

## GREEN FUNCTION OR GREEN'S FUNCTION?

*To the Editor* — Although physics can unite scholars from the most diverse backgrounds one disagreement regularly erupts: whether to write and say “Green’s function” or “Green function”.

The argument is principally for speakers of English; in French, German and other languages, all functions are possessed by the person for whom they are named (*Fonction de Green*; *Greensche Funktion*), and this was also the style in English at the time of the first reference to them by name in English<sup>1</sup> (Green himself never used the term). Since then, names of functions have gone from possessive to adjectival (for example, from Bessel’s function to Bessel function) with the present exception.

Whatever the reason for the anomalous possessive, I suggest that it is worth keeping. Special functions, such as Bessel functions, are mathematical identities that are fixed for all time and their values can be looked up in tables. But one cannot look up a table of the Green function. Rather, Green’s function for a particular problem might be a Bessel function or it might be some other function. (On this basis, one could argue that if one says “Green’s function” one ought to avoid an article, as “the Green’s function” suggests the existence of some entity known as ‘the Green’.)

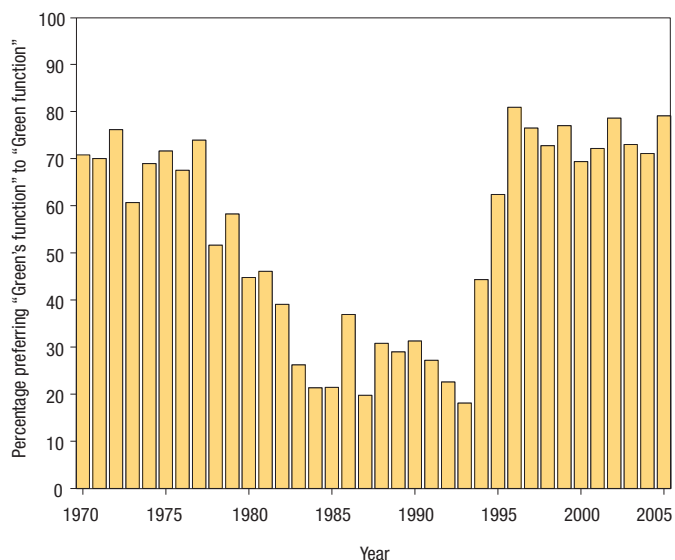
The recent history of usage in this case is interesting. Figure 1 shows the number of articles published from 1970 to 2005 with “Green’s function” in the title as a percentage of those whose titles contained either “Green’s function” or “Green function”, obtained from the ISI Web of Science database. Over this period the possessive form has slowly lost and then much more quickly regained the ascendancy; while the total number of papers has increased steadily (when smoothed over a few years). An analysis of the most frequently appearing journals in each camp shows the same journals at the head of each list, and this is true in each of the ‘epochs’ of usage. An exception to this is Institute of Physics journals such as the *Journal of Physics* series, which prefer ‘Green function’, though not quite exclusively. But the numbers of papers published in these journals are not sufficient to account for the trend seen, and in any case their policy was not reversed in 1994. Perhaps readers of this journal can explain what happened?

## REFERENCES

1. Böcher, M. *Bull. Am. Math. Soc. Ser. 2* 7, 297–299 (1901).

**M. C. M. Wright**

*Institute of Sound and Vibration Research, University of Southampton, Southampton SO17 1BJ, UK.  
e-mail: mcmw@isvr.soton.ac.uk*



**Figure 1** Recent history of the percentage of papers with “Green function” or “Green’s function” in the title that used the possessive form; data from the ISI Web of Science database.