

## FOREWORD

Edward Roberts

I've spent more than 50 years building entrepreneurship and innovation research and teaching at MIT, combined with countless experiences founding, advising, and investing in many tens of new and growing enterprises—and I find every page of *Innovating* a treasure trove of fascinating new perspectives and insights. Just look at the subtitle of this wonderful book about doing Luis Perez-Breva has created: “A Doer’s Manifesto for Starting from a Hunch, Prototyping Problems, Scaling Up, and Learning to Be Productively Wrong.” Other than “scaling up”—which, of course, Luis treats differently than you may be used to (including even talking about “scaling down”)—have you ever seen those words used to frame a treatise on how to innovate?

Let’s start from the underlying thrust of the book: What is the knowledge or evidence one needs to make a problem real, find one or more appropriate and effective solutions, and bring a chosen solution forward into practice? Luis tells us to begin with a “hunch.” Wait a minute!! This is MIT!!! Isn’t he going to expound upon the scientific basis for innovating? Isn’t he going to lay out a series of formulaic steps to make us the fortunes we seek, or at least get us to our desired solutions? No, “starting with a hunch” is where readers will begin to sense that they are in for a very different learning experience.

Think about “hunches”: a hunch about what might be a problem you really want to be tackling; a hunch about approaches that might help in

solving a problem; a hunch about the “parts” (his word) that would go into a search for a solution and into the solution itself; a hunch about the kinds of people you will need as you make progress at each stage; a hunch about when and how to carry out your possible (eventual?) fundraising, and so on. Luis doesn’t confront you with some bold answer to your needs. Instead, he challenges you to recognize how much you don’t know at each phase of your innovating activity and how much (valuable) uncertainty there is as you move forward. And then he helps you steadily to understand better how to proceed in your search and decide whether you want to move ahead—and if so, how. The path to impact is fraught with near misses and learning.

So, here’s a guy who doesn’t follow the path of most books on entrepreneurship (there aren’t many books on *how* to innovate!) in which the author exhorts you to follow his revealed wisdom as he tells you the “secret” of how he made his first hundred million or his first billion dollars! Instead, Luis—a very experienced and pragmatically focused teacher—shows you how he has brought students and people in companies of all ages and with different levels of experience and knowledge further along in their quest to solve problems. And if you are starting from just a hunch, then clearly you should expect you will often be wrong—which is fine.

The book proceeds from that kind of thought process to become an aid to your search for solutions to real-world problems, whether product or process or social issue or organizational design. The author takes the same approach to all of these, and repeatedly offers examples selected from that diversity to help you better understand how to innovate in many contexts.

An underlying “philosophy” (my label) throughout this book is modesty about how much you can know when you are trying to do something that you want to be different from what exists. Luis says that in reality both the problem itself and its solution are often discovered as part of the innovating process. That is a far cry from providing a formula needing only plug-ins. And in his advice on the process to follow, he draws many non-obvious conclusions. For example, if the “real problem” you first identified seems too big to tackle immediately, perhaps you need to formulate your problem at a smaller scale than you had imagined so you can start working on that lesser reality.

One big thing Luis continually asks of you is to reexamine what you believe is the logical next step, using simple words that need defining in the context (which he does for you). What are “parts” of a problem and its prospective solution? They are, of course, the list of all those elements that show up in a piecemeal taking apart of a device you might want to build, but also those elements of an organization you might need to construct, and as well of the assembly of people you might require to determine a solution and then implement it. And even then, more details are desirable. For example, there are the “sub-parts” people bring in— information, capabilities, and skills; these, too, become parts for specific consideration. Luis wants you to be explicit about all of these, and encourages you to seek out as many of these parts in simple, nearby, approximate and inexpensive forms, to help you move along with what you are trying to do. It is again the modesty of manner that permits you to go forward with little resources and with continuity.

Luis is himself extremely innovative in presenting the concept of “innovation prototyping” and elaborating how to construct a “kit” for that process. He writes that it will have “a *hunch* dressed as a problem, a *set of accessible parts*, *pointers to impact*, *pointers to people*, and a *primer* on how to work on the parts and the impact *at scale*.” Every one of those highlighted concepts (my emphasis) demonstrates a toe-in-the-water starting approach for eventually accomplishing a significant goal.

The author reminds you frequently that your purpose is always to find out how you are wrong, so you can then think about a proper next step of inquiry and action. He remarks that “failing sooner buys you time, and money!” while insisting that, of course, you will “fail” (be wrong? make mistakes?) in every stage of your endeavor. And he often does this with wholly unanticipated uniqueness. His presentation of “Fundraising as Advocacy” in a ballet in three movements (!) is an outrageous and absolutely fascinating way to communicate a process that is so awkward and time consuming and yet essential to all forms of innovating.

Let me comment about my experience of reading the book (and you’ll no doubt go back and reread some of the chapters more than once to be sure you’ve got it right). Each chapter has multiple boxes that illustrate and

expand the message of the main text. The examples in the boxes range over fields of human endeavor from creativity to science to inventions to industrial and technological history. Their breadth brings home the points Luis is making. Each chapter has highlighted quotes as you move along to help you capture the essence of the arguments being made. Each chapter ends with “takeaways” that synopsise the main points you should have understood. They prod you to return and reread some part of the chapter that in afterthought seems important enough to reexamine. Each chapter also ends with a splendid illustration that creatively integrates all the major considerations of the chapter. The artwork is quite imaginative, and some readers will find the illustrations to be further stimulants of their thinking. The epilogue provides academic commentary that directs you to underlying data, to deeper reading opportunities, and to further explanations.

If you want, you can just read the takeaways at the end of all the chapters. They will give you continuity and will clearly present the essence of the book’s uniqueness of thought. You would get a boatload of ideas and insights. But you will have missed the enormous content about doing, and the subtleties that no doubt will make the difference in whether you can really follow Luis Perez-Breva’s own guidance to your innovating success: “... bringing together parts, people, and scale in a way not done before [is] something you do continually; innovation is the afterthought.”

I hope you enjoy this book as much as I did.

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