AUTHORSHIP PATTERNS IN MARINE MAMMAL SCIENCE, 1985–1993

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(Received January 15, 1997)

Authorship studies in such disciplines as physics and economics show that with the passage of time there has been an increase in the number of authors per paper, indicating a trend toward more collaboration. In this study, a search was run on the Aquatic Sciences and Fisheries Abstracts database to identify marine mammal science papers published from 1985 to 1993. A total of 1308 papers published in scientific journals was examined. There were weak but statistically significant trends in the increase in the number of authors per paper as well as in the number of multi-authored papers written by authors from different institutions, with the passage of time. Possible reasons for these results include the increasing specialization of researchers necessitating collaboration, more access to electronic means of communication, and more competition for research funds. Confounding factors in this analysis include the possibility that different journals have different publication patterns and regional vs. national/international journal differences.

Introduction

Price\(^1\) discussed the trend toward multi-authored papers in the sciences, writing that the single-authored paper might soon be extinct. Although the single-authored paper is not yet extinct, in the past 40 years there has been a trend across many scientific disciplines towards the multi-authored paper. The term multi-authored or multi-authorship as used in this paper is defined by Halperin et al.\(^2\) as “...listing more than one person as the author of an article in the scholarly literature” (p. 850). Disciplines such as counseling psychology (Zook\(^3\)); health, physical education and recreation (Crase and Rosato\(^4\)); nursing (Norris\(^5\)); physics (Sacco and Milana\(^6\); Sampson\(^7\)); poultry science (Cason\(^8\)); and radiation oncology (Halperin et al.,\(^2\) 1992) have all shown increases in multi-authored papers over time.
Broad noted that co-authorship was on the increase and commented that there were more publications concerning the same data, as well as a decrease in the length of papers. There is a fragmentation of data, with researchers publishing a number of shorter papers rather than one long paper. Norris briefly summarized the literature on reasons for trends in multi-authorship patterns, which include the ever-increasing complexity of research, the "publish or perish" syndrome, and the mentorship of graduate students.

Many of the above-mentioned studies, as well as others, have looked at particular journals or a select group of journals in a discipline to test for an increase in occurrence of multi-authorship. In this study, a broad selection of scholarly journals was examined to see if the same trend holds true for the marine mammal science literature as a whole.

Authorship patterns of the marine mammal science literature are examined to see if there is a trend toward an increase in multi-authored papers with the passage of time, and whether there is also an increase in the number of multi-authored papers whose authors are affiliated with different institutions.

Methods

To identify the papers for inclusion in this study, a search was conducted on the Aquatic Sciences and Fisheries Abstracts (ASFA) cd-rom database (SilverPlatter Information Inc.) from 1985–1993. ASFA covers the world's literature in all areas of marine research, indexing more than 5,000 journals as well as other document types, including technical reports and conference proceedings. The search was constructed using the scientific names of marine mammals. Scientific names used were from Reeves et al., Leatherwood et al., and Klinowska.

Personal experience has shown that ASFA does, in fact, miss some papers from the journals that it indexes. Therefore, the Institute for Scientific Information's Journal Citation Reports from Science Citation Index (1986–1991, 1993) were checked to see which journals had cited Marine Mammal Science most frequently and, conversely, which journals Marine Mammal Science papers had cited the most. Based upon these results, the following journals were checked manually from 1985–1993 to locate any additional papers on marine mammals:

- Canadian Journal of Fisheries and Aquatic Sciences
- Canadian Journal of Zoology
- Fishery Bulletin
- Journal of Mammalogy
- Journal of Zoology
- Marine Mammal Science