

most helpfully. Ben Watson, now in the Computer Science Department at North Carolina State University, cotaught a graduate course with me titled “The Design of Intelligent Systems,” which had a dramatic impact on the material in the book. My colleague in design studies at Northwestern University, Ed Colgate of the Mechanical Engineering Department (and codirector with me of the Segal Design Institute), has been most helpful, as has Michael Peshkin, who codirects their research lab (see my discussion of their “Cobot” in chapter 3). Larry Birnbaum and Ken Forbus have contributed their expertise about things artificially intelligent, and my graduate student, assistant, and colleague Conrad Albrecht-Buehler has been a great help in the development of my ideas (and the running of my classes).

Michael Mozer, a colleague and former student now at the Computer Science Department of the University of Colorado, Boulder has graciously allowed me to poke gentle fun at his “smart home,” even though I knew it was a research project to study the potential capabilities of neural networks, not a suggestion for how future homes should be constructed.

My collaborators during the symposium “The Social Life of Machines,” presented by the Franklin Institute of Philadelphia and the University of Pennsylvania on my behalf, included Judith Donath of the MIT Media Laboratory, Paul Feltovich of the Florida Institute for Human and Machine Cognition (IHMC), Rand Spiro of Michigan State University, and David Woods of Ohio State University. Beth Adelson of Rutgers did all the work behind the scenes, and Jeff Bradshaw (from IHMC) participated by e-mail. This led to a subsequent visit to IHMC in Pensacola, Florida, where I was graciously hosted by its direc-

tor, John Ford, along with Paul Feltovich and Jeff Bradshaw. The work there is wonderful to behold.

My work always benefits from the critiques of my long-time friend and collaborator Danny Bobrow of the Palo Alto Research Center (PARC). Jonathan Grudin of Microsoft Research (Redmond, Washington), another long-time collaborator and friend, has provided a continuing stream of e-mails, thoughts, and deep, insightful discussions. Asaf Degani of the National Aeronautics and Space Administration's Ames Research Center spent time with me and Stuart Card (of PARC) discussing formal methods of assessing the role of automation in the cockpit, cruise ship, and automobile. Dagan's analysis of the grounding of the cruise ship *Royal Majesty* and his book, *Taming HAL*, are important contributions to our understanding of automation.

It is difficult to keep track of all the universities and research laboratories I have visited. I spend a lot of time in the Human-Computer Interactions laboratory at Stanford University with Terry Winograd and Scott Klemmer. In addition, there are Chukyo University in Toyota, Japan, where Naomi Miyake, Yoshio Miyake, and the university administration always provide a warm welcome; Akira Okamoto's Research Center on Educational Media at the Tsukuba College of Technology, Japan; Michiaki (Mike) Yasumura's laboratory at Keio University at Shonan Fujisawa, Japan (where the president of the university, Naoki Ohnuma, fed us lunch and provided my wife with valuable advice about hearing aids).

Stephen Gilbert was my host during my visit to Iowa State University, where Jim Oliver spent the entire day with me in his newly inaugurated Virtual Reality Applications Center. (Brett