

Preface

The field of sensory science has grown exponentially since the publication of the previous version of this work. Fifteen years ago the journal *Food Quality and Preference* was fairly new. Now it holds an eminent position as a venue for research on sensory test methods (among many other topics). Hundreds of articles relevant to sensory testing have appeared in that and in other journals such as the *Journal of Sensory Studies*. Knowledge of the intricate cellular processes in chemoreception, as well as their genetic basis, has undergone nothing less than a revolution, culminating in the award of the Nobel Prize to Buck and Axel in 2004 for their discovery of the olfactory receptor gene super family. Advances in statistical methodology have accelerated as well. Sensometrics meetings are now vigorous and well-attended annual events. Ideas like Thurstonian modeling were not widely embraced 15 years ago, but now seem to be part of the everyday thought process of many sensory scientists.

And yet, some things stay the same. Sensory testing will always involve human participants. Humans are tough measuring instruments to work with. They come with varying degrees of acumen, training, experiences, differing genetic equipment, sensory capabilities, and of course, different preferences. Human foibles and their associated error variance will continue to place a limitation on sensory tests and actionable results. Reducing, controlling, partitioning, and explaining error variance are all at the heart of good test methods and practices. Understanding the product–person interface will always be the goal of sensory science. No amount of elaborate statistical maneuvering will save a bad study or render the results somehow useful and valid. Although methods continue to evolve, appreciation of the core principles of the field is the key to effective application of sensory test methods.

The notion that one can write a book that is both comprehensive and suitable as an introductory text was a daunting challenge for us. Some may say that we missed the mark on this or that topic, that it was either too superficially treated or too in depth for their students. Perhaps we have tried to do the impossible. Nonetheless the demand for a comprehensive text that would serve as a resource for practitioners is demonstrated by the success of the first edition. Its widespread adoption as a university level text shows that many instructors felt that it could be used appropriately for a first course in sensory evaluation.

This book has been expanded somewhat to reflect the advances in methodologies, theory, and analysis that have transpired in the last 15 years. The chapters are now divided into numbered sections. This may be of assistance to educators who may wish to assign only certain critical sections to beginning students. Much of the organization of key chapters has been done with this in mind and in some of the

opening sections; instructors will find suggestions about which sections are key for fundamental understanding of that topic or method. In many chapters we have gone out on a limb and specified a “recommended procedure.” In cases where there are multiple options for procedure or analysis, we usually chose a simple solution over one that is more complex. Because we are educators, this seemed the appropriate path.

Note that there are two kinds of appendices in this book. The major statistical methods are introduced with worked examples in Appendices A–E, as in the previous edition. Some main chapters also have appended materials that we felt were not critical to understanding the main topic, but might be of interest to advanced students, statisticians, or experienced practitioners. We continue to give reference citations at the end of every chapter, rather than in one big list at the end. Statistical tables have been added, most notably the discrimination tables that may now be found both in the Appendix and in Chapter 4 itself.

One may question whether textbooks themselves are an outdated method for information retrieval. We feel this acutely because we recognize that a textbook is necessarily retrospective and is only one *snapshot in time* of a field that may be evolving rapidly. Students and practitioners alike may find that reference to updated websites, wikis, and such will provide additional information and new and different perspectives. We encourage such investigation. Textbooks, like automobiles, have an element of built-in obsolescence. Also textbooks, like other printed books, are linear in nature, but the mind works by linking ideas. Hyperlinked resources such as websites and wikis will likely continue to prove useful.

We ask your patience and tolerance for materials and citations that we have left out that you might feel are important. We recognize that there are legitimate differences of opinion and philosophy about the entire area of sensory evaluation methods. We have attempted to provide a balanced and impartial view based on our practical experience. Any errors of fact, errors typographical, or errors in citation are our own fault. We beg your understanding and patience and welcome your corrections and comments.

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