Despite the global spread of nuclear hardware and knowledge, at least half of the nuclear weapons projects launched since 1970 have definitively failed, and even the successful projects have generally needed far more time than expected. To explain this puzzling slowdown in proliferation, Jacques E. C. Hymans focuses on the relations between politicians and scientific and technical workers in developing countries. Weak state institutions permit many developing country rulers to take actions that undermine their workers’ spirit of professionalism. In so doing, those rulers unintentionally thwart their own nuclear ambitions. Combining rich theoretical analysis, in-depth historical case studies of Iraq, China, Yugoslavia and Argentina, and insightful analyses of current-day proliferant states, Achieving Nuclear Ambitions develops a powerful new perspective that effectively counters the widespread fears of a coming cascade of new nuclear powers.

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Preface

The basic question that animates this book is a natural complement to the question that I asked in my first book, *The Psychology of Nuclear Proliferation*. My first book posed the question of nuclear weapons intentions: why do some state leaders become enraptured by the idea of building the bomb, while others – most others – do not? Now, this book poses the question of nuclear weapons project implementation: why do some states achieve their leaders’ nuclear ambitions quite efficiently, while others – an increasing number in recent decades – find it a long and hard slog, and many fail to arrive at the finish line altogether?

Writing this book has been anything but a long and hard slog. In fact, it has been a highly enjoyable experience. A big reason why has been the great help that I have received along the way from many dozens of interview subjects, archivists, colleagues, and academic institutions. The USC School of International Relations is a wonderful place to work, and I am especially grateful to Linda Cole, Danielle McLaughlin, and Karen Tang, as well as to the two directors of the school since I arrived, Laurie Brand and John Odell. I have also been lucky once again to have a sterling editorial team at Cambridge University Press, including John Haslam, Josephine Lane, and Gillian Dadd. I also thank Emma Wildsmith and Gail Welsh of Out of House Publishing for going the extra mile for me at the final stages of manuscript preparation. Thanks also to Asako Takashima for her hard work on the index.

Many colleagues have generously provided historical data and/or extensive comments on draft chapters of this book. Thanks especially to Carol Atkinson, Erik Baekkeskov, Philipp Bleek, Deborah Boucoyannis, Laurie Brand, Målfrid Braut-Hegghammer, Marilynn Brewer, Mario Carranza, Giacomo Chiozza, Pepper Culpepper, Mai’á Davis Cross, Jorge Domínguez, Robert English, Astrid Forland, David John Frank, Taylor Fravel, Frank Gavin, Eugene Gholz, Maura
Preface


Note that Chapter 5 is a significantly revised version of Jacques E. C. Hymans, “Proliferation Implications of Civil Nuclear Cooperation: Theory and a Case Study of Tito’s Yugoslavia,” Security Studies Vol. 20, No. 1 (March 2011), pp. 73–104. Thanks to Taylor & Francis, Ltd. for granting permission to use it here.

Six graduate student research assistants at USC worked very hard on this book at different points during the lifespan of the project: Mariano Bertucci, Chen Chen, Christina Faegri, Deniz Kuru, Kevin Oakley, and David Walker. Deniz and Chen especially went far beyond the call of duty to advance the research. In addition, I greatly benefited from the comments of the students of IR 502 in Fall 2010, who read the entire draft manuscript and ruthlessly picked it apart. Thank you so very much.

In addition to the colleagues mentioned above, I would like to single out three extraordinary people who have not only helped me hone the argument of this book, but have more generally encouraged me to strive to achieve my academic ambitions.

John Mueller is one of the most brilliant and original IR scholars of our time. He has also been a great mentor and friend to me ever since our lunches together at Jimmy John’s sandwich shop during my stay at the Ohio State Mershon Center in 2002–2003. In the years since then, whether in Ohio, California, or Norway, John has lent an incredibly patient ear and sharp mind to help me identify the few real idea nuggets that are contained in my interminable monologues about the bomb. He has also constantly needled me to put those ideas down on paper and get them out into the public square. John, thanks for everything.

Rieko Kage, my wife and best friend, is quite simply a marvel. She has a visceral revulsion at the mere thought of nuclear weapons, and
yet for over a decade now she has helped me daily to think the matter through. Equally important has been her ability to get me to stop thinking about it and to do other things – which actually somehow often lead to unanticipated breakthroughs on the work front. Rieko, we are a very happy nuclear family, aren’t we?

Finally, my mother Myrna Kelley Hymans has been my most ardent supporter and, er, critic since probably before I was even born. True to form, she has been a big part of the process of working on this book as well. They say you should always write about what you know. Well, the argument of this book highlights the importance of professionalism, and it is above all thanks to my mother, with her half-century of service to McKinsey & Co., that I know what professionalism is, where it comes from, and how much it can help groups of people achieve their ambitions.

It therefore seems only natural, Mom, that I should dedicate this book to you.
Abbreviations

AFA Asociación Física Argentina (Argentine Physics Association)
CAS Chinese Academy of Sciences
CCP Chinese Communist Party
CNEA Comisión Nacional de Energía Atómica (National Atomic Energy Commission, Argentina)
EMIS electromagnetic isotope enrichment
FNEC Federal Nuclear Energy Commission (Yugoslavia)
HEU highly-enriched uranium
IAEA International Atomic Energy Agency
IAEC Iraq Atomic Energy Commission
IAEO Iraq Atomic Energy Organization
ICBM intercontinental ballistic missile
JIC Joint Intelligence Committee (United Kingdom)
LEU low-enriched uranium
MIC Military Industrial Commission (Iraq)
MTCR Missile Technology Control Regime
NIE National Intelligence Estimate (USA)
NPT Non-Proliferation Treaty
NSG Nuclear Suppliers Group
PAEC Pakistan Atomic Energy Commission
PIG Penning ionization gauge
PLA People’s Liberation Army (China)
PNE peaceful nuclear explosion
PSC Politburo Standing Committee (China)
SLBM submarine-launched ballistic missile
UNCTAD United Nations Conference on Trade and Development
UNSCOM United Nations Special Commission