

Comments on “On Bibliometric Analysis of Chinese Research on Cyclization, MALDI-TOF, and Antibiotics: Methodological Concerns”

We have recently reported a bibliometric study of Chinese research in three areas of chemistry.¹ Heneberg has suggested that some of the results therein may have been affected by the methodology that was used,² making two major points: that a large increase in the number of reported publications in 1991 arose from the use of the topic field when formulating searches; and that only publications since 1973 should be considered in national studies owing to the inconsistent availability of address information. We thank him for his interest in our work and respond below.

One point that we should make clear at the start is that the publication and citation data that we used was derived from just the Science Citation Index Expanded (SCIE) portion of the Web of Knowledge (WoK) and not from the set of WoK databases (Web of Science, Derwent Innovations Index, BIOSIS Previews, Medline and Journal Citation Reports) as in Heneberg's study. This is reflected in the larger total numbers of publications reported in Heneberg's Supporting Information Table S1 when compared to the corresponding figures in our Table 1, which relate to SCIE alone. We hence fully endorse his recommendation for “complete disclosure of the databases or indexes used for bibliographical research”.

Turning to the use of the topic field, Heneberg states that “the authors had shown dramatic improvements in research output for the other countries tested [the U.S.A., Germany, and Japan], the majority of which was supposed to have happened in 1991 and in 1973”. We did not show this: we stated that the observed increase in publications in 1991 “arose from a large increase that year in the number of journals covered” (our words), this suggestion being based on information provided by the WoK Customer Technical Support. Heneberg suggests an alternative reason for the observed increase. This is the inclusion of abstracts in the database from 1991, and he shows that that there is a step change in that year in the numbers of CYCLIZATION* publications retrieved in topic searches whereas there is no such step change in the corresponding title searches. There are hence two factors involved here, i.e., an increase (of some 1250 journals) in the SCIE's coverage and an increase in the bibliographic data provided in each database record.

Heneberg is entirely correct in noting that address information is not included in many of the early database records prior to 1973 and that statistics relating to Germany need to take account of reunification. These factors will affect some

of numbers in our Table 2a but do not appear to be relevant to the main results presented in our paper, which focus on more recent developments. The first part of our Results section discusses the rise, both relative and absolute, in the level of Chinese research in the three chosen areas. For example, in Figures 2, 4, and 6, we consider the impact factors for the four countries under consideration: Figures 2 and 6 are based on citations to publications since 1991 and Figure 4 is based on citations to publications since 1997. The second part focuses on the extent, and the types, of collaborative research carried out by Chinese chemists, as detailed in Table 4 (which is based on Chinese publications since 1985) and Table 5 (which is based on Chinese publications since 2000). Extremely few of the publications for these time spans lack address information, e.g., 99.7% of the CYCLIZATION* publications since 1985 have addresses, and both of these studies are hence completely unaffected by the lack of address data prior to the time-periods of interest. Our third set of results demonstrates the dominant role played by the Chinese Academy of Sciences in Chinese chemical research. The conclusions here would be affected only if there were extremely large numbers of early Chinese publications (i.e., that did not have address data) that exhibited different behavior from that which we describe. However, Heneberg agrees that Chinese research has only recently come of age (he mentions “the recent multiplication of research output” in the Supporting Information), and it is hence difficult to imagine that there are sufficient early publications to affect in any way the conclusions in this final part of our Results. We hence agree fully with Heneberg's view that the early data should not be used for national studies but do not believe that this is relevant to the three areas that we have discussed.

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REFERENCES AND NOTES

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