Contents

List of Tables		viii	
List	of Figures	ix	
List	of Equations	xii	
Abs	Abstract		
1	Introduction Characterizing Learning among the Precontact Coast Salish Hypotheses for Restricted Formed Lithic Tool Learning in the Salish Sea Chapter Organization	1 3 4 5	
2	Evidence for the Emergence of Hereditary Social Inequality and Restricted Learning in the Salish Sea Archaeological Data for Social Inequality in the Salish Sea Charles Period (5500-3500 BP) Locarno Beach (3500-2400 BP) Marpole (2400-1000 BP) Late Period (1000 BP-Contact) Ethnographic Discussions of Knowledge Restriction and Embedded Craft Specialization Knowledge Restriction and Coast Salish Lithic Tool Traditions	7 7 8 12 15 17 18 20	
3	 Hafted Chipped and Ground Stone Technologies on the Northwest Coast Hafted Stone Tool Technologies on the Northwest Coast Chronology of Hafted Chipped and Ground Stone Tools in the Salish Sea Introduction of Bifacial Technologies on the Northwest Coast of North America (13,000-5000 BP) Chronological Trends in Hafted Stone Tool Form in the Salish Sea (5000 BP-Contact) Toolstone Quality Reduction Sequence for Coast Salish Hafted Lithics Hafted Chipped Stone Reduction Sequence Hafted Ground Stone Reduction Sequence Impacts of Retouch on Hafted Chipped and Ground Stone Tool Function 	23 23 23 23 26 27 28 28 28 28 28 29 30	
4	Cultural Transmission and the Material Record Cultural Transmission Theory Modes and Mechanisms of Cultural Transmission Transmission Bias Effective Population Size and Cultural Transmission Artefact Style and Function from an Evolutionary Perspective Style and Function as a Dichotomy Style and Function as a Continuum Adding Skill as a Factor: Artefact Attribute Functional and Communicative Potential Employed Archaeological Measures of Cultural Transmission Measuring Discrete Styles Measuring Metric Variation Transmission and Equifinality in the Archaeological Record Previous Cultural Transmission Studies in the Salish Sea	33 33 34 35 36 37 37 37 37 37 38 38 38 39 40 41	
5	Chapter 5. Hypotheses and Expectations Additional Variables and Alternative Hypotheses	43 44	
6	Methodology and Sample Coast Salish Hafted Lithic Tool Typology	47 47	

	Metric Attribute Landmarks	50	
	Measures of Stylistic Variation		
	Changes in Stylistic Diversity by Site Component	50	
	Monte Carlo Simulations of Sample Size Effects on Richness and Evenness	52	
	Measuring Metric Variation within Discrete Styles and Reduction Method by Site Component	52	
	Hypothesized Patterns from Restricted Knowledge in Measures of Stylistic and Metric Variation	53	
	Additional Variables Examined	53	
	Toolstone Quality	53	
	Artefact Curation	54	
	Tool Function: Dart-Arrow Index Application and Discriminant Function Analysis	54	
	Sample	55	
	Examined Archaeological Sites and Site Components	55	
	Determining Site Component Age Estimates	55	
	Chronological Distribution of Site Components	62	
	Artefact Sample Description	63	
	Artefact Material Identification	66	
7	Lithic Technological Organization	69	
	Impacts of Material Quality and Curation on Variation	69	
	Curation Impact on Metric Attributes	69	
	Curation by Period	69	
	Curation by Region	69	
	Material Quality Impact on Metric Attributes	69	
	Material Quality by Period	69	
	Material Quality by Region	72	
	Curation and Material Quality	72	
	Functional Analyses	75	
	Stemmed Dart-Arrow Index	75	
	Discriminant Function Analysis for Unstemmed Dart-Arrow Index	75	
	Stylistic Variation by Functional Class	79	
	Summary	79	
8	Assemblage Stylistic Diversity and Metric Variation	81	
	Sample Size and Time Averaging Effects on Assemblage Stylistic Variation	81	
	Sample Size Effects on Stylistic Measures	81	
	Time Averaging Effects on Stylistic Measures	81	
	Chronological and Spatial Trends in Assemblage Stylistic Variation	81	
	Temporal Trends in Stylistic Measures	81	
	Spatial Trends in Stylistic Measures	90	
	Summary of Stylistic Chronological and Spatial Trends	91	
	Site Function and Seasonal Rounds	91	
	Spatial and Temporal Trends in Artefact Styles	91	
	Trends by 500 Year Period	91	
	Trends by Region and 500 Year Period	91	
	Sample Size and Time Averaging Effects on Assemblage Metric Variation	96	
	Sample Size Effects on Metric Measures	96	
	Time Averaging Effects on Metric Measures	96	
	Chronological and Spatial Trends in Metric Variation	96	
	Temporal Trends in Metric Measure	96	
	Spatial Trends in Metric Measures	107	
	Summary of Metric Chronological and Spatial Trends	107	
	Summary	108	
9	Inferring Cultural Transmission	109	
	Key Findings	109	
	Assemblage Diversity Analyses	109	
	Sample Size and Time Averaging Effects on T _f and T _e	109	
	Estimating Site Component Deviation from Neutrality (T _f and Theta)	110	
	Estimating Theta	110	
	T _f compared to Theta	114	

		ial and Temporal Trends in T_f - T_e	116		
	-	al Trends in Innovation Rate and Cumulative Richness	116		
	Summa	ry	117		
10	Discuss	sion	121		
		ng Knowledge Restriction in the Salish Sea	121		
		rall Findings	121		
		itional Variables: Material Quality, Curation, Sample Size, Time-Averaging, and Shifts in Tool Function	123		
		poral Trends in Artefact Styles	125		
	Inter	preting Observed Deviations from Neutrality	125		
		ence of Prestige on Learning and Patterns in the Record	125		
		mary	127		
	Impacts	s of Household and Group Interaction on Lithic Craft Learning and Relational Wealth	127		
		ence of Household Economics on Dart and Arrow Learning	127		
	Deg	ree of Group Interaction, Seasonality, and Lithic Craft Learning	128		
	Assemb	plage Diversity and Styles Represented at Specific Site Components	131		
	Loca	arno Beach (DhRt6)	131		
	Mon	tague Harbour (DfRu13)	131		
	Mar	pole (DhRs1)	132		
	Gler	rose Cannery (DgRr6)	133		
	Engl	lish Camp (45SJ24)	134		
	Mus	queam Locality (DhRt4)	135		
	Cattle Point (45SJ1)		135		
	Dior	nisio Point (DgRv3)	136		
	Chei	rry Point (45WH1)	136		
	Bied	lerbost (45SN100)	136		
	Summa	ry	137		
	Cultura	l Transmission Theory and its Utility in Addressing Theoretical Issues in the Salish Sea	137		
	The Uti	lity of, and Issues With, Studying Older Archaeological Collections	138		
11	Conclu	sions	141		
11		or Future Work	141		
		Directions for Cultural Transmission Studies	142		
		her Examining Knowledge Restriction and Lithic Technological Organization in the Salish Sea	142		
	Conclu		143		
Bibl	Bibliography				
Арр	endix A	Exploratory Data Analyses	169		
A	and: P	New Dedicaankan Date Context Summaries	175		
Арр		New Radiocarbon Date Context Summaries 00 Biederbost	175 175		
		Cherry Point	175		
		7 Semiahmoo Spit	1/8		
	4 3 W П I	/ semannoo spn	101		
Арр	endix C	Radiocardon Dates and Date Provenience Data	183		