

Taphonomy studies the transition of organic matter from the biosphere into the geological record. It is particularly relevant to zooarchaeologists and paleobiologists, who analyze organic remains in the archaeological record in an attempt to reconstruct hominid subsistence patterns and paleoecological conditions. In this user-friendly, encyclopedic reference volume for students and professionals, R. Lee Lyman, a leading researcher in taphonomy, reviews the wide range of analytical techniques used to solve particular zooarchaeological problems, illustrating these in most cases with appropriate examples. He also covers the history of taphonomic research and its philosophical underpinnings. Logically organized and clearly written, the book is an important update on all previous publications on archaeological faunal remains.

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## VERTEBRATE TAPHONOMY

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# VERTEBRATE TAPHONOMY

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**To Barbara, John, and Michael**

CONTENTS

	<i>page</i>
<i>List of figures</i>	xiii
<i>List of tables</i>	xx
<i>Preface</i>	xxiii
<i>Acknowledgements</i>	xxvi
1 WHAT IS TAPHONOMY?	1
Introduction	1
On the analysis of archaeological faunal remains	2
Basic concepts	3
Goals of taphonomic analysis in zooarchaeology	5
The challenge of taphonomy	6
Taphonomy's contribution to zooarchaeology	7
Terminology used in this book	8
What this book is and what it is not	9
2 THE HISTORY AND STRUCTURE OF TAPHONOMY	12
A brief history of taphonomic research	12
On the structure of taphonomy: a personal view	34
Summary and conclusion	39
3 TAPHONOMY IN PRACTICE AND THEORY	41
Introduction	41
Examples of taphonomic analysis	41
Uniformitarianism and actualism	46
Actualism in archaeology and taphonomy	52
Analogy	64
Summary	68
4 STRUCTURE AND QUANTIFICATION OF VERTEBRATE SKELETONS	70
Introduction	70
Ontogeny and allometry	70
Skeletal tissues	72
ix	

x	<i>Contents</i>	
	Properties of skeletal tissues and taphonomy	82
	Vertebrate skeletons	87
	Modification of skeletal tissues and time of death	95
	Quantification	97
	Summary	112
5	VERTEBRATE MORTALITY, SKELETONIZATION, DISARTICULATION, AND SCATTERING	114
	Introduction	114
	Modes of death	115
	The demography of mortality	115
	The seasons of mortality	132
	Skeletonization and disarticulation	135
	Analysis of disarticulation and scattering	150
	Summary	160
6	ACCUMULATION AND DISPERSAL OF VERTEBRATE REMAINS	161
	Introduction	161
	Dispersal, scattering, and accumulation	161
	Analyzing dispersal	168
	Analyzing accumulation	189
	Accumulation and dispersal as mirror images	219
	Summary	220
7	FREQUENCIES OF SKELETAL PARTS	223
	Introduction	223
	Human utilization and transport of carcass parts	223
	Structural density of bones	234
	Differential transport versus differential survivorship	258
	Within-bone nutrients	281
	Reconstruction of ravaged assemblages	283
	Other sources of variation in bone structural density	288
	A final comment	289
	Summary	292
8	BUTCHERING, BONE FRACTURING, AND BONE TOOLS	294
	Introduction	294
	Butchering	294
	Fracturing of bones	315
	Bone artifacts	338



<i>Contents</i>	xi
Butchering, breakage, and bone tools	350
Summary	352
<b>9 OTHER BIOSTRATINOMIC FACTORS</b>	354
Introduction	354
Weathering	354
Root etching	375
Trampling	377
Abrasion	381
Burning	384
Other biological agents of bone modification	392
Preservation and size biasing	397
Comparative analytic techniques	398
Summary	402
<b>10 BURIAL AS A TAPHONOMIC PROCESS</b>	404
Introduction	404
Deposition and burial	406
Sedimentation	406
Burial processes	413
Spatial distribution of faunal remains	415
Summary	416
<b>11 DIAGENESIS</b>	417
Introduction	417
Mineralization, leaching, enrichment	419
Analysis of chemically altered bone	423
Sediment overburden weight	423
Post-burial movement	432
Summary	433
<b>12 TAPHONOMY OF FISH, BIRDS, REPTILES, AND AMPHIBIANS</b>	434
Introduction	434
Fish taphonomy	434
Avian taphonomy	446
Reptilian and amphibian taphonomy	450
Summary	450
<b>13 DISCUSSION AND CONCLUSIONS</b>	452
Introduction	452
Multi-variate taphonomic analysis	453
A general theory of taphonomy?	463

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xii	<i>Contents</i>	
	<i>Bibliography</i>	466
	<i>Glossary of taphonomy terminology</i>	502
	<i>Index</i>	517

## FIGURES

---

Figure		
2.1.	General relations of the subdisciplines of taphonomy relative to an animal's life, death, and scientific recovery.	<i>page</i> 17
2.2.	Modeled taphonomic history of a biotic community or life assemblage.	19
2.3.	Medlock's (1975) model of the taphonomic history of a faunal assemblage.	24
2.4.	Frequencies of titles of taphonomic literature per decade.	25
2.5.	Meadow's (1981) model of the taphonomic history of a faunal assemblage.	28
2.6.	Hesse and Wapnish's (1985) model of a taphonomic history of a zooarchaeological assemblage of faunal remains.	29
2.7.	Behrensmeyer and Kidwell's (1985) model of a taphonomic history with relations of subdisciplines of taphonomy indicated.	30
2.8.	Andrews' and Cook's (1985) model of a taphonomic history showing stages of modification.	31
3.1.	Intersection of different kinds and intensities of historic (taphonomic) processes defining uniformitarianism, actualism, and catastrophism as paradigms for explaining the past.	50
3.2.	Schematic representation of the transformation of an animal from being a living organism to being a fossil showing where particular bodies of theory are relevant, and general categories of transforms and contexts.	65
3.3.	A model of (relational) analogical reasoning.	66
4.1.	Schematic illustration of ossification and growth of endochondral long bone (tibia) of a mammal.	71
4.2.	Structure of mammalian bone at different scales and levels of organization.	75
4.3.	Microstructure of mammalian bone showing Haversian and lamellar bone.	76
4.4.	Appearance and distribution of trabecular and compact bone in a mammalian long bone.	77
4.5.	Cross section of a typical mammalian tooth showing major components and regions.	80

xiv	<i>List of figures</i>	
4.6.	Modeled relation of stress and strain, Young's modulus of elasticity and point of failure.	84
4.7.	North American bison ( <i>Bison bison</i> ) skeleton.	88
4.8.	Generalized leporid or rabbit skeleton.	88
4.9.	Generalized teleost fish skeleton.	89
4.10.	Generalized frog (amphibian) skeleton.	90
4.11.	Generalized turtle (reptile) skeleton.	91
4.12.	Generalized snake (reptile) skeleton.	92
4.13.	Generalized bird skeleton.	93
4.14.	Directional terms for vertebrate skeletons.	94
4.15.	Chronological relations of bone ontogeny, bone remodeling, death, and taphonomy.	95
4.16.	Normed MNI per skeletal portion frequencies and normed MAU per skeletal portion frequencies for pronghorn antelope remains from 39FA83.	107
4.17.	Bivariate scatterplot of MNI per skeletal portion frequencies and MAU per skeletal portion frequencies for pronghorn antelope remains from 39FA83.	108
4.18.	Bivariate scatterplot of MNI per skeletal portion frequencies for left and right skeletal portions of pronghorn antelope from 39FA83.	109
5.1.	Two basic types of age (mortality) profiles.	119
5.2.	Age (mortality) profiles for a population with high mortality and recruitment.	122
5.3.	Mortality profile for fossil horses.	123
5.4.	Mortality profile for fossil antelope.	123
5.5.	Mortality profile for archaeological deer remains.	124
5.6.	Mortality profile for archaeological pronghorn antelope remains.	125
5.7.	Expected and observed mortality profile for wapiti killed by the volcanic eruption of Mount St. Helens.	126
5.8.	Three-pole graphing technique for assessing demographic (mortality) data.	129
5.9.	Mortality profiles for African bovid remains from Klasies River Mouth and Elandsfontein.	130
5.10.	Three-pole graph of mortality data from Klasies River Mouth and Elandsfontein.	131
5.11.	Seasonality and mortality profiles for deer ( <i>Odocoileus</i> spp.) remains from archaeological site 45DO189.	133
5.12.	Seasonality and mortality profiles for deer ( <i>Odocoileus</i> spp.) remains from archaeological site 45DO176.	134
5.13.	A partial, articulated wapiti skeleton <i>in situ</i> .	136
5.14.	Blumenschine's (1986a, 1986b) consumption sequence plotted against flesh weight.	149

<i>List of figures</i>	xv
5.15. Order of joint disarticulation at Casper and Horner II as determined by Hill's (1979a, 1979b) method.	152
5.16. Proportion of articulated joints at Casper and Horner II as determined by Todd's (1987b) method.	153
5.17. Bivariate scatterplot of index of skeletal disjunction and index of fragment disjunction against standardized meat weight yield for Horner II bison.	158
5.18. Bivariate scatterplot of index of skeletal disjunction and index of fragment disjunction against standardized marrow yield for Horner II bison.	159
5.19. Bivariate scatterplot of index of skeletal disjunction against index of fragment disjunction for Horner II bison.	159
6.1. Types of bone occurrence based on mortality type (individual, mass), bone accumulation agencies, transport, and duration of accumulation.	164
6.2. Classes of bone occurrence defined by dimensions of variability in accumulation agent (physical, biological), mortality (single individual, multiple individuals), accumulation action (passive, active), and duration of accumulation (short, long).	167
6.3. Equid mortality profiles for Magdalenian and Gravettian levels at Solutré, France.	169
6.4. Frequencies of equid skeletal parts in the Aurignacian level of Solutré, France.	170
6.5. Classification of bone dispersal groups according to current velocity and proximity to the site where bones begin transport by fluvial action.	173
6.6. Classification of bone shape based on axial ratios.	177
6.7. A mirror-image rose diagram showing azimuths of long axis of long bones.	179
6.8. Idealized stereographic projections of four possible distributions of long bone orientation and plunge or dip.	182
6.9. A stereographic projection of the horizontal and vertical orientation of five bones.	183
6.10. Distribution and orientation of wapiti carcasses killed by the volcanic eruption of Mount St. Helens.	184
6.11. Azimuth of wapiti carcasses killed by the volcanic eruption of Mount St. Helens.	185
6.12. Blumenschine's (1986a) consumption sequence.	188
6.13. Frequencies of skeletal elements from carnivore kills and from a carnivore den plotted against Blumenschine's (1986a) consumption sequence.	189
6.14. Relative frequencies of skeletal portions in different types of bone accumulations.	191

xvi	<i>List of figures</i>	
6.15.	Rodent gnawed bones.	196–7
6.16.	Ratio of post-cranial to cranial skeletal parts accumulated and deposited by 19 species of raptors and mammals.	202
6.17.	Ratio of distal to proximal limb elements accumulated and deposited by 19 species of raptors and mammals.	203
6.18.	Proportion of complete limb elements in assemblages accumulated by selected raptors and mammalian carnivores.	204
6.19.	Ragged and crenulated edges resulting from mammalian carnivores gnawing modern wapiti bones.	207
6.20.	Pitting and punctures.	208
6.21.	Punctures.	209
6.22.	Furrow on a modern wapiti proximal femur.	210
6.23.	Scooping out on two distal femora.	211
6.24.	Digestive corrosion of first phalanges of domestic sheep.	211
6.25.	Comparison of diameters of puncture marks on small mammal bones collected from a rockshelter, and the range of canine diameters of modern carnivores.	214
6.26.	Attributes of modification to prey bones created by various African carnivores.	215
6.27.	Bivariate scatterplots of relative frequencies of bones from small mammals and from large mammals on the African landscape against bone frequencies in a hominid settlement.	221
7.1.	A family of strategies for utilizing and/or transporting animal carcass parts.	228–9
7.2.	Scatterplot of caribou %MAU values from Anavik against caribou %MGUI values.	231
7.3.	Scatterplot of Brain's (1969) goat bone structural density values against the number of recovered goat bone specimens from a Hottentot village.	236
7.4.	Anatomical locations of scan sites where photon absorptiometry measurements have been taken on ungulate bones.	240–1
7.5.	Anatomical locations of scan sites where photon absorptiometry measurements have been taken on marmot bones.	242–3
7.6.	Anatomical locations of scan sites where photon absorptiometry measurements have been taken on seal bones.	244–5
7.7.	Scatterplot of %survivorship of deer skeletal parts from 45OK4 against bone mineral density values for deer.	249
7.8.	Scatterplot of frequency of individual scan sites in one skeleton against bone mineral density values for deer.	251
7.9.	Scatterplot of MAU frequencies of marmot skeletal parts from the White Mountains against bone mineral density values for marmots.	254
7.10.	Scatterplot of MAU frequencies of marmot skeletal parts	

<i>List of figures</i>	xvii
from the Salishan Mesa site against bone mineral density values for marmots.	255
7.11. Scatterplots of guanaco utility indices against guanaco bone density.	259
7.12. Scatterplots of %MAU frequencies of deer-size animal remains against the structural density of deer bones, the %MGUI for sheep, and the %MGUI for caribou.	262–3
7.13. All possible combinations (classes) of correlation coefficients between the %MAU of a bone assemblage, and both bone density and %MGUI.	264
7.14. Scatterplots of %survivorship of skeletal parts after ravaging by hyenas against sheep bone structural density and deer bone structural density.	268
7.15. Variation in scatterplots of %survivorship of skeletal parts after ravaging by hyenas against sheep %MGUI for long bone ends and for long bone shaft ends.	269
7.16. Scatterplots of MNE frequencies from for FLK <i>Zinjanthropus</i> assemblage.	272
7.17. Bar graph of %weight loss of cow bones over time.	279
7.18. NISP-to-MNE ratios plotted against within-bone nutrient index for two taxa.	283
7.19. Scatterplots of caribou bone observed and reconstructed frequencies against the caribou %MGUI.	287
7.20. Standardized food utility index for complete bones plotted against the %MAU of surviving sheep bones.	292
8.1. Examples of cut marks.	305
8.2. Distal metapodials showing locations of variously documented cut-marks.	310
8.3. Proportional frequencies of cut-marked specimens in selected anatomical categories.	311
8.4. Fracture types described by Shipman <i>et al.</i> (1981), with modifications by Marshall (1989).	319
8.5. Fracture edge morphology of a broken metacarpal illustrated using Biddick and Tomenchuk's (1975) system of polar coordinates and vertical planes.	322
8.6. Features of fracture surfaces shown on a bovid proximal metacarpal.	323
8.7. Loading points.	327
8.8. Bar graphs of three bone fragmentation attributes for three assemblages.	330–1
8.9. Variation in the proportion of complete skeletal elements between two taxa of owls.	334
8.10. Proportional frequencies of 1 cm size classes of long bone	

xviii	<i>List of figures</i>	
	diaphysis fragments for two assemblages of deer bones.	335
8.11.	A model of the relation between NISP and MNE in an assemblage of bones.	336
8.12.	Prehistoric scapula awls from eastern Washington.	341
8.13.	Pseudotools.	342
8.14.	Scatterplot of MNE frequencies of selected bison bones against the bison food utility index.	349
8.15.	Demography of mortality of mastodon carcasses reported by Fisher (1987).	350
8.16.	Season of mortality of mastodon carcasses reported by Fisher (1987).	351
9.1.	Bone weathering stages described by Behrensmeyer (1978).	356–7
9.2.	Weathering profiles for carcasses dead 0.5 to 1 yr, carcasses dead 2.5 to 3 yr, carcasses dead 4 to 10 yr, and carcasses dead 10 to 15 yr.	365
9.3.	Weathering profiles for two assemblages of bones.	368
9.4.	Frequency distribution of percentages of bones per weathering stage in three assemblages.	370
9.5.	Three-pole graph of bone weathering data for six assemblages from Olduvai Gorge and control assemblages of carcasses dead for known numbers of years.	372
9.6.	Cumulative percent frequency distributions for weathering stages of bones in summed assemblages of Olduvai Gorge thin deposit sites and summed assemblages of Olduvai Gorge thick deposit sites.	373
9.7.	Root etching on a sheep mandible.	376
9.8.	Vertical frequency distribution of trampled artifacts.	378
9.9.	Summary of changes to bone subjected to heating.	386
9.10.	Cumulative percent of weight loss of fresh and burned bones placed in acid.	390
9.11.	Regression of log of live weight against log of the ratio of number of individuals expected to number of individuals observed.	397
9.12.	Scatterplot of % differences in frequencies of proximal and distal humeri against % differences in frequencies of proximal and distal tibiae.	400
9.13.	Bone destruction graphs.	401
11.1.	Bivariate scatterplot of NISP:MNI ratios per skeletal part for two bone assemblages.	428
11.2.	Bar graph showing variation in completeness index values across seven small, compact bones from two sites.	430
11.3.	Bivariate scatterplot of completeness index values for six small, compact bones.	431



	<i>List of figures</i>	xix
12.1.	Proportional frequencies of salmonid cranial and post-cranial remains.	439
13.1.	Example of graphic technique for summarizing and comparing taphonomic data for multiple assemblages.	459

## TABLES

### Table

2.1.	Kinds of taphonomic data that should be recorded for vertebrate fossil remains.	page 22
4.1.	Frequencies of major kinds of skeletal elements in different mammalian taxa.	98
4.2.	FLK <i>Zinjanthropus</i> bovid limb bone data.	103
4.3.	Frequencies of pronghorn antelope skeletal portions from site 39FA83.	106
4.4.	Observed and expected MNI frequencies of pronghorn antelope skeletal portions from site 39FA83.	109
5.1.	Life table for female Himalayan thar.	117
5.2.	Life tables for two hypothetical populations of mammals.	120
5.3.	Observed and expected frequencies of wapiti from catastrophic mortality resulting from volcanic eruption of Mount St. Helens.	125
5.4.	Mortality data for two fossil assemblages.	130
5.5.	Rank order of joint disarticulation in five mammalian taxa.	145
5.6.	Sequence of damage to bones of ungulates exploited by North American wolves.	148
5.7.	Ranked general consumption sequence.	149
5.8.	Joint articulation data for bison bones from the Casper site and the Horner II site.	151
5.9.	Index of skeletal disjunction and index of fragment disjunction for the Horner II bison remains.	157
6.1.	Dimensions of variability in the process of bone accumulation.	165
6.2.	Classes of variation in bone accumulation.	166
6.3.	Alignment of types of bone occurrence with bone accumulation classes.	167
6.4.	Criteria proposed by Wheat (1979) for distinguishing kill sites, processing sites, and consumption sites.	171
6.5.	Mammalian skeletal elements grouped by their susceptibility to fluvial transport.	172
6.6.	Korth's (1979) settling groups aligned with Voorhies' (1969) groups.	174

<i>List of tables</i>	xxi
6.7. Fluvial transport index values and saturated weight index values for various taxa.	175
6.8. Observed and expected frequencies of 1084 bone specimens per 10° orientation class at Lubbock Lake.	180
6.9. Three-dimensional orientation data for five fictional long bones.	183
6.10. Gnawing damage to bones typical of four taxonomic groups of mammalian carnivores.	213
6.11. Frequencies of skeletal parts of two sizes of mammals from the landscape and from a hominid settlement.	220
7.1. Binford's (1978) normed utility indices for domestic sheep and caribou.	226
7.2. MNE and MAU frequencies of caribou bones for two ethnoarchaeological sites.	230
7.3. Utility and transport indices for various taxa.	232
7.4. Utility indices for bone parts of various mammalian taxa.	233
7.5. Frequencies and structural density of goat bones, and measures of sheep bone density.	236
7.6. Average bone mineral densities for deer, pronghorn antelope, domestic sheep, bison, guanaco, and vicuna.	246–7
7.7. Average bone mineral densities for marmots and phocid seals.	248
7.8. Frequencies of representation of scan sites of deer bone from archaeological site 45OK4.	250
7.9. MAU values for the White Mountains marmots and the Salishan Mesa marmots, and corresponding scan sites for structural density values.	253
7.10. Traditional density scan sites and maximum density scan sites typically correlated with MAU values.	257
7.11. %MAU frequencies for deer-sized animals for site 45CH302.	260
7.12. MNE and %MAU frequencies for hyena-ravaged domestic sheep bones.	266
7.13. Frequencies of skeletal parts at FLK <i>Zinjanthropus</i> and complete bone utility index values.	271
7.14. Correlation coefficients between percent weight loss of skeletal parts due to carnivore gnawing over time, and bone structural density.	278
7.15. NISP to MNE ratios for selected parts.	282
7.16. Reconstructing caribou bone assemblages from Nunamiut sites.	286
7.17. Experimental data for bone transport and survivorship, and how those data would be treated in an archaeological context.	290

xxii	<i>List of tables</i>	
8.1.	Carcass resources exploitable by a faunal processor or human butcher.	295
8.2.	Selected carcass-processing activities directed towards extracting consumable carcass resources.	295
8.3.	Factors that influence utilized butchering techniques.	296
8.4.	NISP and frequencies of cut-marked specimens in the FLK <i>Zinjanthropus</i> assemblage.	308
8.5.	Frequencies of cut-marked meaty limb specimens and metapodial specimens in the FLK <i>Zinjanthropus</i> collection.	312
8.6.	Frequencies of cut-marked specimens in joint, and meaty limb shaft locations.	313
8.7.	Fracture classification system of Davis (1985).	321
8.8.	Frequencies of fracture attributes in three assemblages of human bones.	329
8.9.	Frequencies of skeletal parts in raptor pellets.	332
8.10.	MNE frequencies of bison bones recovered from the Phillips Ranch site.	348
9.1.	Weathering stages in large and small mammals.	355
9.2.	Kolmogorov-Smirnov <i>D</i> statistics between all possible pairs of carcass assemblages from major habitats.	362
9.3.	Frequencies of weathered bones in six assemblages from Olduvai Gorge.	371
9.4.	Frequencies of bone parts from selected sites.	399
10.1.	Standard sediment size classes.	407
10.2.	Depositional settings and attributes of sediments and sedimentary units.	408
11.1.	Ratios of NISP:MNI per skeletal part in two assemblages.	427
11.2.	Turbation processes influencing burial, exposure, and movement of fossils.	432
12.1.	Average skeletal completeness ratios for various sized horizontal units and sites.	440
12.2.	Structural density of coho salmon skeletal elements.	442
12.3.	Summary of criteria for distinguishing culturally from naturally deposited assemblages of fish remains around large lakes.	445
13.1.	Dimensions and attribute states for taphonomic analysis.	457
13.2.	Definition of variables and listing of values per plotted variable.	460

## PREFACE

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When I started my studies of vertebrate faunal remains recovered from archaeological sites over twenty years ago, I had no idea what taphonomy was nor was I particularly concerned about what are today typically asked questions concerning the preservation and formation of the archaeofaunal record. But as I read the zooarchaeological literature while completing my doctoral dissertation in the mid-1970s, I found an increasing number of papers dealing with taphonomic issues. The fact that since then it has become increasingly difficult to keep up with the ever growing literature on taphonomy is something of a mixed blessing. It is a mixed blessing because (a) we are constantly realigning the relation between what we *want* to learn and what we *think we can* learn from the vertebrate faunal remains we recover from archaeological sites, and thus our conclusions tend to be much more strongly founded than even a decade ago (this is good), and (b) it is nearly impossible for any one analyst to conceive of all of the logically possible taphonomic problems that a single reasonably sized assemblage of vertebrate remains might present. The latter is not bad; it just means a taphonomist's and zooarchaeologist's (and thus my) job is much more difficult now than it was a mere decade ago. Simply put, the analysis of zooarchaeological remains is no longer the simple, straightforward task that it was in the 1960s or 1970s. Taphonomic research has found a home in zooarchaeology, and it is here to stay.

Today, the number of zooarchaeologists who simply identify the bones, tally them up, and write a report about what prehistoric hominids were eating, is diminishing. Most reports on zooarchaeological remains written in the past ten years contain a more or less detailed consideration of at least a few taphonomic issues. This book is about how taphonomic questions might be analytically addressed and, sometimes, answered. It is a book that I wanted to write ten years from now. However, when Ann Stahl talked to me in the Spring of 1991 about the possibility of writing it, I realized, upon reflection, that now (from May 1991 until January 1993) was just as good a time as later. In fact, the more I thought about it, the better the idea of writing it now became. Many of my friends and professional colleagues were working hard on important taphonomic problems, and virtually all of them were eager to tell me what they were working on and what they were learning. Writing the book would, I decided, be easy because of all of these wonderfully knowledgeable people, and there weren't more of them than I could keep track of with a little effort. Any value

xxiv *Preface*

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*Preface*

xxv

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