

REJOINDER: “COAUTHORSHIP AND CITATION NETWORKS FOR STATISTICIANS”

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We would like to thank all discussants for very thoughtful and stimulating comments. We especially thank B. Silverman for a nice and timely introduction for our paper; it is well said and very much illuminating.

In the past decades, the scientific community has grown substantially: we have way more researchers and annual publications than we ever had before. For example, the statistics community has grown from a tight-knit community (where one statistician may know almost all other statisticians) to a much larger one, driven by the technology advancements in computing and data acquisition.

While undoubtedly we have numerous achievements in our time (of which we should be proud), we have also heard many critical criticisms, among which there are the paper by Ioannidis (2005), “Why most published research findings are false,” and the paper by Geman and Geman (2016), “Opinion: Science in the age of selfies.”

As Silverman points out, an interesting question is therefore how to scrutinize the vast volume of scientific research we have today. While we can always turn to the traditional *subjective approaches*, we must admit that such approaches may be biased or inadequate, and *quantitative approaches*, like it or not, will play an increasingly more important role.

Having overseen the need for statisticians to engage a more active role in quantitative evaluation of scientific impact and productivity, Peter Hall said the following in his Presidential address at the 2011 Institute of Mathematical Statistics Annual Meeting (Miami, FL) [Hall (2011)]:

“...As statisticians we should become more involved in these matters than we are... We should definitely take a greater interest in this area.”

Hall’s viewpoint is reminiscent of the recent proposal by Donoho (2015) in “50 years of data science,” where he oversaw the need of a new research discipline called “Science for Science.”

Our work is a response to Hall’s calling, and we believe that our data set will provide a fertile ground for future research on network analysis and related fields. Our effort in data collection is continued, and we now have a data set much larger than the one presented in our paper, covering papers in 36 representative journals in statistics and related fields, spanning 40 years.