

Contents

List of Figures.....	xiii
List of Tables.....	xvii
Foreword.....	xix
Preface.....	xxi

1. Theoretical Background and Introduction to The Question.....	1
1.1. Current Theories for the Study of Lithic Technology	1
1.2. Toward a Paleosociological Research Strategy.....	3
1.3. Microblade-based industries in Paleosociological Research	4
1.4. Organization of the Monograph	5

Part I. Setting The Stage: Microblade Technology and Microblade-Based Societies

2. An Overview of Microblade Technology.....	11
2.1. Microblade Technology.....	11
2.1.1. Forms of Microcores	12
2.1.2. Methods of Microblade Production	12
2.1.3. Microblade Technology as a Composite Technology	13
2.2. Origin and Spread of Microblade Technology in the Northern Circum-Pacific	13
2.3. Assessment of the Culture-Historical Approach	17
2.4. Geography and Climates of NE Asia	19
2.4.1. Geography of Contemporary NE Asia	19
2.4.2. NE Asia during the Last Ice Age.....	19
2.5. Summary	22

3. Temporo-Spatial Framework of Microblade-Based Societies in Northeastern Asia	23
3.1. Microblade-based Societies	23
3.2. Spatial Framework of Microblade-based Societies.....	24
3.2.1. The “40 Degree North Latitude Phenomenon”	24
3.2.2. The Four Regions of NE Asia	26
3.3. Temporal Framework of Microblade-based societies	29
3.3.1. Phase I	29
3.3.2. Phase II.....	31
3.3.3. Phase III	31
3.3.4. Phase IV	32
3.4. Two Waves of Cultural Change among Microblade-based Societies	33

Part II. Building Frames of Reference

4. The Macroecological Approach	37
4.1. The Macroecological Approach: Theoretical Background	37
4.1.1. What is the Macroecological Approach?	37
4.1.2. Study of the Past Using Modeled Past Climate Data.....	38
4.2. Cultural changes among microblade-based societies.....	38
4.2.1. Paleoclimate, Technological Organization, and Macroecology	38
4.2.2. Cultural Changes among Microblade-based Societies: Research Questions.....	40
4.2.3. The “Refugium Model”: A Starting Point to Study the First Wave of Cultural Change.....	41
4.2.4. The Pleistocene-Holocene Transition: Investigation of the Second Wave of Cultural Change.....	41
4.3. Construction of Input Files for Binford’s Frames of Reference from Existing Data Sources under Two Contrasting Climatic Conditions.....	42
4.3.1. Modern Weather Station Data	42
4.3.2. The Database for the Last Glacial Maximum	42
4.3.3. Instructions for Running the EnvCalc2.1 Program	43

5. Developing A Frame of Reference	45
5.1. Key Variables	45
5.2. Climate, Biomes, and Habitat	45
5.2.1. Climate	45
5.2.2. Biomes and Habitat	51
5.3. Minimalist Terrestrial Model: Modelling A-Cultural Adaptation of Human Beings.....	54
5.3.1. Population Densities.....	55
5.3.2. Subsistence Specialization	57
5.4. Modelling Density-Dependent Change in Hunter-Gatherer Subsistence.....	59
5.4.1. Subsistence: Hunting, Gathering, or Fishing	60
5.4.2. Projected Population Density	63
5.4.3. Group Size and Social Organization	64
5.4.4. Mobility.....	66
5.5. Unpacked or Packed: A Growth Rate Model and Density Controlled Subsistence.....	68
5.5.1. Mapping Unpacked and Packed Subsistence Specialization	70
5.5.2. Population Packing and Technological Change	74
5.6. Lifeways of Hunter-Gatherers: Habitat and Diversity of Behavior	75
5.6.1. Climate Change and its Impacts on Past Foraging Societies	75
5.6.2. Vegetation Change	78
5.6.3. Variables among Different Culture-Ecological Regions	80
5.6.4. Summary	85

**Part III. Cultural Process among Microblade-Based Societies in Northeastern Asia I:
Cultural Change during the Last Glacial Maximum**

6. High Latitudes of Northeastern Asia: Transbaikal and the Pshk	89
6.1. Continuously Occupied or Abandoned?.....	89
6.2. Assessment of the Previous Viewpoints.....	89
6.3. A Macroecological Approach.....	91
7. Edge of The Loess	95
7.1. Local Origin or Exotic Technology: An Assessment of Previous Viewpoints.....	95
7.2. A Macroecological Approach.....	97

**Part IV. Cultural Process Among Microblade-based Societies in Northeastern Asia II:
Cultural Change During The Pleistocene-Holocene Transition**

8. Rise of Jomon: From The Paleo-Honshu Island to the Pshk Peninsula	109
8.1. The “Jomon Revolution”.....	109
8.2. A Macroecological Approach.....	111
9. Cultural Change in Eastern Siberia and its Neighbors: The Rise of a Mesolithic Adaptation	119
9.1. The Temporo-Spatial Framework of Archaeological Cultures in Eastern Siberia and Its Neighbors	119
9.2. A Macroecological Approach.....	120
10. Northern China: Food Production and Microblade-based Societies	143
10.1. Archaeological Sites Associated with Microblade Technology in North China	143
10.2. Early Intensification or Group Activity: A Study of Plant Use at the Shizitan Site	143
10.3. Broad Spectrum Revolution and Intensification: A Study of the Pleistocene-Holocene Transition.....	156
10.4. The Demise of Microblade-based Societies: A Preliminary Study on Microblade Assemblages during Early Holocene	164
11. A New Frontier: Microblade-based Societies on the Tibetan Plateau	167
11.1. Paleolithic and Neolithic on the Tibetan Plateau	167
11.2. A Macroecological Approach	171
11.2.1. Sites of the Late Pleistocene.....	171
11.2.2. Epipaleolithic Hunter-Gatherers.....	173
11.2.3. Neolithic Agriculturalists	175
11.2.4. A tale of Two Models	177

12. A New Starting Point for Further Research	183
12.1. What Has Been Learned?.....	183
12.2. Where to Go Next?.....	185
12.2.1. The Regions Not Yet Analyzed	185
12.2.2. Global Microlithization and Beyond.....	187
12.2.3. The “Paleoarctic Tradition” and “The First Americans”	188
12.2.4. The Forging-to-Farming Transition	188
12.3. Unfinished to be Continued.....	189
Appendix Coordinates of the principle sites.....	191
References Cited.....	195