a Member Initiatives Grant³ which we received). This was a fairly large effort: we visited approximately 14 different institutions; we made presentations; we developed packets of information; we made materials available on the ASA website; we wrote articles, including some peer-reviewed articles; and just talked with as many people as possible which led to the establishment of many different StatComs, but also a network that connected them and developed an institutional home for StatCom within the ASA.

The vision of StatCom is to apply statistical methods and principles to support and have a positive impact on communities and institutions that serve those communities; as well as, to increase communication and collaboration among student statisticians who are engaged in service-oriented statistics. The projects that StatCom volunteers get involved in allow students to gain service-learning outside their normal classroom setting and curriculum. (See Resources Section)

As part of StatCom, I had been involved in several projects at the state/local levels. One in particular was with the city of West Lafayette, Indiana. The mayor of the town was interested in revitalization of neighborhoods. She set up a task force on development and

wanted to ask both local residents and businesses their opinions through surveys. StatCom assisted by consulting on sampling and survey design, as well as analyzing the results, which were presented and discussed at public meetings.

My experience is an example of the additional, but sometimes less tangible, benefits for participating students. They can become involved in the practice of statistics before they have completed their coursework, and they learn things not typically covered in the classroom – technical and statistical consulting skills as well as leadership and management skills. StatCom allows newer students to have interactions with and mentorship from more senior students, leading to a greater sense of community within the student body and lasting professional and social relationships. For many of us, it developed our identities as statisticians, as members of our university and department, and as members of the local community. In the process, we were also contributing to the university's mission of engagement in the larger community. This seemed more important to me, than building a CV.

In addition to the statistical consulting work, StatCom also developed an outreach program (P-12 Outreach Program) in an effort to increase interest and achievement in statistics at all pre-college levels [for Purdue University this would be specifically for the State of Indiana]. (See Resources Section)

Interviewer: How did you learn about and first get involved with Statistics Without Borders (SWB)?

Statistics Without Borders (SWB) sprang out of a conversation between the interviewer Gary Shapiro, Steve Pierson (American Statistical Association), and the former Editor-in-Chief of SJAOS, Fritz Scheuren after a panel session entitled "Statisticians Speaking Out and Reaching Out on Global Health" at the 2008 Joint Statistical Meeting (JSM). For more information, see West and Condon (2015)

The ASA Strategic Initiative (Member Initiative) that help disseminate the StatCom model to other universities allowed us to work closely with ASA and especially its members who were interested in pro bono statistics. It was a natural connection. I haven't been involved in SWB projects, as they overlap in content and clients somewhat with my "day job", and that sometimes raises issues, so I've been trying to contribute

³At the time, these were called "Strategic Initiatives".

as I can to the organization itself rather than specific projects.

My contributions to the organization of SWB has been mostly in the areas of serving as Secretary before SWB formalized its charter and currently as Communications Director.

Interviewer: You are currently a scientist doing research related to health, nutrition, agriculture and related development issues mostly in Africa. What skills or connections from your “day job” do you bring to your “volunteer work life” and vice-versa bringing from your “volunteer work life” to your “day job”?

Yes, my “day job” is as a scientist, doing research in developing countries – mostly in East Africa. I’m especially interested in how agriculture and the environment affect our health and well-being. While I don’t teach courses, I do mentor students, especially in Ethiopia, where I have been working a lot lately.

The experiences with StatCom have been useful with my current work, to address issues of sampling, questionnaire design, survey implementation, and presentation of results. However, it isn’t just the technical skills but also skills along the entire process of statistical consulting such as initiating contact with clients, determining deliverables and timelines, and collaborating and communicating with non-statisticians.

After I finished my training at Purdue, I worked for a time at a non-profit organization. There were several skills that I gained while working concurrently in the non-profit sector and in pro bono statistical organizations, showing the high degree of overlap in these areas. These skills involved developing a mission and vision, planning, and goal setting, as well as branding ourselves as an organization, developing our communications materials, managing projects, working with clients, motivating people who are volunteers, planning sustainability and continuity and building a pipeline of volunteers, to name just a few.

Interviewer: You are currently serving as Communication Director in SWB – Could you describe what that office entails?

It’s been evolving as SWB grows and through discussions with members of the Executive Committee as well as other volunteers. So, when we started, it was more about working on immediate needs and ideas as they arose. We developed our website and brochures

for potential clients and other audiences and about a couple of years ago, we started a blog. I and many others created posters and other materials to promote and spread the word about SWB.

However, more recently, I have been trying to think more strategically about our communication activities, and looking at the bigger picture of communication for SWB as the group thinks about where we want to be in the future.

When one thinks about a group’s communication, there are several aspects. There are the external communication activities, such as the website, the blog, presentations at meetings and conferences, and magazine and peer-reviewed articles about our work. In more recent years, we have explored using social media to communicate with our members, as well as the outside world. Then there are the more internal communication activities – facilitating dialogue among members including the leadership as the organization grows and develops. Although it may not be so much “communication” activities strictly speaking, there are also activities such as feedback from volunteers when we send out membership surveys, as well as feedback from clients. Then there is facilitation of communication among the hundreds of volunteers.

SWB has grown from an original membership of 30 members in 2008 to over 1,900 members at last count in 2015 [3].

In addition, to the greater numbers of members, there are also different levels of involvement and different interests and expertise among members, as well as wide geographical location.

Interviewer: As Communication Director, were there any particular or primary goals that you have been trying to accomplish during your tenure-ship?

There are a lot of goals, and I don’t know if I will have accomplished all of them, but I hope we continue making progress on these primary aims of good communication within a large organization and also communicating externally through mechanisms such as the website, written articles, and other regular communications with members, and also try to modernize our communication activities through such activities as blogs. There is really a lot to do.

However, it is my goal right now to look at the bigger picture, to look at communication activities strategically within this growing organization. We are a larger

organization than when we started and so we may need to look beyond specific activities to achieve what we want to achieve going forward. One of the most important things is to continue to spread the word about what statistics can do as a profession, and what we can offer as statisticians. There are still many people out there who don't know what we as statisticians can bring to their potential projects, to help them make decisions based on evidence or prioritize their activities or limited resources. So, I think there is still that need.

Interviewer: Prior to being Communication Director, you served as Secretary for SWB. Were there any particular or primary goals that you worked on during this tenure-ship?

At the time that I served as Secretary for SWB, there was no formal charter. Thus I worked with you (Gary) and others, the early members of SWB, to formalize our relationship with ASA, develop a charter, formalize our operating principles, and make decisions on who our clients would be, what our objectives were, and what we wanted to achieve.

The role of Secretary then was sort of a general administrative role, and may have even been combined with the role of Treasurer – limited since we are a pro bono organization! More recently, many of the operating principles and procedures that I originally worked on have been refined and developed by many other volunteers; for example, through committees to ensure quality and consistency in delivery of our projects.

In addition, another important activity that will allow for institutional continuity, since volunteers come and go, and which I have worked on with the cooperation of other original members, is maintaining a history of SWB. This was originally presented as a poster at one of the Joint Statistical Meetings. (See under Resources)

This concludes our Conversation with Nilupa Gunaratna and her involvement with Statistics in the Community (StatCom) and Statistics Without Borders (SWB).

Resources

If you are interested in learning more about StatCom, go to <http://www.amstat.org/education/statcom/index.htm>.

For more information about StatCom, the following paper discusses in detail how StatCom works and the principles behind it:

- Gunaratna NS, Johnson CA, and Stevens JR. (2007) “Service learning for graduate students through a student-run consulting program.” *Journal of Statistics Education* 15 (2) [online: <http://www.amstat.org/publications/jse/v15n2/gunaratna.pdf>].

This next paper discusses StatCom as an example of service learning, how it contributes to training the next generation of statisticians, and how it can contribute to a university's engagement mission. It also presents a case study (the West Lafayette project mentioned in the interview) to analyze the impact of a volunteer project:

- Gunaratna NS, Olbricht GR, Lipka AE, Watkins AE, and Yoshida PY. (2007) “Serving the community through discipline-specific consulting.” *Journal of Higher Education Outreach and Engagement* 11 (4): 99–108.

If you are interested in learning more about StatCom's P-12 Outreach Program, go to http://www.stat.purdue.edu/external_relations/statcom/p12outreach/.

If you are interested in discussing possible projects with Statistics Without Borders, you can complete a form at <http://community.amstat.org/statisticswithoutborders/gethelpwithanewproject>.

If you are interested in volunteering with Statistics Without Borders (SWB), you can find out more at <http://community.amstat.org/statisticswithoutborders/getinvolved>.

The history of SWB can be found in the JSM Proceedings:

- Gunaratna NS and Shapiro G. (2014) “Statistics Without Borders: Providing pro bono statistical consulting globally.” *Joint Statistical Meetings Proceedings, American Statistical Association (ASA)*: 3088–3091.

References

- [1] N. Gunaratna, Students Serve Community through StatCom, *Amstat News* (Feb 2006), 4–5.
- [2] N.S. Gunaratna, A.E. Lipka, G.R. Olbricht and P.Y. Yoshida, Service-Oriented Statistics: What Can Students Do, *Amstat News* (June 2006).
- [3] K. West and K.M. Condon, Conversation on Statistics without borders (17 May 2015) between Cathy Furlong (Chair) and Katherine Condon and Kirsten West (JAOS), *Statistical Journal of the IAOS* 31(3) (2015), 337–340.