

## Book Reviews

Debugging SAS Programs: A Handbook of Tools and Techniques

By Michele M. Burlew

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### Janet Stuelpner, Citigroup

They say that if ten programmers are given the same task, they will come up with ten different methods to achieve the same results. With that in mind, below are two differing points of view on the same book. Both reviewers agree that the author attempted a Herculean task in writing about debugging code and the associated error messages, including what those messages mean. The book is chock full of useful information that can't be found elsewhere. Where we differ is whether book successfully addresses the topic. So, here is the HASUG version of point/counterpoint.

### Reviewed by: Charles Patridge, PDPC, Ltd.

Michele Burlew has done an excellent job on a topic that is not well publicized – How to Debug A SAS Program. The book contains eight chapters that are well thought out and organized:

- Chapter 1-Understanding the Types of Errors in SAS Programs
- Chapter 2-Reading the SAS Log and Interpreting SAS Messages
- Chapter 3-Problem-Solving SAS Language Programs
- Chapter 4-Problem-Solving SAS DATA Steps with the DATA Step Debugger
- Chapter 5-Problem-Solving SAS Macro Language
- Chapter 6-Base SAS Messages
- Chapter 7-Macro Facility Messages
- Chapter 8-Review of SAS Processing Concepts

Chapter 4 does an excellent explanation of the use of the DATA Step Debugger with several examples while chapter 5 provides an excellent clarification in debugging SAS macro and the errors that are associated with the macro language. A number of the examples provided are well documented with “callouts” providing reasons for common and not so common error messages including solutions to correcting these errors. In Chapter 6 and 7, the SAS messages are grouped NOTES first, followed by WARNINGS, and concluding with ERROR messages. Within each grouping, the messages are alphabetically arranged. It is obvious Michele has spent considerable time writing this book by supplying examples of SAS programs with errors, their messages, and solutions to correcting these errors.

I highly recommend this book for beginners, intermediate and advance SAS professionals as an excellent source for learning more about the SAS system, debugging your own SAS programs as well as programs written by other SAS professionals. Having used the SAS Software for 20 plus years, there were some errors in this book I have never seen before; either I programmed very well (GRIN) or there are some places I have never ventured to within the SAS Software.

***Caution should be used when reading this book – It is like an excellent glass of wine, it should be sipped, savored and slowly digested to appreciate the full body of its contents.***

### Reviewed by: Janet Stuelpner, Citigroup

Michele Burlew undertakes a very difficult task in her new book How to Debug A SAS Program. This is a topic that has been discussed, but never written in such depth before. Although we

have all seen a great number of the error messages that Ms. Burlew has encountered, she takes the time to explain the cause of the error, the message that SAS prints in the log and, in some cases, what method is used to correct or avoid the message. All types of messages are covered. We all know the differences between NOTES, WARNINGS and ERRORS, however, before this book, it was not as clear.

My big problem with the book is that it can't decide whether it wants to be a reference manual or a user manual. Although very thorough and informative, the author can't quite make up her mind. This book doesn't give 'user-friendly' advice to the reader as we have seen in other SAS Books By User. It contains a great deal of information that can be found in a reference manual. It would be a great addition to your library as a way to look up an error message when encountered. However, it is not the kind of book that can be read in one, two or three sittings. I would put this book in the category of messages and codes that are found in a reference manual.