

On Statistical Collaborative Work

My Current Thoughts – December 2007

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Here are some ingredients which I believe make for success in the sort of interdisciplinary work inherent in statistics:

- Substantial expertise, broad knowledge and firm grounding in statistics
- Basic knowledge of the other discipline including some knowledge of traditional methods, the scientific or technical jargon used, experimental procedures, methods for establishing credentials, for debate and for evaluating hypotheses
- Intellectual security and confidence – not being afraid to ask “dumb” questions
- Creativity
- An openness and interest in the question under study and in the other discipline broadly
- A focus on creating methodology to suit the fundamental scientific questions rather than implementing tools which are conveniently at hand (creating methodology to solve a real problem rather than applying methodology of questionable value in the context)
- Communication skills including an ability to see another’s viewpoint and to tolerate differences in viewpoints
- Social skills: being gracious
- Keen interest in research broadly

For research teams, communication and networking is important; management is crucial. For teams in the same locale, having space to support the collaboration and in conjunction with others working similarly is helpful. Potential team organizers should note that fundraising for a team is a major enterprise requiring long term commitment. In this regard, understanding the funding environment in the other discipline is important. For researchers at different locations, management must explore and create regular virtual networking opportunities for team members and for students as well as host some face-to-face meetings. At every networking opportunity, discussions should critique what is not (and is) going well and how improvements may be made in the team’s effectiveness to monitor the work of the team as a whole. Celebration of the successes of each team member should also be routine at networking events. Keep seeking to broaden the expertise of the team (as needed) by adding new members and new opinions as the collaboration develops. Joint training by statisticians and other researchers can be extremely useful, provided the student’s interest is kept first and foremost through the collaboration and the student has the skills above. Students involved in a team should be provided opportunities to network beyond their immediate supervisors to draw

on the strengths of the team as a whole. This could be accomplished through networking events or through reading group meetings or summer schools, or short visits to other researchers on the team in statistics, or work experience at laboratories in the other discipline. Research should be disseminated to all the scientific fields involved.

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