Diverse and collaborative leadership for Statistics and Data Science

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Abstract:

Focus on data science has contributed to renewed emphasis on identity and leadership in the statistical sciences. Linking recent and earlier comments from statistical leaders, discussion of leadership across types and the diversity and people of the statistical and data sciences emphasizes its development and promulgation. Donoho (2017) does far more than provide sound arguments that statistics – the infinitely quotable 'greater statistics' of Chambers (1993) – is at the heart of data science. By revisiting and linking with the work of Tukey (), Chambers () and others, Donoho not only advocates 'greater statistics' but also 'greater data science', and initiates a vision for the latter that is far more than a 'mere scaling up to big data' and big technology, but an ongoing 'more intellectually productive and lasting' science. Like statistics has always been, the statistical and data sciences are fed by, and feed into, problems in all disciplines and contexts involving data, variation and uncertainty, with the diversity of the domains of such contexts ever-increasing with the growth of data and technologies. Perhaps we should also introduce the term 'greater data' to better cover the diversity of data types and sources as well as 'size'. Collaboration underpins much progress, and leadership must therefore also involve collaboration, across the diversity of statistics and data science as well as in their practice. Parallels between leadership in statistical practice, and statistical leadership in teaching, also demonstrate foundations for developing leadership in future statisticians, data scientists and their collaborators and clients across other disciplines, research and workplaces.

Keywords:

Data science; statistical practice; leadership; diversity; collaboration

References

Chambers, JM (1993) Greater or lesser statistics: a choice for future research, *Statistics and Computing*, 3, 182-184

Donoho, D. (2017). 50 years of data science. *Journal of Computational and Graphical Statistics*, 26 (4), 745-766.

Tukey, John W. (1962) The future of data analysis. *The Annals of Mathematical Statistics*, 33 (1), 1-67.