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## CONLEY MORIARTY

SCIENTIFIC AND EXPERT EVIDENCE



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# \_\_\_\_\_SCIENTIFIC AND EXPERT EVIDENCE

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# TO MY MOTHER: HAPPY 85TH BIRTHDAY

J.M.C.

# TO MY MOTHER, JUSTINE B. DESMOND, AND MY GRANDPARENTS, THE LATE MAY AND LEO BROPHY: CUM AMORE ET GRATIIS PRO EDUCATIONE

J.C.M.

We bring to this book a mixture of academic and practical experience with scientific evidence, a blend that we hope is reflected in the book itself. For each of us, the book represents a logical next step in a lengthy relationship with the topic. Both of us spent substantial apprenticeships as big-firm litigators, during which we dealt extensively with expert witnesses, both friendly and hostile. We both have also dealt with the judiciary on these issues, Conley as director of a "judging science" program and a teacher of law and social science at the University of Virginia's Graduate Program for Judges, and Moriarty as clerk to a state supreme court justice with a special interest in questions of law and science. And both of us have written on law and science, Moriarty primarily on psychological and "forensic science" issues, and Conley on anthropology and statistics.

At about the time that *Daubert* brought new urgency to the topic, each of us began teaching a course on scientific evidence. Although we were not in consultation at the time, each of us concluded that, to be an intelligent and critical consumer of scientific evidence, a lawyer needs a grounding both in the relevant legal doctrines and in the basic scientific principles that underlie various types of evidence—not that a lawyer needs to function as a scientist (neither of us fits that description), but it is not sufficient to treat the "scientific" part of scientific evidence as a black box to be managed by the experts. We have both believed from the outset that mastery of a relatively few overarching scientific concepts and processes can greatly enhance a lawyer's effectiveness. Accordingly, as we assembled,

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tested, and revised our own *ad hoc* teaching materials, we particularly sought cases and other sources that deal with scientific issues in some depth, in a way that is both accurate and straightforward.

The completion of the *Daubert* trilogy; the burgeoning academic literature about the theoretical, practical, and policy implications of the trilogy; the revision of Federal Rule of Evidence 702; and, most importantly, the proliferation of significant cases that seem to turn on the admissibility and sufficiency of scientific evidence acted in concert to persuade us that the time had come to turn our *ad hoc* teaching materials into a casebook. In simplest terms, scientific evidence had become part of the basic literacy of every courtroom lawyer, whether civil or criminal, and that reality seemed to call for a course with a "real" book.

We hope that law students and their teachers will find this to be a challenging yet non-intimidating introduction to the scientific techniques that regularly enter the courtroom and the evidentiary principles that govern their use. If we, who majored in Latin literature (Conley) and philosophy (Moriarty), have been able to achieve elemental literacy, then so can you. We hope that this book will make your journeys a good deal less painful than ours have been.

John M. Conley Jane Campbell Moriarty

May 2007

I owe special thanks to my research assistant, Rhiannon D'Agostin, a member of the class of 2008 at the University of North Carolina School of Law. An adept law student as well as a graduate biologist, she went far beyond the usual RA duties in helping me to define topics, find and edit cases and materials, and insure the accuracy of the biological material.

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And above all, thanks to my wife, Paula, for everything.

J.M.C.

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xxiv Acknowledgments

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J.C.M.

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