(*Introduction to Heat Transfer*), and have not examined it in sufficient detail to do it justice in the form of a book review. Nevertheless, the following points could be made in a review of this volume.

This text is intended as a first course in heat transfer. It is presented in a form that is particularly helpful for those who like a structured teaching approach that includes student self-assessment. A particularly welcome aspect is the promotion of the view that technical problems do not have a unique solution and instead may have several equally acceptable solutions. This is not always recognised at the student level. The presentation style is clear and easy to follow. As befits a first text, many of the topics are presented without great depth (for example, the analogy between heat and mass transfer) or are not particularly state-of-the-art (for example, the section on boiling heat transfer). However, greater depth and/or more cutting-edge information could detract from the first-text approach.

As a minor point, the absence of an origin in the heat transfer coefficient graph of figure 10.9 could be confusing and could lead a reader to an incorrect understanding of boiling heat transfer trends. On the same general topic, I would prefer that the recommended nucleate boiling correlation, that of Rohsenow [4], be replaced by that of Labuntsov [5]. Unlike many alternatives, both are simple and non-dimensional, and so both imply generality. However, the dependence of Rohsenow's proportionality "constant" and Prandtl number exponent on fluid–surface combination indicates non-generality, and suggests that Rohsenow's dimensionless groups do not truly reflect the physical processes that occur during boiling. And Labuntsov's correlation, while being of a comparable age, is based on a wider range of data. Moving on to the next stage of the boiling curve, I cannot agree with the text view that transition boiling is of little practical interest. It is important, for example, in transient quenching. Nor is it only attainable by controlling the surface heater temperature. The text here could include a simple but reasonable prediction method such as a straight line connection on log–log paper between the critical heat flux and minimum heat flux points. Such modifications would remain compatible with the author's first-text approach.

Although the text is intended primarily as a first course, I personally find it a useful general reference, notwithstanding minor quibbles of the type given above.

Perhaps the Editors accepted Spalding's contribution, as offered, as a means of honouring his undoubtedly deserved reputation as an expert in this field and also on the basis of his being a Founding Editor of this Journal. In my opinion, they would have better served his reputation by not accepting his review in the form offered. It does not usefully serve the heat and mass transfer community, and it reflects badly on both the Journal and Professor Spalding.

**Acknowledgement**

I acknowledge and appreciate helpful discussions with Ms Jeane Balcombe, ANSTO Communications, concerning matters of English style.

**References**

[1] B. Spalding, Book review, International Journal of Heat and Mass Transfer 41 (1998) 3689–3690.
[2] F.P. Incropera, D.P. DeWitt, Fundamentals of Heat and Mass Transfer, 4th ed., John Wiley, New York, 1996.
[3] F.P. Incropera, D.P. DeWitt, Introduction to Heat Transfer, 3rd ed., John Wiley, New York, 1996.
[4] W.M. Rohsenow, A method of correlating heat transfer data for surface boiling liquids, Trans ASME 74 (1952) 969–976.
[5] D.A. Labuntsov, Heat transfer problems with nucleate boiling of liquids, Thermal Engineering 19 (9) (1972) 21–28.

D.R.H. Beattie
*Australian Nuclear Science and Technology Organisation, Private Mail Bag 1, Menai 2234, Australia*

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**Response to Brian Spalding's review [1] of Incropera and DeWitt's texts, *Fundamentals of Heat and Mass Transfer*, 4th ed. [2], and *Introduction to Heat Transfer*, 3rd ed. [3]**

Brian Spalding's review of Incropera and DeWitt's popular textbooks fails to provide a careful consideration of their content and approach. By questioning the value of these books without providing reasoned scientific grounds for doing so, this review fails to live up to the standards of the scientific community for fairness and impartiality.

First, the review places the majority of its emphasis on language issues. This focus is inappropriate, if not

misguided. For example, the lengthy critique of the usage of the word 'maturation', which is found in the books' prefaces, tells us less about the merits of these texts than it does about Professor Spalding's preferences in language and culture. His critique of this word, which is misconstrued to have associations with rottenness rather than to refer simply to the process of becoming mature, relies on definitions given in the *Oxford English Dictionary*. The definitions he finds there inspire him to quote both the venerable English poet Keats, and the American poet Ogden Nash, to illustrate his distaste. Professor Spalding apparently is blind to the fact that we live in an age in which neither British usage nor culture is the world standard. Were Professor Spalding to have used an American dictionary, such as *Webster's Collegiate*, he would have found that the word is used correctly. This reader could not help but think that the reviewer's questionnaire for input on the future of these books contained one question best directed at the reviewer himself/herself: 'Do you find our tone at all patronizing?'

In addition to the inappropriate and irrelevant treatment of language issues in this text, Professor Spalding fails to come to terms with the strong international consensus on the quality of these books. These books hold 70% of the US undergraduate textbook market in heat transfer and have been translated into five languages. Professor Spalding's sly suggestion that the 'handsome' appearance and the publishers' marketing of these texts have more to do with its success than their quality, shows disrespect for the opinions of the many scholars and teachers who find Incropera and DeWitt's work invaluable in the classroom. The book is a text of choice by faculty engaged in heat transfer education across the world. As such, one would have thought that the review would have been performed by an educator who interacts regularly with students. This is not the case, of course, which makes us question the motivation behind Professor Spalding's authoring the review.

The latter part of Professor Spalding's review targets Incropera and DeWitt's omission of (very minor) details embedded within the Karman–Polhausen analysis of the convective boundary layer for criticism. To quote Professor Spalding in the same review, "it is foolish to pass judgment on what topics are included, and what are left out", and it seems to us that this statement can be easily extended to the question of where to draw the line on which steps to include within an analysis presented to an undergraduate student, and which to omit. These details can be easily covered by the instructor or, better yet, left for the student to discover on his or her own.

Finally, the review promotes another heat transfer book at the expense of Incropera and DeWitt. This is particularly troublesome, since the author of that book received a post-graduate degree at Imperial College. Could this suggest a possibility of conflict of interest?

We hope that the editors would hold their reviewers to a more exacting standard of fairness and objectivity in the future. This type of review demeans the level of scholarly discourse upon which we all depend.

## References

[1] B. Spalding, Book review, International Journal of Heat and Mass Transfer 41 (1998) 3689–3690.
[2] F.P. Incropera, D.P. DeWitt, Fundamentals of Heat and Mass Transfer, 4th ed., John Wiley, New York, 1996.
[3] F.P. Incropera, D.P. DeWitt, Introduction to Heat Transfer, 3rd ed., John Wiley, New York, 1996.

Amir Faghri
*University of Connecticut, School of Engineering, Storrs, CT 06269, USA*
*E-mail address: faghri@eng2.unconn.edu*

Vijay K. Dhir
*University of California, School of Engineering, Los Angeles, CA 90024, USA*

Yogesh Jaluria
*Rutgers University, Mechanical Engineering, Piscataway, NJ 08855, USA*

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