
Contents

Preface	ix
1. Introduction	1
2. Interactions Between Continuous Predictors in Multiple Regression	9
What Interactions Signify in Regression	9
Data Set for Numerical Examples	10
Probing Significant Interactions in Regression Equations	12
<i>Plotting the Interaction</i>	12
<i>Post Hoc Probing</i>	14
<i>Ordinal Versus Disordinal Interactions</i>	22
<i>Optional Section: The Derivation of Standard Errors of Simple Slopes</i>	24
Summary	27
3. The Effects of Predictor Scaling on Coefficients of Regression Equations	28
The Problem of Scale Invariance	28
<i>Linear Regression with no Higher Order Terms</i>	29
<i>Regression Equations with Higher Order Terms</i>	30
<i>Simple Slopes of Simple Regression Equations</i>	31
<i>Ordinal Versus Disordinal Interactions</i>	31
<i>Numerical Example—Centered Versus Uncentered Data</i>	32
<i>Should the Criterion Y Be Centered?</i>	35
<i>Multicollinearity: Essential Versus Nonessential Ill-Conditioning</i>	35

9. Conclusion: Some Contrasts Between ANOVA and MR in Practice	172
Appendix A: Mathematical Underpinnings	177
Appendix B: Algorithm for Identifying Scale-Independent Terms	183
Appendix C: SAS Program for Test of Critical Region(s)	188
References	190
Glossary of Symbols	198
Author Index	204
Subject Index	207
About the Authors	212