## ${\bf Contents}$

Chapter 1.	Introduction	1
Chapter 2.	Background Material	7
Part 1. I	ntroducing Generative Complexity	21
Chapter 3.	Definitions and Examples	23
Chapter 4.	Semilattices and Lattices	29
Chapter 5.	Varieties with a Large Number of Models	33
Chapter 6.	Upper Bounds	43
Chapter 7.	Categorical Invariants	53
Part 2. V	arieties with Few Models	57
Chapter 8.	Types 4 or 5 Need Not Apply	59
Chapter 9.	Semisimple May Apply	65
Chapter 10.	Permutable May also Apply	69
Chapter 11.	Forcing Modular Behavior	75
Chapter 12.	Restricting Solvable Behavior	87
Chapter 13.	Varieties with Very Few Models	97
	Restricting Nilpotent Behavior lpotent Congruences in non Nilpotent Algebras lpotent Algebras	107 107 111
Chapter 15.	Decomposing Finite Algebras	119
	Restricting Affine Behavior panded Modules reing Finite Representation Type.	123 123 132
	A Characterization Theorem cally Finite Varieties with Few Models nitely Generated Varieties with Few Models	135 135 136

vi CONTENTS

Part 3. Co	onclusions	139
Chapter 18.	Application to Groups and Rings	141
Chapter 19.	Open Problems	147
Chapter 20.	Tables	153
Bibliography		157