

Preface

This book is the final result of a number of incidents that occurred to us while discussing location issues with colleagues at conferences. Frequently we attended presentations, in which the authors quoted the well-known references that helped to make the discipline what it is today. Upon further inquiry, though, it turned out that some of these colleagues had never actually read the original papers. We then discussed among ourselves which contributions could be credited with shaping the field. And, lo and behold, we found that we, too, had neglected to read some of the papers that form the foundation of our science. Whether it was laziness or other things that got in the way, it had become clear that something had to be done.

Our first thought was to collect the original contributions (once we could agree on what they were) and reprint them. When discussing this possibility with a publisher, we immediately ran into a roadblock in the form of copyright. While this appeared to have stopped our enthusiastic effort dead in its tracks, we kept on collecting and reading what we considered original contributions.

This went on until we met Camille Price, who suggested that, rather than reprinting the original contributions, we should invite some of the leaders in our field and ask them to describe the original contribution, explain and interpret it, and comment on the impact that it had to the field. This was, of course, an excellent idea, and the response by our colleagues to our pertinent requests was equally enthusiastic. What you hold in your hands is the result of this effort.

In other words, the purpose of this book is to provide easy access to the main contributions to location theory. The book is organized as follows. The introductory chapter provides an overview of some of the many facets of location analysis. This is followed by contributions in the main three fields of inquiry: minisum, minimax, and covering problems. The next chapters are part of an ever-growing list of nonstandard location models: models including competitive components, those that locate undesirable facilities, those with probabilistic features, and those that allow interactions between facilities. The following chapters discuss solution techniques: after a discussion of exact and heuristic techniques, we devote an entire chapter to Weiszfeld's method, and another to Lagrangean techniques. The last chapters of this book deal with the spheres of influence that the facilities generate and that attract

customers to them, and the last chapter delves back into the origins of location science, when geographers discussed central places.

Since the book is written by different individuals, the style and notations differ. Initial attempts to unify the notation were nipped in the bud. It is apparent that some chapters will be accessible to the laymen, others require substantial mathematical knowledge. However, all are written by competent individuals, who have made a major effort to not only popularize the original work, but also to assess its impact on the field and its implications for theory and practice.

With great sadness we have to report the untimely death of one of our contributors, Professor Roberto Galvão. His chapter is certainly one of the highlights of this book. In order to publish his contribution, it was required to have the usual consent form signed by a relative of his. Alas, none was to be found. Since we are certain that it would have been Professor Galvão's will to see his work in print, Professor Marianov now formally appears as coauthor (and, as such, being able to sign the necessary form), while the chapter was and remains entirely that of Roberto.

Last, but certainly not least, it is our great pleasure to thank all individuals who have contributed to this work and helped to make it reality. First and foremost, there are the contributors to this volume, who have devoted their time and talents to the cause of making the original contributions in our field accessible to those interested in the area. Then, of course, there is Camille Price, without whose suggestions and encouragement this book would never have seen the light of day. Thanks also go to Professor Hillier for his patience, and to Mr. Amboy for his timely help with the preparation of a camera-ready copy of the manuscript.

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