not everyone will agree with the author's basic tenets, but the result is undeniably thought provoking. *Morphogenesis and Evolution* does not fall into either of these categories. It is not a comprehensive review (nor does the author intend that it should be) but neither does the book propose a qualitatively new theory of development and evolution.

I question some of Thomson's choices of references, his areas of inquiry, and his omission of relevant research now being done in developmental biology. For example, I fail to see the reason for including Chapter 5, on early pattern formation in amphibians, while at the same time ignoring the work on cell-adhesion molecules by Edelman and colleagues, work that is specifically related to morphological evolution. Likewise, Thomson's decision not to enter into aspects of genetic regulation of development is a real drawback of the book. I agree with him that "there are fundamental questions concerning evolutionary mechanisms that can only be asked and answered at the morphogenetic level" (p.vi). But I would also argue that gene action cannot be dissociated from developmental processes; gene expression is both the cause and the effect of a series of interactions at the cellular and tissue level.

The best parts of the book are those dealing with the conceptual framework of the issues — Chapter 2, "Theory, Reduction and Hierarchy", and Chapter 3, "Development: Pattern and Process", are well written and are useful introductions to their subjects. Chapter 8, "Patterns of Evolution", is also good. Indeed, as a chronicle of "a subject in transition, a subject that is still defining itself" (p.v), the book is a success. But Thomson proposes his particular definition of the subject, and in my view his definition is incomplete because two aspects of it are ignored: the role of genes within developmental systems, and the mathematical properties of pattern-formation models. I believe that both of these topics will have a prominent part to play in formulating a comprehensive theory of development and evolution. □

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On the surface

H. K. Christenson

Colloidal Systems and Interfaces. By Sydney Ross and Ian D. Morrison. *Wiley: 1988. Pp.422. £47.50, $49.95.*

One of the more interesting problems in applied colloid science is that of pondering over why beer foam is more stable than champagne foam. If observation and experiment get you nowhere, the answer can be found in this introductory text, which is based on a short course on emulsions and dispersions given by the authors and F. M. Fowkes.

As might be expected, the treatment of emulsions and dispersions is more detailed than is usual in this sort of book, but overall Ross and Morrison have succeeded in providing a fairly extensive overview of 'wet' surface chemistry and colloid science. Although clearly directed at an industrial audience, the book is well-suited for a more general readership. It is easy to read and important phenomena are illustrated with historical anecdotes and practical examples. Particularly valuable are the extensive bibliography and the reference lists, which are not often found in elementary textbooks. The practical sections on measurements of surface tension, particle sizing and various other techniques should be invaluable to those requiring a quick and comprehensive overview.

There are a few noteworthy omissions, no doubt stemming from the perceived interests of the particular group for which the book is intended. In particular, there is virtually nothing on biological colloids. Some of the material on surface forces is not quite up to date, with hardly a mention of solvation and hydration forces and nothing on hydrophobic interactions. Similarly, the section on amphiphilic aggregation structures, while welcome because many textbooks on colloid and surface science contain nothing whatsoever on this topic, might well have included a brief treatment of geometric packing constraints.

There are a few other problems. The book is not well organized, many concepts being introduced before they are properly defined and discussed. It is also marred by a few sweeping generalizations and erroneous statements. Thus, potential energy is often used when free energy is meant; all liquid crystals do not flow like liquids; and retardation of Van der Waals forces cannot always be ignored in lipid–water systems. Many figures are inadequately captioned and are almost impossible for the uninitiated to interpret.

In spite of these shortcomings (easily rectified in a future edition) the book can be recommended to anyone who desires an accessible and interesting introduction to colloid science. With a slight reorganization and some additional material, it would be extremely suitable for courses at an elementary level. □

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