The Seasoned Schemer (MIT Press)

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The notion that "thinking about computing is one of the most exciting things the human mind can do" sets both The Little Schemer (formerly known as The Little LISPer) and its new companion volume, The Seasoned Schemer, apart from other books on LISP. The authors’ enthusiasm for their subject is compelling as they present abstract concepts in a humorous and easy-to-grasp fashion. Together, these books will open new doors of thought to anyone who wants to find out what computing is really about. The Little Schemer introduces computing as an extension of arithmetic and algebra; things that everyone studies in grade school and high school. It introduces programs as recursive functions and briefly discusses the limits of what computers can do. The authors use the programming language Scheme, and interesting foods to illustrate these abstract ideas. The Seasoned Schemer informs the reader about additional dimensions of computing: functions as values, change of state, and exceptional cases. The Little LISPer has been a popular introduction to LISP for many years. It had appeared in French and Japanese. The Little Schemer and The Seasoned Schemer are worthy successors and will prove equally popular as textbooks for Scheme courses as well as companion texts for any complete introductory course in Computer Science.

**Book Information**

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**Customer Reviews**

This book is the second half of "The Little Schemer". It expects you to have mastered the previous volume, so it starts fast and picks up speed from there. It covers a lot of ground in a slim volume (just
as in "The Little Schemer"). This book introduces the concepts of closures and call-with-current-continuation (among other things). As with "The Little Schemer", this book's strength is in its socratic instruction method. Lessons are written and illustrated as conversations between the reader and the instructor (in question/answer format). While this sounds strange, it is actually surprisingly effective as a means of learning the material. It might seem somewhat like rote instruction, but it can often frame foreign concepts in a rememberable fashion. Neither of these books require much in the way of background or familiarity with the material. They were created as a means of teaching non-programmers to program in Scheme. However, I think they hold value for trained programmers as well.

The Seasoned Schemer continues where the The Little Schemer - 4th Edition (a truly marvelous book) left off. It aims to extend the readers understanding of programming techniques and the Scheme programming language. It covers many interesting topics like memoization, the interchangeability of functions and data, mutable state, and programming with continuations. Unfortunately The Seasoned Schemer has a strong inclination towards inside jokes for people who already know the material. In the process of charming the experienced reader it risks losing novices. How does a reference to Alonzo Church using call-with-current-continuation tell the novice that letcc is not available in many Scheme implementations? Why is there no real explanation of when and where to apply the "12th commandment" (use letrec to remove arguments that do not change for recursive application)? Why does a discussion about using closures and functions to model data structures devolve into trivia about circular lists? The text often seems like a sequence of such programming gems littered in a book with few clues for eyes unaccustomed to recognizing gems. People familiar with the subject matter will enjoy the charming and concise discussion of fundamental (and often difficult) ideas. Other readers are probably better served by reading a proper text book on programming in Scheme. It's a real pity though, because once you get the inside jokes this really is a fine book! Just don't use it as your first book on programming in LISP like languages.

The book picks up and demonstrates using to letcc (call with current continuation) to speed up delivery of results or to simply forget pending applications and return to an outer list of s-expressions. Additionally there is more using of letrec and the demonstration of of using set!. The final chapter once again looks at creating the language within the language but this time including 'define' and using set! to update closures. If you felt reasonably confident with the Little Schemer
you should be fine reading this extension book, and you will likely be much more confident with any
lisp like languages having read it.

The Seasoned Schemer continues where the Little Schemer left off introducing local variables via
let and it’s variations including letrec. Set!, the syntax for changing a variables value is introduced.
Continuations, as used for escaping from an computation and for going back to previous position in
code are also introduced. There are less references to the accomplishments of famous computer
scientists in this book than in the Little Schemer which I found to be disappointing. However, I
greatly enjoyed this book and would recommend it to anyone wanting to increase their
understanding of the Scheme programming language. Although scheme’s vector data type is not
introduced, I think you will have enough of an understanding of Scheme after reading this book to
make substantial programs.

I've put this book #8 in my Top 100 Programming, Computer and Science books
list:http://www.catonmat.net/blog/top-100-books-part-two/The Seasoned Schemer is continuation of
The Little Schemer that I listed as my #4 favorite book in the first part of this series. This book is
written in the same style as The Little Schemer and it’s extremely fun to read. It’s a dialogue
between you and the authors but unlike The Little Schemer that teaches you to think recursively this
book teaches you to think about the nature of computation. You’ll learn about closures,
continuations and continuation passing style (cps), y-combinator and implement your own Lisp in
Lisp at the end.

Dialogue style makes this book fun to read. Leitmotif of food examples keeps the tone light and the
reader hungry. Have the number for pizza handy before you sit down for this book. Focuses on the
use of functions in scheme, in an easy reading, enjoyable style. My only minor criticism is that the
typographic conventions make the code hard to read. I realize that they serve a purpose, but it
made the typesetting ugly. An admirable work, suitable for reading even if you already "know it all",
just because of its approach to teaching.

This is the second book, going more in depth with the language. Mandatory for everyone that wants
to learn Scheme

Silence! stir not! for a whisper
Would affright thy pretty prey;
Not a motion, little lisper,
Else the fish will
glide away.

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