

# Preface

This is a book for scientists and technical professionals about surviving and succeeding in the organizations and groups in which they work. It is also for science managers and executives who want to know how best to manage scientists. If you work with scientists, this book can provide you with a better understanding of the world in which they live and the challenges that they face.

Practical advice and exercises show scientists and science managers how to interact with others in ways that improve their effectiveness and increase their productivity. The book also shows how to apply improved self-awareness and interpersonal skills to specific problems that science professionals encounter every day. If you are a scientist, the skills that you learn will enable you to better identify, focus on, and achieve your objectives. You will become more productive in your job and more successful at what you do, whether your field is molecular biology or astrophysics.

Unless you have well-developed self-awareness and interpersonal skills, all of the management tools in the universe will not be of much use to you. If you are a scientist, chances are that your self-awareness and interpersonal skills are not as well developed as your technical skills; this limitation can impede your work. We provide concepts, concrete tools, and exercises that will help you to improve these skills. Our approach is designed to aid you in overcoming the barriers to knowing yourself, what to do, and how to do it.

The third edition of this book comes at a time we frankly never thought we would see. Since the second edition was published in 2012, we have seen a steady increase and interest in management and leadership training in the scientific realm. This has been manifested in a steady growth in requests for us to run workshops at educational institutions, private companies, and government agencies both in the United States and internationally. In addition, more and more organizations (NIH, NSF, and private companies) are now requiring or strongly recommending that their scientific managers and leaders, or scientists themselves, receive annual training in management and leadership skills. We would like to think that this book and the work we have done in this field has played some part in this gradual shift. The degree to which attention has been focused on this realm was brought home to us recently when Carl was referred to as "... the de facto Godfather of teaching EI (emotional intelligence) to scientists" (Kidder 2016).

In this third edition, we have edited and revised nearly every chapter of the book and have added two new substantial chapters. Chapter 4 (Bring Them On! Interviewing, Selecting and Hiring Scientists) and Chapter 6 (How Am I Doing? Setting Goals, Giving Feedback, and Doing Performance Reviews). The genesis of Chapter 4 is interesting. Carl has been running

workshops on management and leadership for scientists for almost 20 years. At the end of every workshop Carl hands out feedback forms so that participants can evaluate the workshop. On the form is a place where participants can answer the question “Are there other themes you would like to see in future or new workshops?” In the last two years, but not even once before then, we have received multiple responses asking for a workshop on how to interview and hire scientists. Just recently (in January 2018), Carl participated in a panel discussion on management and leadership for scientists at the Massachusetts Institute of Technology. When the moderator asked the audience (MIT scientists from multiple disciplines) what they would like the panel to address, the very first request (which was heartily seconded by several others in the audience) was about how to select and hire scientists for their groups.

Perhaps this focus on hiring reflects something about the current job market for scientists (is it now harder to hire qualified scientists?) or perhaps it reflects changing demographics in our workshops (maybe we’re attracting more junior faculty starting or getting ready to build a lab). Whatever the reason, Chapter 4 will provide useful tools for those who need to staff their labs. We think the approach we advocate in Chapter 4 will be useful to you even if, or perhaps especially if, you’ve been hiring scientists for years. The new Chapter 6 is a logical extension of the new chapter on hiring. It provides the tools science managers need to help those they hire be as productive as possible. The chapter shows how to set goals and provide clear direction, give useful feedback, and help scientists know how they’re doing relative to their own and their mentor’s expectations. We provide step-by-step guidance and scripts on which to base these important conversations.

In addition to the new chapters, we have updated most of the others. We added a section on creating a lab culture and another on delegation in Chapter 5. Chapter 7 contains a new section on the importance of “psychological safety” in optimizing team performance, and Chapter 12 has a new section entitled “Ten essential characteristics of scientific team leaders.”

We especially want to highlight that we added important sections that relate to issues of gender, racial, and minority bias to Chapters 4 and 13. These sections were informed in part by the excellent report from the National Academies of Sciences, Engineering, and Medicine, *Sexual Harassment of Women: Climate, Culture and Consequences in Academic Science, Engineering, and Medicine* (2018). In Chapter 4 on hiring we discuss a variety of implicit biases (including gender and racial bias) that affect how we interact with others and that can influence hiring or promotion decisions. We specifically draw attention to resources available to our readers who wish to explore and mitigate the impact of their own biases. In Chapter 13, a new section, “Recognizing and acknowledging attitudes towards gender, race, ethnicity, and minority status,” emphasizes the pivotal role played by those in leadership positions in shaping the culture and behaviors in their own organizations. The message is that leaders must set examples and actively work to create organizational cultures that recognize and eliminate discriminatory and harassing behaviors of all types.

The book draws heavily on examples and experiences from Carl’s 30-year career in science, both in academia and the private sector. The new chapters, in particular, use material that Carl developed for the workshops that he has run during the years since the second edition. The book also relies heavily on Suzanne’s long career as a psychologist and clinician, working with individuals and groups, and on her insights into people in general and scientists and technical professionals in particular. Our suggestions and guidelines work. They are all based on techniques that we have tried and used ourselves and that we have helped others use.

## REFERENCES

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