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# An interdisciplinary study of an aesthetic particularism: the 'Split representation in the Art of Asia and America'

Pothier, Benjamin

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University of Plymouth

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**UNIVERSITY OF  
PLYMOUTH**

**AN INTERDISCIPLINARY STUDY OF AN AESTHETIC PARTICULARISM:  
THE SPLIT REPRESENTATION IN THE ART OF ASIA AND AMERICA**

*by*

**Benjamin Pothier**

A thesis submitted to the University of Plymouth  
in partial fulfilment for the degree of

**DOCTOR OF PHILOSOPHY**

School of Art, Design and Architecture

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## **Author's declaration**

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Doctoral College Quality Sub-Committee. Work submitted for this research degree at the University of Plymouth has not formed part of any other degree either at the University of Plymouth or at another establishment.

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A handwritten signature in black ink, consisting of a large, sweeping loop followed by a vertical stroke and a diagonal line extending upwards and to the right.

Date: 7th January 2022

**Abstract: Benjamin Pothier**

**An interdisciplinary study of an aesthetic particularism: the ‘Split representation in the Art of Asia and America’.**

This thesis consists of an interdisciplinary research on an aesthetic particularism mentioned by anthropologist Claude Levi-Strauss as “The split representation in the Art of Asia and America” in his 1944 eponymous essay. Most researchers include in this group the Ainu and Jōmon People from Japan, tribes from the Amur Basin, Haida people from the Northern West Coast, Ancient China (Yangshao and Shang Dynasty), Māori People from New Zealand and Kadiweu people from Brazil.

I conducted this inquiry through an online study of academic papers and historical accounts available in online databases, by doing researches at research Libraries in Paris, through field researches in the Arctic, Brazil, Hawaii and Nepalese Himalayas, and email exchanges with some prominent researchers in the disciplines related to the subject, on a six years period.

In the framework of this research I was also granted an access to National Geographic's Genographic Project database, and allowed by Claude Levi-Strauss's widow to consult his unpublished expeditions notebooks at his archival fund at the research Library of the National Institute of Art History in Paris.

After presenting Levi-Strauss's Life and the roots of his theories, I discuss more recent perspectives on the subject, including the researches of the British anthropologist Alfred Gell.

Before exposing the cases of the widely acknowledged connections between the pattern making habits amongst certain hunter-gatherers tribes with the taking of entheogenic drugs during rituals, with the Shipibo people from the Peruvian Amazonia and their ritualistic use of Ayahuasca as a case study.

I continue by providing dedicated inter-disciplinary case studies on the specific patterns of each populations from the Split Representation groups using up to date researches results in the fields of Art theory, ethnobotany and allied sciences.

Using an interdisciplinary and technoetic approach, My first original contribution to knowledge consists of a demonstration of the flaws in Levi-Strauss theory by documenting how he based his overall reasoning on now outdated data that have been for some completely refuted since the publication of his essay.

I also propose an alternative theory on the split representation, by highlighting the common practice of shamanism among the various people cited by Levi-Strauss, and how entoptic visual imagery derived from altered states of consciousness, primarily induced by psychoactive plants, as well as animistic self-other identification and the influence of shamanic type rhythmic drumming might explain for a part the similarities between those diverse artistic styles.

Finally, this set of new knowledges brings new perspectives and possible explanations to the function and origins of Art and their influences on early human cognitive development.

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## Table of Contents

Introduction .....	25
Problem.....	28
Purpose Statement .....	30
Significance statement.....	32
Literature review.....	36
Methodology.....	52
Limitation of this dissertation .....	64
1. The Split Representation Question.....	67
1.1.1 Early researches on the split representation .....	70
1.1.2 Franz Boas .....	70
1.1.3 Claude Levi-Strauss .....	76
1.2 Contemporary perspectives on the split representation question .....	82
1.2.1 Jan Deregowski 's 'a note on the possible determinant of "split representation" as an artistic style' .....	85
1.2.2 Partial refutation of Jan Deregowski.....	87
1.2.3 Alfred Gell . Art and Agency.....	89
1.3 Historical context of Claude Levi-Strauss essay (1945).....	91
1.3.1 D.N.A discovery and genetic lineage mapping (1950 to present days) .....	95
1.3.2 Ritualistic use of entheogens and tribes: contemporary studies .....	97
1.3.3 Relevance of a new contemporary study of the split representation phenomenon.....	100
1.4 Patterns and tribes.....	104
1.4.1 Early modern human dispersal and the Out of Africa (OoA) model.....	104
1.4.2 Hunter-gatherers and the (Upper?) Palaeolithic cognitive revolution.....	108
1.5 Cognitive sciences, human creativity and the Upper Palaeolithic cognitive revolution	111



1.5.1	Nested diamond pattern petroglyph found in the Billasurgam Cave complex in the Kurnool District .....	117
1.5.2	Ainu patterns and Abstractness .....	120
1.5.3	Spiral motifs in European rock art .....	122
1.6	Ayahuasca and the Shipibo people, a case study.....	124
1.6.1	Ayahuasca, a summary presentation. ....	130
1.6.2	Ayahuasca visions and geometric patterns .....	131
1.6.3	Shipibo patterns, ayahuasca and Peruvian copyright laws , a case study : ‘A legally acknowledged connection between patterns visualization under the influence of an entheogen and pattern making on textiles’ .....	134
1.7	Split representation and Shamanism .....	138
1.7.1	Shamanism .....	138
1.7.2	conclusion.....	142
	Preamble to the case studies : an inter-disciplinary study of the Ainu people, Haida people, Māori people, Shang dynasty, Kadiweu people and the split representation question. ....	144
2	AINU.....	147
	Preamble: .....	147
2.1	General overview.....	148
2.1.1	Jōmon – Ainu Lineage.....	152
2.1.2	Proven genetic Lineage: .....	153
2.2	Culture .....	161
2.2.1	Religion and Belief System .....	162
2.2.2	Shamanism and Animism .....	163
2.2.3	Iyomante, the Bear ritual.....	166
2.2.4	Tattooing .....	168
2.2.5	Medicine and ethnobotanic records. ....	172
2.3	Ainu Patterns .....	183

2.3.1	Meaning of the Patterns .....	187
2.3.2	Sermaka omare: the Ainu concept of ‘Spiritual protection’ .....	189
2.3.3	Mandalas, pattern-making and cognitive sciences.....	190
2.3.4	Possible origin of the Patterns .....	193
2.3.5	Estimated date of the Patterns .....	200
2.4	Conclusions and limitations .....	204
3	HAIDA.....	209
3.1	Preamble .....	209
3.2	General overview .....	210
3.2.1	Proven genetic lineage.....	211
3.3	Culture.....	213
3.4	Haida and Northern West Coast Styles.....	216
3.4.1	A note on Franz Boas study of the facial paintings styles of the Haida .....	224
3.4.2	Origin of the Patterns.....	226
3.4.3	Estimated date of the Patterns .....	233
3.5	Shamanism and ethnobotanic records .....	234
3.5.1	The Devil’s Club ( <i>Oplopanax horridus</i> ); A potential Northern West Coast entheogen.....	239
3.5.2	Discussion.....	243
3.6	Relevance of Levi-Strauss’s theories on Northern West Coast Art in the lights of new discoveries .....	244
3.7	Conclusion.....	247
4	MĀORI.....	251
4.1	General overview .....	251
4.1.1	Proven Genetic Lineage .....	255
4.1.2	Polynesian dispersal model map.....	257
4.1.3	Possible implications of this genetic proximity on the Split Representation Question 258	
4.1.4	Limitations to the dissemination theory: The case of Polynesia .....	260

4.2	Culture .....	261
4.2.1	Religion and belief system.....	263
4.2.2	Medicine and Pharmacopeia.....	265
4.2.3	Rongoa.....	269
4.2.4	Tattooing .....	271
4.3	Māori Patterns.....	277
4.3.1	Description of the patterns .....	277
4.3.2	General view of the pattern .....	278
4.3.3	Discussion .....	280
4.3.4	A note on the first historical western representation of a Māori tattoo .....	283
4.3.5	First traces of Māori Patterns.....	287
4.3.6	Dating of the Patterns .....	289
4.3.7	Discussion .....	290
4.4	Puzzling facial painting case in the Marquesas .....	293
4.5	Shamanism and ethnobotanic records.....	295
4.6	The Case of Coriaria Arborea.....	297
4.6.1	Tutu Tree , Tattooing and Patterns .....	304
4.6.2	Tutu Poisoning Symptoms and Māori Shamanism and Culture .....	307
4.7	Conclusion .....	312
5	SHANG DYNASTY.....	319
5.1	Preamble .....	319
5.2	General overview.....	320
5.2.1	Proven Genetic Lineage .....	321
5.3	Culture .....	323
5.4	Shang Patterns and the Taotie .....	326
5.4.1	Meaning of the pattern .....	328
5.4.2	Description of the pattern .....	330
5.4.3	Estimated date and origin of the pattern.....	331
5.4.4	Approximative Timeline of the Chinese civilization .....	333

5.5	Discussion.....	334
5.6	Shang shamanism and entheogenic drugs .....	335
5.6.1	Preliminary Conclusions.....	345
5.7	Levi-Strauss’s approach to Shang art and the split representation.....	347
5.8	Conclusions .....	354
6	KADIWEU .....	358
6.1	General overview .....	358
6.1.1	Proven genetic lineage.....	360
6.2	Culture.....	365
6.2.1	Shamanism.....	366
6.2.2	Tattooing.....	370
6.2.3	Kadiweu Patterns .....	374
6.2.4	General view of the Patterns .....	375
6.2.5	Discussion.....	377
6.2.6	Origin of the pattern .....	382
6.3	The Case study of <i>Anadenanthera colubrina</i> var. <i>cebil</i> .....	385
6.4	A study of Claude Levi-Strauss’s expeditions notebook and photographic archives in the lights of his essays on the Caduveo and the split representation .....	391
6.4.1	Broad general view of the fund .....	392
6.4.2	Content of the boxes.....	393
6.4.3	Ascertainment.....	396
6.5	Caduveo compositional procedures and Andean influences .....	407
6.5.1	Discussion.....	410
6.5.2	Estimated date of the Patterns .....	411
6.5.3	Conclusion.....	412
	Final Conclusion .....	415
	BIBLIOGRAPHY.....	428

APPENDICES ..... 455

Appendix [A] : Grayanotoxins poisoning symptoms, artistic styles from the SRQ taxon  
and Siberian Shamanism..... 456

**LIST OF ABBREVIATIONS:**

AMH : Anatomically Modern Human

ASC : Altered State of Consciousness

LGM : Last Glacial Maximum

M.P : Middle Palaeolithic

OoA : Out of Africa

SRQ : Split Representation Question

SRT : Split Representation Taxon

SSC : Shamanic State of Consciousness

U.P : Upper Palaeolithic

**LIST OF FIGURES:**

Figure 1 : Similarities between the artistic styles from the SRQ taxon ..... 68

Figure 2 : Introduction by Franz Boas of ' "Facial paintings of the Indians of northern British Columbia. Memoirs of the AMNH' , (Boas, 1898) ..... 73

Figure 3 : Early human dispersal . (Demenocal and Stringer, 2016) ..... 104

Figure 4 : Comparison of Entoptic Phenomena and Rock art, (Lewis-williams et al., 1988) ..... 113

Figure 5: Nested diamond design dated between 5400-5000 BP, (Taçon , Boivin et al. 2013) ..... 117

Figure 6: honeycombs still found in the cave complex.' ( Taçon and Boivin et al. 2013) ..... 119

Figure 7: Heinrich Klüver’s Form Constants, (Horowitz, 1970: 216)..... 127

Figure 8 : Visual Overview, Shipibo patterns ..... 133

Figure 9: Resolución Directoral RD N 540/INC-2008 (extract)..... 137

Figure 10 : a shaman in Siberia, earliest European depiction of a shaman, by Dutch explorer Nicolaes Witsen in the late 17th century. .... 139

Figure 11: Visual overview : Ainu styles ..... 146

Figure 12 : 'Snow goggle Dogu' (Miyagi 1000 BCE -400 BCE) and inuit with 'snow goggles' ..... 156

Figure 13 : Ledum Palustre, Thomé, O. W. "Flora von Deutschland, Österreich und der Schweiz Gera." Germany, Köhler (1885)..... 165

Figure 14 : ainu women wrist tattoo , (Landor, 1893:253) ..... 169

Figure 15 : : ainu woman with lips tattoo, (Landor, 1893:60) ..... 170

Figure 16 : *Corydalis ambigua* Cham. & Schltdl. .... 176

Figure 17 : *Artemisia vulgaris* L. .... 178

Figure 18 : Rhododendrons Distribution, (Kuttapetty et al., 2014) ..... 180

Figure 19 : Ainu people in Tokyo (1904) before leaving for St. Louis. “The Ainu Group at the Saint Louis Exposition” by Frederick Starr. Library of Congress ..... 184

Figure 20 : Ledum Palustre , Hamilton, Edward. "The flora homoeopathica: or, illustrations and descriptions of the medicinal plants used as homoeopathic remedies/by Edward Hamilton." London:, Leath & Ross (1852). ..... 195

Figure 21 : 'Snow goggle Dogu' Guimet Museum, 1000-300 AD ..... 201

Figure 22 : Visual overview , Northern West Coast Styles ..... 208

Figure 23 : 'Haida Portrait Mask.', (Baflour, 1907)..... 210

Figure 24 : Chilkat Blanket. Native American, Tlingit people, Ketchikan, Alaska, 19th century. Birmingham Museum of Art Goat wool, cedar bark. 35 1/4 × 65 3/4 inches. Museum purchase, 1956.48.48. .... 218

Figure 25 : Proposed eyes circulation on a Chilkat Blanket .....	222
Figure 26: Haida facial paintings, Plate I , (Boas, 1898 ) .....	225
Figure 27 : Northern West Coast Style and 'Humanization' visual technique .....	230
Figure 28 : A Tluwulahu mask: 'Kwakiutl man, head-and-shoulders portrait, facing front, wearing a mask depicting a loon on top of a man's head to facilitate the loon changing into the form of a man. ' Edward Curtis, 1914, Library of Congress .....	236
Figure 29 : The Author as seen by someone suffering from either Lateral (1) or Vertical (2) Diplopia .....	237
Figure 30 : Devil's club or devil's walking stick ( <i>Oplopanax horridus</i> ) .....	241
Figure 31 : Visual Overview, Māori style .....	250
Figure 32 : Gilsemans, Isaac : A view of the Murderers' Bay, as you are at anchor here in 15 fathom [1642]. Ref: PUBL-0086-021. Alexander Turnbull Library, Wellington, New Zealand. /records/23220299 .....	254
Figure 33 : Geoff Irwin and Carl Walrond, 'When was New Zealand first settled? - The date debate', Te Ara - the Encyclopedia of New Zealand .....	257
Figure 34 : Right: Kadiweu woman (string figure), probably 1936, Claude Levi-Strauss Fund NAF 28150 (245) - Left : String Figure, Hawaii, 2019, personal collection, Benjamin Pothier .....	259
Figure 35 : A War Canoe of New Zealand, By Sidney Parkinson , (Parkinson, 1773) ...	262
Figure 36 : Tohunga Suppression Act 1907 .....	266
Figure 37 : Carved Boxes or chests, (Hamilton, 1896:423 ) .....	278
Figure 38: 1) THE HEAD OF A NEW ZEALANDER, 1773, ENGRAVING FROM A WASH DRAWING MADE BY SYDNEY PARKINSON , 1773 / 2&3) : Common facial tattoo and leg patterns reported by Hamilton, 1901 .....	283
Figure 39 : TATTOOING IN THE MARQUESAS BY WILLOWDEAN CHATTERSON HANDY Bernice P. Bishop Museum Bulletin i WITH 38 PLATES BAYARD DOMINICK EXPEDITION Publication Number 3 HONOLULU, HAWAII Published by the Museum 1922.....	295
Figure 40 : Puhou, <i>Coriaria arborea</i> Linds., collected [unknown New Zealand location], New Zealand. Gift ofASUREQuality Limited, 2012. CC BY 4.0. Te Papa (SP099539) .....	298
Figure 41 : Visual Overview, Shang Dynasty and Neolithic China Styles .....	318
Figure 42 : Clear Taotie detail on a 'Ding' Bronze tripod vessel, (1250-1046 BC), Cleveland Museum of arts .....	327
Figure 43 : Jar with Spiral Designs, 3300 - 2650 BC, pottery, Cleveland museum of art .....	336
Figure 44: 1) left: Lattice-tunnel form constant hallucination from marijuana (Siegel, 1977) 2) right: Yangshao culture, neolithic China, c. 2600-2300 BC, ceramic - Östasiatiska museet, Stockholm .....	338
Figure 45 : Max Loehr Five Style Sequence, with a chronological evolution from the abstract to the figurative and increased complexity (Moreno, 2003).....	351
Figure 46 : Visual Overview, Kadiweu Style .....	357

Figure 47: Guaycuru women, from Castelnau, Francis de. "Expedition dans les parties centrales de l'Amérique du Sud." (1850).....	359
Figure 48 : Kadiweu Woman, 1892 (Probably from Boggiani).....	376
Figure 49 : anadenanthera colubrina var cebil .....	385
Figure 50 : photographie d'une femme caduveo avec peintures sur le visage (NAF 28150 (246) .....	389
Figure 51 : couverture de l'Evangile selon Saint Jean couvert de motifs caduveos (NAF 28150 (126)) .....	394
Figure 52 : calque de dessins caduveos conservé avec les documents ayant servi à l'illustration d'ouvrages notamment Tristes tropiques (NAF 28150 (247) .....	400
Figure 53 : page 28 of ' The man who knew all' with caduveos pattern (NAF 28150 (126)) .....	401
Figure 54 : Caduveo drawings on tanned animal skins, NAF 28150 (247). (Hand drawings by the author).....	402
Figure 55 : Tunic fragment, 7th-9th Century, Wari culture, Peru, Metropolitan Museum .....	408
Figure 56 : Visual overview, WARI and KADIWEU STYLES .....	409



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## Introduction

'If meaning is elusive, perhaps it is because consciousness itself,  
and therefore language,  
is fractal.'

Hakim Bey

It is around 1999 that I encountered for the first time and to my own aesthetic delights some photographic reproductions of the traditional embroidery work of the Ainu people, an indigenous people from North Japan. I was conducting my master in fine arts at that time and I had started to practice quite intensely Aikido, a traditional Japanese martial art and a spiritual practice. During the same period I got acquainted with the work of Professor Claude Levi-Strauss and his essay on the split representation during our semiology and general culture courses.

The spiral, as a geometric shape and a vector of movement, plays an important role in the philosophy and practice of Aikido (Ratti, 1970), and I was fascinated by the

significant presence of spirals and whorls on Ainu designs. For the next 10 years I became involved in various artistic projects in a large number of disciplines, but the essay by Levi-Strauss kept puzzling me as I delved deeper into my martial arts practice and my overall interest in arts and creativity. As I show in this essay even though, and following my first intuitions, I have inquired through the years of research the possible connections between the intensive use of spirals on those artefacts from this indigenous people of Japan and its prominent place in the philosophy and practice of Aikido, my PhD journey has brought me to other conclusions. And I consider now those connections to be quite peripheral to the core subject of my research. By stating this I am not saying that my first intuitions were unfruitful, as they clearly are still relevant to some extent in my opinion, but that the whole question seems to be much more complex and to involve other interrelated factors of a greater importance, and in a fascinating manner.

I am passionate about this subject, as most PhD researchers are with their own, even though it is in no ways an 'obsession' for me. And I am convinced that a strong interest balanced with a proper detachment is the best way to inquire objectively such types of research questions. Since the beginning of my participation to this PhD program my own artistic practices and centres of interests have evolved and expanded, and due to my participations to various extreme expeditions and analogue space missions

worldwide, first as an expedition documentarian, then as an analogue astronaut and a human factor expert, I got the honour to be elected as a fellow of the Explorers Club, a 115 years old international professional society, in 2018.

Things happen sometimes for obscure reasons, and maybe it is simply the beauty of the art of the Ainu people that brought me to dedicate so many years of my lifetime to the subject of his essay. I hope therefore that my readers will share with me my excitement about this enigmatic case and follow me step by step as I dig deeper and deeper into various interrelated fields of research and into the core question of this dissertation, the split representation in the art of Asia and America, an aesthetic particularism.

## Problem

In his 1944<sup>1</sup> essay 'Split representation in the art of Asia and America' Claude Levi-Strauss developed a theory encompassing the overlapping fields of art theory, art history, sociology and anthropology. He alleged throughout his demonstration that the artistic styles of the tribes and cultures he circumscribed in his taxon were significantly influenced by the socio-political structure of the cultures studied while refuting diffusionists theories that could have potentially explained some similarities between the artistic styles of those cultures, through eventual cultural transmissions or borrowings.

This thesis will investigate the relevance of his theories in the light of new discoveries accomplished since the publication of his essay to the dawn of the 21st Century, and will propose an alternative explanation regarding the 'split representation question', its possible origins, meanings and implications.

---

<sup>1</sup> The essay is sometimes mentioned as being published in 1944-1945

Those new discoveries that Levi-Strauss was not aware of at the time he wrote his essay rise from decisive new techniques and disciplines, like genetic anthropology and its invaluable intake to the study of human dispersal in Asia and America since the Out of Africa (OoA) event. It also comprises the now growing numbers of studies proving the undeniable influences of the traditional taking of entheogenic substances amongst various tribes on Earth on the design of their artistic production

The study extends to a gathering, study and cross-checking of a large number of contemporary research results that in some cases partially or totally contradict some of the sources on which Levi-Strauss based his allegations, with a focus on the work of Leonhard Adam, Franz Boas, H.G Creel and Bernhard Karlgren on the art of Northwest coastal people and the one of the Shang dynasty, that as I will show can be considered as the fundamental cornerstone of Levi-Strauss's theoretical basis on the split representation question.

## Purpose Statement

I will demonstrate in this essay that one of the reasons why the theories on the split representation question (SRQ) raised by Levi-Strauss were never completely cross-checked and challenged might be the holistic nature of the question in itself, as well as its position at the border of over-lapping disciplines. A point that could be explained by the quite recent development of transdisciplinary researches (Bernstein, 2015).

This thesis contributes therefore to the body of knowledge about the SRQ at large, but also about each cultures and their artistic styles encompassed in its taxon, by providing a systematic transdisciplinary study of those cultures and their possible interrelations in the framework of the SRQ, regarding and without limitation:

- 1) Their possible genetic connection to each other's that could potentially imply a cultural borrowing or transmission/dissemination of artistic styles.
- 2) The potential identification of traditional entheogenic drugs in use within those cultures and the study of the possible correlations between the taking of those entheogens and the visions of 'form constants' that would match with their artistic styles.

3) The system of belief of each culture and their attitude toward artistic representation, and its possible incidence on those artistic styles.

4) The genealogy of their artistic styles in a wider geographic area and time period and its possible connection to their systems of belief or other significant factors in order to re-contextualize their artistic production.

In order to provide an overview of the theories developed by Levi-Strauss and their implications and ramifications, this essay starts with a summary of the current academic consensus regarding the biography of Levi-Strauss and other key researchers on whose works he based his allegations, including the Life and work of Franz Boas, 'the father of modern American anthropology', who had as it will be shown a major influence on this particular essay by Levi-Strauss. I consider as mandatory to include those brief biographical summaries as they can potentially highlight some roots of Levi-Strauss's intellectual preferences that would have directly influenced the scope and direction of his own researches on the core subject of this present study. His intellectual proximity with the Surrealist movement during his exile in New York City at the time he wrote his essay being one amongst others. This dissertation contributes therefore as well to the body of knowledge and the construction of a critical discourse about the evolution of modern anthropology and its reciprocal relation to art theory



and art practice at the turn of the 20th century in a theoretical, ontological, epistemological and historical approach.

It extends to case studies of the use of entheogens by indigenous people worldwide and its potential implications on their artistic styles, and to advances in palaeontological research and the study of the belief systems of indigenous people worldwide, including shamanism, that could have an incidence on the understanding of our research question.

### Significance statement

This research having been conducted within the framework of my participation to the Planetary Collegium research program preliminary under the supervision of the Professor Roy Ascott, it involved from my side as a researcher an holistic and technoetic approach to complex problems that represents in my opinion an essential core of the ethos of this inter-disciplinary research program that doesn't limits its scope of inquiry to the arts.

Even though the subject of this dissertation is art, I show that the SRQ is by essence a subject that requires a transdisciplinary approach in line with the aims of the Planetary Collegium. As opposed to Levi-Strauss who reduced his study and attempts at providing an explanation to this aesthetic particularism, to a socio-political and '*structuralist semiotic anthropology*' study (Gell, 1998). I will demonstrate that any attempts at studying the question as a whole makes it mandatory to include, and without limitations, the intakes coming from anthropology and allied sciences, be it from the fields of genetic anthropology, ethnobotanic, paleoanthropology, archaeology, cognitive sciences, history, art history, art theory, etc...

As I dissect Levi-Strauss's intellectual standpoints and theories he develops in his essay, a large number of those theories rising from his own personal perspective and postulates on the purpose, origins and aims of artistic creation within cultures, I explain why, and in line with the views of respected contemporary researchers, I tend to be much more convinced by theories of evolutions of artistic styles, dissemination and transmissions of cultural particularisms, and by the influence of the ritualistic use of entheogenic substances on those styles and cultural particularisms, than by Levi-Strauss's theories that -to summarize in one sentence his 23 pages essay on a subject that I will unveil in this 80000 words dissertation- tend to find in the socio-political structure of tribes and civilizations an explanation for some particular aesthetic traits

of their artistic styles. Even though the account of Levi-Strauss toward a better understanding of non-western cultures should be definitely acknowledged, a lot of his work and his 'structuralist semiotic anthropology' theories have been largely challenged by contemporary researchers. However, for some reasons, and one probably connected with the quite 'hermetic' qualities of this specific text - notwithstanding the unquestionable intellectual elegance of Levi-Strauss's scholarly work on the topics- his views on the SRQ seem to have never been confronted to the incredible new body of work and new knowledge available in the 21st century, due to the advances in disciplines as diverse as genetic anthropology, archaeology, ethnobotanics, etc...

Even if Levi-Strauss's theories were partially refuted since the publications of his essay, apparently none of those refutations were ever conducted in a transdisciplinary approach, thus explaining as I will demonstrate a kind of existing 'mild status quo' on the subject within the academic community. It is unique in the sense that Levi-Strauss's postulates on this particular subject seem to have been accepted as a kind of strictly proven theory by generations of researchers until these days, even years after the undeniable refutations of Karlgren's work on Shang bronzes on which Levi-Strauss based, and in a way grounded, a large part of his demonstration.

It is significant to remark that Levi-Strauss's famous intake to the study of myths, as well as the indisputable status and international fame he had gained at the peak of his career, might have misguided generations of scholars to accept de facto as a proven and accurate theory his hypothesis on art in general and the SRQ in particular, leading for example some following researchers to neglect during their field research the possible importance of the taking of entheogenic substances by the tribes they were studying and their potential influences on the artistic styles of those groups of population, preferring to focus on questions of kinship that were popularized by Levi-Strauss. And as we will see this past intellectual posture had an unfortunate impact on the amount of data available for interdisciplinary research in present days.

Considering the vast number of new knowledge available and the indubitable evolution of the understanding of traditional and indigenous cultures by western sciences since the mid-20th century, at a time post-colonial acculturation and environmental issues threaten the perennality of those unique cultures, a renewed perspective on the SRQ seems more necessary than ever as it might contain the keys for a better understanding of the origins of human creativity and our initial ability to live in symbiosis with Nature as a species.

## Literature review

The split representation question, by the overlapping disciplines that could potentially provide some insights on its issues, offers a quite wide field of research and literature corpus as long as one doesn't just follow the 'structuralist semiotic anthropology' method of Levi-Strauss, that could be summarized as an attempt at finding universal laws and structures beyond or behind cultural manifestations in a transcultural approach.

And in this sense I humbly inscribe myself much more in the lineage of Franz Boas, Alfred Gell or Jeremy Narby than in the path of Levi-Strauss, as I am definitely convinced of the existence of '*unique Weltanschauung of particular cultures*', a point of divergence to Levi-Strauss's views brilliantly summarized in this way by Regna Darnell:

Without Boas's groundwork documenting the distribution of myth themes and correlating masks, ceremonials, and stories, the comparative project of Lévi-Strauss could scarcely have been formulated. He adopted both the database and the historical comparative method of Boasian Northwest Coast scholarship and applied the method to revised theoretical purposes. The structures he compared throughout the Americas were not "historical" in precisely the Boasian sense, although their historical interactions provided evidence of universal mental processes. In this, Lévi-Strauss's approach is French, his thinking a product of an Enlightenment rationalism and universalism thoroughly alien to Boas's own Germanic emphasis on the unique *Weltanschauung* of particular cultures, including his own.

(Darnell, 2004)

The advancement of art theory as well as anthropological and archaeological state of research at the time Levi-Strauss wrote his essay had an influence on his work at an epistemological and ontological level. And I couldn't therefore neglect this point during my approach to the core question. Just as an example, diffusionism or even hyper-diffusionism theories that flourished during the colonization era to the middle of the 20th century in the academic circles claimed that 'Civilization' had risen either from one culture centre -like in the theories of G. Elliot Smith who considered that all higher cultures on Earth had originated from ancient Egypt, (Smith, 1915)- or from various centres but with possible diffusions processes that are now challenged, like Betty Meggers's assumption of Neolithic Japan Jōmon's culture influence on the Ecuadorian's Valdivia Neolithic culture through a supposed Neolithic transpacific migration, a theory that has been largely refuted since then by new archaeological findings (Meggers, 1962).

To 'decipher' the intellectual background and theoretical approach toward art creation of various scholars that are quoted in this dissertation seemed therefore necessary, and I have conducted such a task in the framework of this research as long as this epistemological perspective, and arguably postmodern/post-structural approach (Merriam, 2009), could bring new light to the core subject of this study.

In any cases a point remains which is the undeniable similarities between various artistic styles from different cultures that were encompassed in a way already by Boas (1897), and more significantly later on by Creel (1935), Adam (1936) and Levi-Strauss himself in what I will refer to in this essay as 'the split representation taxon'. I borrow from biology the term 'taxon' derived from 'taxonomy', first used in 1926 by Adolf Meyer-Abich, to describe my corpus of study that regroups the artistic styles of various cultures and civilization, and I solely apply this word to those apparently similar artistic styles studied and perceived as a whole in this study, not to the individuals or group of populations that were part of the cultures studied.

No further than on the first and second page of his essay, Levi-Strauss mentions:

(...) And yet, it is impossible not to be struck by the analogies presented by Northwest Coast and ancient Chinese art. These analogies derive not so much from the external aspect of the objects as from the fundamental principles which an analysis of both arts yields.

(Levi-Strauss, 1944)

Basing his views on Leonhard Adam's analysis of both arts which is arguably similar to Karlgren's inaccurate theories on the development of the Shang style. Levi-Strauss's ontological perspective and his epistemological approach that rise from it are, should I say, 'structuralist'. Throughout his essay he apparently inquires and tries to explore '*fundamental principles which an analysis of (both) arts yields*'. This denotes a philosophical

perspective about the meaning and even essence of art that I don't share with Levi-Strauss. As a trained artist, the first similarities that strike me for example between the art of the Northern West Coast and the one of the Ainu people and even with the one from the Shang dynasty, rise from a similar use of thick lines, general contrast of the works, a tendency to 'fill' the space of representation in an 'horror Vacui' style, etc... that I will formulate more precisely throughout my study.

It should be however clearly understood that my visual analysis of the artistic styles studied was in no ways an attempt to consider and 'classify' art as a 'language'. What Alfred Gell describes as 'The failure of "structuralist" semiotic anthropology in the 1970's (Gell, 1998: 163) is in my opinion symptomatic of Levi-Strauss's ontological and epistemological approach to the subject, and the undeniable influences of Saussurian linguistic on Levi-Strauss's anthropology of art theories (Gell, 1998).

Even though I did used my training as an artist on a first and should I say 'sensible' approach to my taxon, I applied during the years of research what I would define as an holistic and in a way 'technoetic' ontological and epistemological approach that I describe further in the section dedicated to my research methodology.



As I mentioned, the literature is sparse regarding the 'split representation in the art of Asia and America' in itself as a subject matter of research beyond Levi-Strauss's essay. His work has been however quoted and commented in numerous research papers and dissertations since its first publication in 1945.

My focus was first to have an in-depth look at Levi-Strauss's essay. It also broadens to some of his others published and unpublished works . I focused mainly on a study of his work on the art of the Haida people and other tribes of the Northern West Coast, and on the Caduveo people, a Brazilian tribe that he had visited in 1936. This sub-corpus includes 'Indian cosmetics' (Levi-Strauss, 1942), 'The art of the northwest coast at the American museum of natural history' (Levi-Strauss, 1943), 'The use of wild plants in tropical South America.' (Levi-Strauss, 1950), and the seminal 'A world on the Wane' (Levi-Strauss, 1955) that narrates his field research in Brazil amongst various tribes. None of those essays, even the one on the wild plants in tropical South America, ever mention nor comments any potential use of entheogenic drugs by Brazilian or Northern West Coast tribes.

My research and literature corpus have however rapidly extended to the work of Franz Boas and to all the sources quoted by Levi-Strauss in his essay once I had managed to 'integrate' the views he expressed in his rather difficult to approach work and throughout his body of work on the Northern West Coast and Brazilian tribes. Even though I am a bit familiar with Levi-Strauss's seminal work on the structure of myths, mainly through my readings of 'Story of Lynx' (Levi-Strauss, 1995) and the 'Savage Mind' (Levi-Strauss, 1966), those essays don't provide any critical information regarding the core of our research.

As I show throughout this dissertation, one of the origins of the flaws in Levi-Strauss's theoretical development about art and the SRQ lies in my opinion on his choices of references regarding the art of the Shang dynasty and the study of the Taotie, a mythical theriomorphic<sup>2</sup> figure. Levi-Strauss quotes the work of HG Creel '*On the Origins of the Manufacture and Decoration of Bronze in the Shang Period*' (Creel, 1935) at the second page of his essay, and connects it later on with the work of Leonhard Adam '*Northwest American Indian Art and Its Early Chinese Parallels*' (Adam, 1936) and Bernhard Karlgren's '*New Studies on Chinese Bronzes*' (Karlgrén, 1937). And it seems accurate to

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<sup>2</sup> adjective: theriomorphic, (especially of a deity) having an animal form. "gods depicted in theriomorphic form"

consider, and in a way following Gell (1998), that all those authors agreed more or less on the hypothesis summarized by Franz Boas in his introduction to 'The decorative art of the Indians of the north Pacific coast' :

It has been shown that the motives of the decorative art of many peoples developed largely from representations of animals. In course of time, forms that were originally realistic became more and more sketchy, and more and more distorted. Details, even large portions, of the subject so represented, were omitted, until finally the design attained a purely geometric character.

(Boas, 1897)

As I will demonstrate, even though this alleged chronological and stylistic evolution from the figurative to the abstract and symbolic might have randomly happened in some cultures during specific time periods, this was clearly not the case in the chronological evolution of the art of ancient China, and Karlgren's corroborating theories on the subject have been largely and quite definitively refuted in the last decades, due to the advances in archaeological researches in China since the 1940's that have helped to demonstrate for example the clear influence of the geometric style of Neolithic China's Yangshao Culture's pottery on the figurative yet partly geometric art of the Shang dynasty that it predates. One recent intake to the subject being Irina Zhushhikhovskaya's article '*Spiral patterns on the Neolithic pottery of East Asia and the Far East*' who highlights the puzzling fact that:

The pottery decoration of Neolithic cultures of Eastern Asia and the Russian Far East presents cases of spiral motif configurations corresponding to all the basic types of plane spiral figure. These are the Archimedes, logarithmic, clothoid spirals, and the spiral of yin-yang type, or t'ai chi figure. It may be considered as evidence that the spiral was one of the main and most developed geometrical concepts of the Neolithic population in this part of the world.

(Zhushhikhovskaya, 2008)

Zhushchikhovskaya's study provides a wider perspective on the subject as it clearly shows the existence of an anterior Neolithic curvilinear artistic tradition in a geographic area that not only encompasses ancient China but also Japan and the Amur region that are mentioned, likewise, by Levi-Strauss in his essay. In my opinion this study additionally represents the early stages of a very promising domain of research that will be probably enhanced in the future through the use of visual clustering and artificial intelligence in order to study efficiently the chronological evolution of ancient artistic styles in certain geographic areas through visual data bases analysis.

I consider that the refutation of Karlgren's work should be understood as one of the critical points that lead almost 'de facto' to a contemporary reconsideration, if not a refutation, of Levi-Strauss's theory about the SRQ. A contemporary of Karlgren, Max Loehr provided a critical approach to his theories.

Karlgren claimed to be employing a purely 'scientific' approach in his attempts to arrive at a taxonomy of the Shang bronzes, whilst Loehr employed a more intuitive approach. When a greater body of archaeological data became available in the wake of the Cultural Revolution and the recommencement of the archaeological exploration of China's past, it was Loehr's classificatory scheme which was shown to have successfully anticipated the new discoveries

(Martin, 2011)

And there is nowadays a consensus on the question as Loehr's theories were later confirmed by new archaeological findings. But what is most significant for our core subject is highlighted in this way by Matthew Martin in his review of Bagley's work on Max Loehr's theories:

An aspect of Loehr's typology which seemed counterintuitive to many scholars working on these bronzes was that recognisable zoomorphic depictions appear to have developed out of earlier abstract decorations. The assumption of most commentators, including Karlgren, was that the line of development was reversed – initially realistic depictions of animals gradually became abstracted and stylised, the process believed to lie behind the development of the Chinese writing system.

(Martin, 2011)

And I will demonstrate the implications of existing 'earlier abstract decorations' from which had risen 'recognisable zoomorphic depictions', not only toward a refutation of Levi-Strauss's theories that were built in opposition to those postulates that have ultimately proven to be accurate.

As shown, Levi-Strauss based therefore his theories on works published by his predecessors in the overlapping fields of art theory, art history and anthropology, a part of them having been undeniably refuted since their publication. A point that is however rarely if ever mentioned in the academic literature regarding a critical approach to Levi-Strauss's views on the SRQ. Indeed, even though 'Structural Anthropology' as a global theory has been largely challenged in the last decades, few works are however available regarding the split representation in itself. As I mention throughout this thesis, Levi-Strauss himself and probably until his death considered his theory on the SRQ as unchallenged. A point that is even documented by the Professor Yves-Alain Bois:

*"I do not know if Lévi-Strauss's argument has been disproved—my guess is that it has not, not because it is fool proof, of course, but simply because it does not seem to have interested the specialists in the field.<sup>23</sup>*

and in footnotes:

*"23. My friend Marcel Hénaff, who teaches anthropology at Uc san Diego, asked Lévi-Strauss on my behalf if his essay had ever been commented on (discussed, approved, rebutted) by his peers. The laconic answer was no."*

(Bois, 2015)

If I mention in this dissertation some critical works about Levi-Strauss's views regarding the SRQ, mainly by Alfred Gell and Jan Deregowski, to my knowledge and following the aforementioned comments by Bois (2015) there is however a lack of critical studies of

this topic in the academic literature. His essay has been however widely quoted since its publication ( at the time I am writing those lines in 2020, the essay in itself is reported to be quoted 62 times in other publications according to Google Scholar database, but the book 'Structural Anthropology' in which it was republished in extenso as a chapter in 1963 is credited of 9564 references. The chapter was even included later in 'The anthropology of art: a reader' (Morphy and Perkins, 2009).

As I mention the lack of existing pluridisciplinary approaches to the subject in the academic literature, I need to highlight, based on my body of research, how I tend to consider that most references made by other scholars to Levi-Strauss's specific work on the SRQ are generally focused on only one sole aspect of his postulates (Like Deregowski who focused mainly on chain-type drawing), when they are not inaccurately summarizing his theories to the sole case already developed by Boas of '*a technical need for the representation of a three-dimensional element on a two-dimensional surface*' (Lopes, 2014), which in my opinion applies to the art of the Northern West Coast but hardly to the art of the Shang dynasty as I demonstrate throughout this dissertation following the indisputable refutation of Karlgren's theories on the subject.

Other scholars have chosen to highlight only the assertion by Levi-Strauss that split representation is an unconscious need existing amongst those societies *'to express 'a deeper and more fundamental splitting, namely that between the dumb biological individual and the social person whom he must embody'*, basing his postulate on the beliefs of the Caduveo people who considered that unpainted (tattooed) humans are 'dumb'. (Pollock, 1995).

More recently, in his PhD Dissertation *'Ambiguous artefacts : towards a cognitive anthropology of art'* Jean-Luc Jucker (2012) mentions the SRQ and in my opinion rightfully credits Boas and Levi-Strauss of their own respective postulates on the subject, even though he understandably summarizes slightly Levi-Strauss's approach to the question as it is not the core subject of his study. He highlights in which ways the acceptance of what he refers to as Levi-Strauss's 'observations' *'that split representation occurs in cultures that could not possibly have been in contact: there are instances of it in the art of ancient China, in Māori art (New Zealand), and finally in Caduveo (South America) art'* poses questions about the potential existence of cross-cultural determinants of art. Once again, as I demonstrate throughout this thesis, I consider that those supposed 'observations' by Levi-Strauss are in fact only assumptions, as he grounds his theory on Karlgren's erroneous postulates.



The most satisfying analysis of Levi-Strauss theory lies for me in the work of Stephan Moebius and Frithjof Nungesser that I would label as an essay at the border between sociology, history of art and art theory. In 'Total Art. Durkheim, the Durkheimians, and the Arts' (Moebius and Nungesser, 2013) they tightly summarize Levi-Strauss's theory on the SRQ in this way:

The 1945 essay concentrates on the splitting of representation and attempts to prove that this ultimately corresponds to the dualism of face and mask, of nature and culture, "person and impersonation, individual existence and social function, community and hierarchy

(Moebius and Nungesser , 2013)

And as we will see I tend to adhere to this definition.

Once I had managed to extract the pith and marrow of Levi-Strauss's essay, and underwent through the cross-checking of the sources he relied on, as shown in the preceding sections, I spent my time working on the dedicated case studies. Many of this dissertation's sources come from academic papers published by anthropologists, but it clearly extends to other disciplines and types of documents, including the catalogues of indigenous or ancient art exhibitions organized at major institutions like the British Museum (The power of Dogū: ceramic figures from ancient Japan. London: British Museum, 2009) or the Smithsonian's Arctic Studies Center (Ainu: spirit of a

northern people, 1999.) that provide consistent theoretical accounts to the present study as well as reliable iconographic resources.

This research having been conducted through a thorough examination of existing contemporary research results, in a large number of interconnected disciplines, available on online databases disseminated worldwide, that are considered to represent the 'state of research' on my main subject, it also extends to an in-depth study of explorers' journals sometimes dating back to the 16<sup>th</sup> century or earlier, to physical-library research of documents unavailable as digitalized documents, including a study of Levi-Strauss's expeditions notebooks and archives in his archival fund at the INHA library through a special authorization granted to me by Claude Levi-Strauss's widow.

The study of explorers' diaries, like the one of the famous Captain James Cook that documents the first western encounters with the indigenous population of present day New Zealand (Māori: Aotearoa), or 'The Terena and the Caduveo of Southern Mato Grosso, Brazil' By Kalervo Oberg, a seminal study published by the Smithsonian institution which made available to the English readers multiple references to the field studies conducted in Brazil by José Sánchez Labrador and other Jesuits explorers in the

16th century, that were previously published only in Spanish; or 'Ainu Economic Plants', an extensive taxonomy of the plants used by the Ainu people conducted in English by the reverend John Batchelor, an Anglican English missionary to the Ainu people, and the Dr Kingo Myabe in 1896, and based on a cross-checking of a pre-existing report from the Tokugawa shogunate era that was only accessible in Japanese, have provided me numerous times some critical information about the past use of potentially entheogenic substances by the tribes studied that were in many cases either unknown or never mentioned by contemporary field researchers. Regarding Claude Levi-Strauss's archives, the exclusive access granted to me by his widow to his field research notebooks and other materials from his 1936 expedition have provided me an opportunity to deliver a critical assessment of those documents that I have included in the case study of the Kadiweu people (6).

Finally, regarding shamanism, its frequent connection to the traditional use of entheogenic substances and its possible influences on the artistic styles of the split representation taxon, I tend to adhere to the neuropsychological model based on Heinrich Klüver's form constants' researches on Mescaline (Klüver, 1926), popularized by Lewis-Williams (1988) in regards to his study of South African rock art, and explored since then by many scholars (Narby, 1998; Roe, 2004; Rättsch, 2005; Luke, 2010; Winkelman, 2019), in the fields of archaeology, ethnobotanic, anthropology, ethno-

mathematics or psychology. I tend to adhere to this model as a researcher and as an artist, but also considering, as I document, that I have experienced myself in the framework of this research, as a 'psychonaut' and explorer, the triggering of visions of form constants during my participation to an Ayahuasca ceremony through my own taking of this entheogenic beverage. I can only testify that the traditional taking of certain entheogenic plants or substances that have been used for millennia in certain geographic areas can indubitably trigger the visions of form constant that are puzzlingly similar to the shapes of the traditional decorative patterns that have been in fashion within those culture for thousands of years.

For each case study I relied on the work of renowned experts on the fields and the most recent studies on the subject as long as there appeared to be a consensus amongst the academic community, with as much cross-checking of information as I could perform in the framework of this research. I would argue that the scope of my research makes it irrelevant to mention or comment here in details all the literature that I have consulted for each case study on a six years period. For practical reasons those sources are however highlighted in each case studies and of course listed in the biography.

## Methodology

As mentioned in the previous sections, transdisciplinary research is still a rather new scientific approach. And one of my postulates is that the 'split representation in the art of Asia and America' is a -If not 'the'- transdisciplinary subject '*par excellence*'.

I however consider that such type of intellectual approach to a subject requires a very strict scientific mindset and an appropriate research methodology in order to avoid the risk of falling into fallacious theories. And it should be highlighted again that if Levi-Strauss seemed to show some reluctance to conduct his own study at the beginning of his essay, it is precisely because false diffusionist theories were legion at the time he wrote his own essay.

I would qualify my methodological approach as influenced by Ascott's concept of 'technoetics' (Ascott, 1997), and more particularly to the acceptance of the world as expressed in the official presentation of the eponymous academic journal for which he acts as the editor, 'Technoetic Arts':

Technoetic Arts focuses upon the juncture between art, technology and the mind. Divisions between academic areas of study, once rigidly fixed, are gradually dissolving due to developments in science and cultural practice. This fusion has had a dramatic effect upon the scope of various disciplines.<sup>3</sup>

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<sup>3</sup> <https://www.ingentaconnect.com/content/1758-9533>

It is indeed with a similar and therefore in a way 'technoetic' mindset that I have approached my subject. And I would argue that my training as a researcher but also my previous training as an artist have helped me to develop this transdisciplinary and 'technoetic' approach. Not only because I have myself practiced sculpture, woodworking, traditional martial arts and dance or even sewing and embroidery, or because I am familiar with the world of tattooing, some very diverse artistic disciplines that tend to echo the techniques employed within the split representation taxon. But also, because contemporary art practices and art education tend to develop a holistic approach to complex problems. This for the simple reason that in our post-modern world, *'Reality is a nexus of interrelated phenomena that are not reducible to a single dimension'* (Klein, 1984). And I couldn't agree more regarding the nature of the SRQ.

I also adhere to some extent to the concept of 'bi-cognitivism' developed by anthropologist Jeremy Narby (Olivenstein, 2001), as I consider that western-centrism might be the intellectual straitjacket that draws and constricts the limits and limitations of scientific research, for the better and the worst, regarding the understanding of indigenous knowledge. And one could state in this sense that I am at the same time an empiricist and a pragmatist.

As a trained artist with decades of practice behind me in a large number of disciplines, I know through theoretical studies but also by literally 'first-hand' experience that an artwork is the result of numerous factors, some arguably inherent to the society in which the artist was raised and in which he produces his work, some inherent to his own predispositions and his systems of belief and representation, and some inherent to the techniques he employs. But I would add that ultimately a true 'work of art' is inhabited by an 'aura', a term proposed by Walter Benjamin to describe this 'essentially ephemeral, elusive phenomenon' (Duttlinger, 2008) that I would argue makes art 'art'.

As demonstrated by Peter G Roe (Washburn, 2004) in his empirical analysis of the representational techniques of the Shipibo people that he conducted with a class of students at the University of Delaware, amongst the works of art produced by indigenous people, even the ones that apparently tend to involve some strict mathematical rules for their creation generally ultimately obey to superseding and quite often non-verbal vernacular rules that can be only acknowledged by the 'connoisseur' of the culture in which they are produced. A point that probably eludes the grasp of a large part of Western Sciences, or at least the 'structuralist semiotic anthropology' methodology.

This being stated, I tend to employ the hypothetico-deductive method for my research. Intuition is a thing, in art as well as in indigenous knowledge and maybe even in scientific research, but it seems to me that Narby's bi-cognitivist approach is also an injunction to test and validate the 'relevance' of those intuitions and the intakes of traditional knowledge through an empiricist approach. In this sense it seems reasonable to me to listen very carefully to the voices of the representatives of the cultures studied before elaborating any built-up scientific theories on those cultures. And I have proceeded in this manner as much as I could while conducting this research.

This hypothetico-deductive methodology is precisely what leads me to refute Levi-Strauss's theories, as I consider that research results coming from an intellectual reasoning, no matter how brilliant but based on inaccurate sources should be considered as assumptions only if not strictly as false results.

The methodology used to provide a critical perspective to Levi-Strauss's essay is a thing. But to conduct a pluridisciplinary research on its core subject with a renewed perspective is another one.



On one hand I have conducted a study of the scientific 'Zeitgeist' at the time Levi-Strauss wrote his essay, as well as biographical research on the Life of Levi-Strauss himself, in order to gain some epistemological and ontological perspectives on our core question. In a way my epistemological approach could be probably qualified as post-structuralist, if this word still means something at the dawn of the 21st century. And I would add and argue that if my research methodology and philosophical approach takes in high consideration the notions of 'Weltanschauung' and 'Zeitgeist' it is probably because I am convinced of the importance of those two concepts and what they imply, as a researcher, but also as an artist. As one of the conscious or unconscious role and function of the artist is in my opinion to experience and express, usually in a non-verbal way, the Zeitgeist of his epoch and a certain Weltanschauung, be it his own, the one of his group or the one of his 'client'. Thus, implying that I am keen to seek for such concepts in my approach to artworks that I didn't created myself.

On the other hand, those preliminary researches have led me to the necessity to assess the current state of research or 'status quaestionis' of several disciplines which had shown critical advances since the time Levi-Strauss wrote his essay. I have therefore conducted what we could qualify as a transdisciplinary, technoetic and systematic study of each subgroup from my taxon. I tried to maintain a balance in the systematism of my study, by providing for each group a precise summary of the state

of research of various factors related to the core question of this dissertation while also inquiring and documenting some of their specificities as my aim was not to identify any universal rules, as stated previously. It includes confirmed data about the potential genetic connection between those groups in terms of human migrations, the possible known influences or should I say 'genealogy' of their artistic style, the recorded uses of entheogenic plants or substances that could potentially trigger the visions of form constant, a description of the specificities of their artistic styles, their systems of belief, etc...

Any type of inter-disciplinary or transdisciplinary research project requires to find a subtle balance between a broad general view of the question and a deep enough study of each path of research in each disciplines involved in the study. And to conduct such type of inquiry while avoiding 'cherry picking'. The two 'main' research directions were for me to assess the relevance of Levi-Strauss's theories on the subject, and to identify key disciplines that would potentially provide new research results in connection with our subject. My main approach was therefore, in a chronological order, to :

- Cross check sources quoted by Levi-Strauss in his essay in order to assess their accuracy and level of relevance in the lights of contemporary researches. This was

partly done at the INHA Library in Paris, as a lot of Levi-Strauss's references led to papers published in academic journals and reviews before 1945 that weren't accessible online in any digitalized format.

- Review the postulates raised by Levi-Strauss in his essay, cross-check in detail his use of the hypothetico-deductive method and the ways he articulates his thoughts in order to propose his own theory on the subject. And by doing so potentially identify flaws in his reasoning. This approach has been conducted by engaging throughout those years of research into numerous step by step readings of his essay, and through the identification in the academic literature of critical studies about his work, be it in the domains of sociology, anthropology, art theory or the history of sciences.

- As much as possible, consult the earliest expeditions accounts and explorers' diaries that could contain useful data on the cultures studied, providing in some cases the first accounts of Western encounter with the culture studied. Of course, my limitation was to be only able to consult documents or translations in the English and French languages.

- Research in online database the most up to date, and as much as possible peer-reviewed researches relevant for each topic.

I had to deal of course with one of the pitfalls of transdisciplinary research. I.e. the necessity to find a balance between in-depth enough research in each field, while keeping the cohesion of the general view on the core subject. And as told by the unfortunate story of Karlgren's own failure, to advance slowly on the epistemological and ontological approach to the core subject of this present dissertation. I think I managed to do so by conducting systematic case studies of each cultures from my taxon and the specific case studies on general topics that are presented before them in this dissertation.

It should be noted that most of the data used in this dissertation are second-hand quantitative and qualitative data, apart from a series of short interviews I conducted with high ranking Aikido practitioners that I ultimately decided to remove from this essay due to thesis proportions, and few ethnographic observations I conducted during research expeditions in Hawaii, Nepal and Brazil that are peripherally related to my subject.

Data regarding the people and cultures studied in this dissertation, as well as information related to ethnobotany, genetic geography, palaeoanthropology, art theory and art history, archaeology, anthropology, and other allied sciences and sub-disciplines were gathered through a research on mostly peer reviewed research papers and Master and PhD dissertations accessible in online databases, and through a study of books, academic journals and other documents related to the topics at research libraries in Paris and in my personal collection.

Databases consulted during the past 6 years in the framework of this research include in a non-exhaustive manner : PubMed, Elsevier, ProQuest, Jstor , Taylor& Francis, Routledge, Springer, Worldcat, Wiley inter-science, EOL the Encyclopaedia of Life website hosted by the Smithsonian Institute, Research Gate, Google Scholar, PLOS ONE, etc..

Academic and specialized online journals include “The Journal of the Royal Anthropological Institute” (formerly MAN), Nature, Science, “American Anthropologist”, “Journal of Ethnobiology and Ethnomedicine”, “Wilderness & Environmental Medicine, “the official journal of the Wilderness Medical Society” , the “Journal of Psychedelic Drugs”, the “annual review of Anthropology”, *Gradhiva - Revue d'anthropologie et d'histoire des arts*, “Technoetic Arts: a journal of speculative

research”, “the Annual reports of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution”, etc...

And the online Libraries databases I have consulted include of course Primo the online database of the University of Plymouth Library, as well as the British Library’s and INHA (French National Institute of Art History) websites, Quai Branly Ethnography Museum Library database, BNF (National French Library ) database, Cambridge Core, the Smithsonian libraries website etc... It should be noted that I was also granted an access to National Geographic's Genographic project database in the framework of this research.

Classical historical accounts and archaeological documents like ‘The three voyage of Captain James Cook around the world’, ‘Tattooing in the Marquesas’ by Handy, Willowdean C, or ‘The necropolis of Ancon in Peru : a contribution to our knowledge of the culture and industries of the empire of the Incas being the results of excavations made on the spot’ by Reiss, W. (Wilhelm), were consulted through their digitalized copies available on Archive.org through an initiative by the Getty Research Institute. ‘The Terena and the Caduveo of Southern Mato Grosso, Brazil’ by Oberg, was consulted at the Biblioteca Digital Curt Nimuendaju website.

Through the kind authorisation provided by his widow, I was allowed to consult and research Claude Levi-Strauss's private archives within his archival fund at the INHA / BNF Library. This access to his archives has granted me the unique opportunity to consult and research in unpublished materials, including his Brazilian expeditions notebooks and various sets of field research photographs probably produced by Dina Levi-Strauss, his first wife.

Physical-Library researches on the overall topics were conducted at the BNF (national library of France), Quai Branly Museum's library and the INHA (national institute of art history) Library in Paris.

Researches on the artistic styles from Asia, and more particularly China and the Shang dynasty, were conducted at the research library René Grousset located at the Cernuschi Asian Arts Museum in Paris. I also visited and studied the collections on Māori and Ainu Art at the Quay Branly Museum in Paris and at Leiden Ethnographic Museum in the Netherlands, and of course the Shang dynasty bronzes at the Cernuschi Asian Arts Museum in Paris.

Physical-library researches with a focus on arctic and circum-polar tribes and their art were conducted at the UiT, Arctic Universities of Norway's Libraries during my stay at UiT Tromsø as an invited scholar at the Center for Sami and Indigenous studies, as a grant recipient of the French-Norwegian center for Social and Human Sciences grant in 2015.



## Limitation of this dissertation

First and foremost, this dissertation doesn't represent all the researches that were conducted, nor the sum of all written materials that were produced. For the sake of thesis proportion, entire sections have been dismissed in order to fit with the academic requirements. Even though the whole dissertation keeps its consistency, some sections that are not presented here have provided me insights that are inherently part of the overall final intellectual approach to the core subject.

Various hypothesis were tested and researched on a 6 years period, and if proven wrong or irrelevant I have chosen to not include them in this dissertation. For the sake of the clarity of this essay I have prioritized the sections that would concur to an assessment of the relevance or not of each postulates made by Levi-Strauss, and the sections dedicated to the case studies that can provide a wider and renewed perspective to the issues studied in this dissertation. Sections that were more related to some of my speculations on the causes of the SRQ as a whole have been dismissed for a part, and only the one that are founded on the cross-checking of the most robust research results coming from a number of disciplines are presented here.

Some of those paths of research that I didn't decided to include in the present essay are however briefly mentioned in the paper 'A walking Man from the North' (Pothier, 2015) that I have included in Appendix [B].

- This essay is the results of a transdisciplinary approach to a complex aesthetic particularism that most scholars including Levi-Strauss considered that it transcended the constraints of time periods and geographic locations, and it is therefore not an art history dissertation.
- This is not an essay on shamanism, even though it examines the possible relations between the practice of shamanism and artistic styles.
- This study is limited by the lack of existing studies of the potentially entheogenic and chemical properties of certain plants whose uses in a shamanic context are however largely confirmed in the academic literature.
- This study inquires the possible genetic lineages between those aforementioned groups from our taxon only for the sake of potentially identifying possibilities of cultural transmissions of artistic styles, and no conclusions are drawn regarding the possible influences of the genetic inheritance in themselves at a biological level toward artistic creation.

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## 1. The Split Representation Question

'Split representation in the art of Asia and America', as it was described by Claude Levi-Strauss in his eponymous essay and throughout his work, is an aesthetic particularism pre-supposedly shared by some tribes from the Arctic and subarctic regions from the North of Alaska and Canada, to ancient China and North Japan. The technique is considered by Levi-Strauss and other scholars to be also shared, amongst other tribes and cultures, by the Māori People (New Zealand) and Kadiwéu people (Brazil), and to be connected to the habit of those people and civilizations to tattoo, paint, carve and embroider a similar types of decorative patterns on the body, clothing, objects and houses.

According Levi-Strauss, quoting the work of Franz Boas, an American anthropologist:

The animal is imagined cut in two from head to tail . . . there is a deep depression between the eyes, extending down the nose. This shows that the head itself must not have been considered a front view, but as consisting of two profiles which adjoin at mouth and nose, while they are not in contact with each other on a level with the eyes and forehead . . . either the animals are represented as split in two so that the profiles are joined in the middle, or a front view of the head is shown with two adjoining profiles of the body.

(Levi-Strauss, 1944)

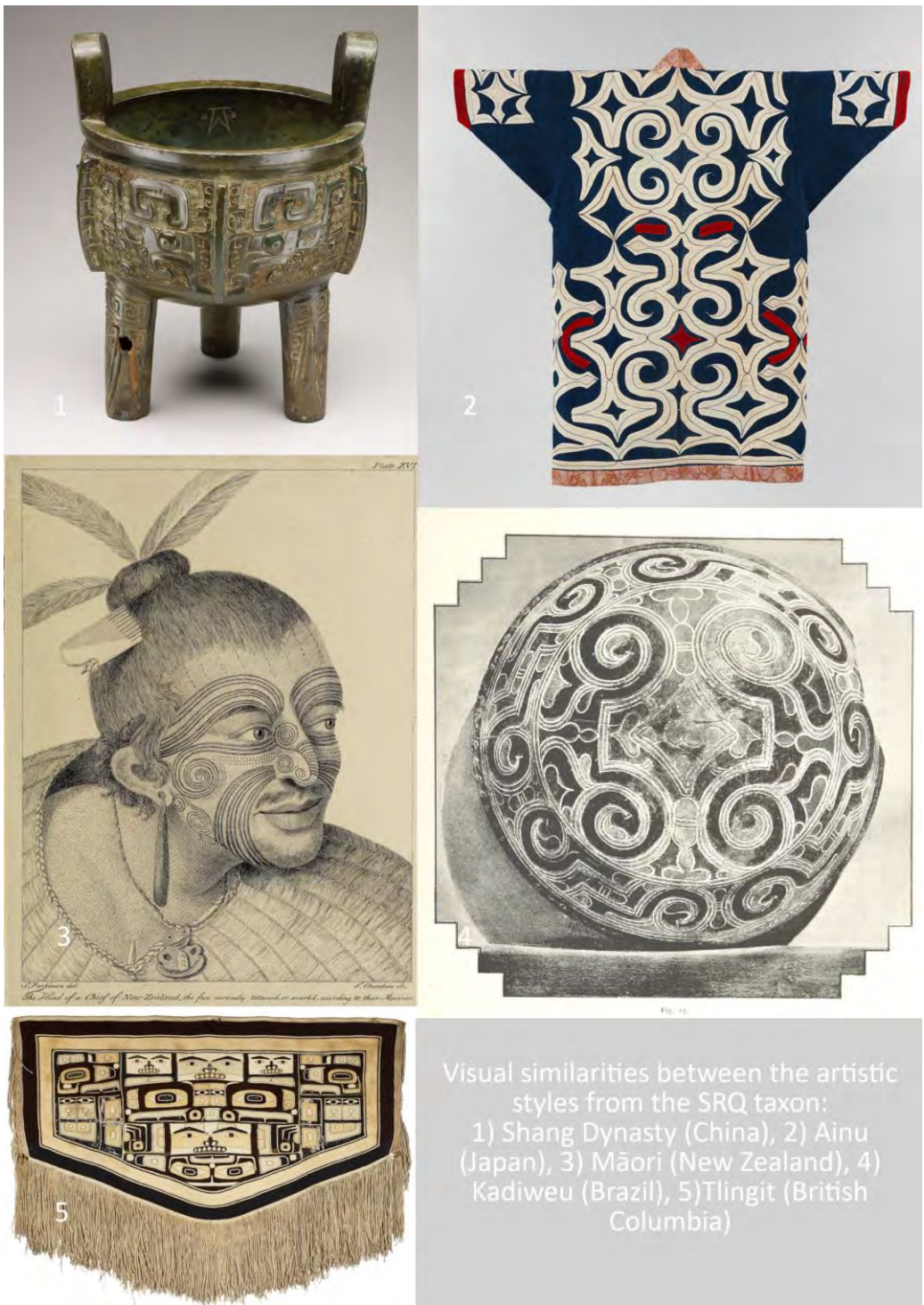


FIGURE 1 : SIMILARITIES BETWEEN THE ARTISTIC STYLES FROM THE SRQ TAXON

To summarize the theories developed by Levi-Strauss, and for which I attempt to provide a possible new reading in this dissertation, I would start by arguing that Levi-Strauss extended Boas's study of the Northern West Coast Style to other tribes presenting some undeniable similarities in terms of artistic style, and suggested through his essay that this was due to some similarities in their representational methods arising from some structural laws ruling their socio-political orders. In this sense Levi-Strauss's views on the subject cannot be summarized by this quote describing only one of the processes used in the art of the Northern West Coast. Levi-Strauss fully exposed his theories on the subject in his essay 'the split representation in the Art of Asia and America' in 1944, that was later released as a chapter of his seminal book 'Structural anthropology' in 1963. A book in which he developed further, and beyond the scope of the SRQ, his theories and structuralist approaches that are still considered to be a steppingstone in modern anthropology.

The art critic Yve-Alain Bois wrote a pertinent summarization of Levi-Strauss theories on the subject in an article featured in the academic journal 'October' published by MIT Press:

The elegant hypothesis proposed by Lévi-strauss, after several long detours and a complex analysis that I cannot even attempt to reconstruct here, is that all the cultures in which he finds similar "split representations" were what he calls "mask cultures," for which the human body was the original support of

image-making (thus the importance of tattoo in several of them) and whose social hierarchies were regimented by masquerade. He even does what I would call a Panofsky number—by which I refer to the extraordinary series of “refutations of the proofs to the contrary” that lend so much flavor to the long footnotes of Renaissance and Renascences—he explains why the “split representation” does not occur in certain “mask cultures” by showing that in such cultures, the mask does not have the same constitutive function (no longer referring to ancestry and encoding a hierarchy of genealogies, it belongs to a pantheon of gods whose image is only the occasional garment of an actor participating in a specific ritual).

(Bois, 2015)

Bois stresses the ‘*several long detours and complex analysis that (I) cannot even attempt to reconstruct here*’, that led several researchers to critic Levi-Strauss’s approach to art. The curious reader is of course more than welcomed to read Levi-Strauss’s essay in extenso, but throughout this dissertation I quote numerous extracts of his text and tried to explain his broad general views on the subject in the most objective ways.

### 1.1.1 Early researches on the split representation

### 1.1.2 Franz Boas

Franz Boas (Minden, July 9, 1858 - New-York, December 21, 1942) a German-born American anthropologist, is considered as one of the founders of modern anthropology as well as the father of American anthropology. According to the website

of the anthropology department at Columbia University, where Boas served as the Director of the department for forty-one years, bringing the discipline to the 20<sup>th</sup> century and providing many advancements in the field:

Franz Boas pioneered the concept of life group displays, commonly known as dioramas, and exhibited skulls of various peoples to demonstrate the irrelevance of brain size and argue the diminished significance of theories of racial distinction between humans.” (...) “Dr. Boas studied and widely collected information on race, linguistics, art, dance, and archaeology--commanding all four subdisciplines of anthropology. From these studies he developed his theory of relativism, debunking the prevailing beliefs that Western Civilization is superior to less complex societies. After guiding the Columbia Anthropology Department for forty-one years, Boas became Professor Emeritus in 1937. In 1942, Boas died, having established anthropology as a recognized and distinguished science.<sup>4</sup>

After conducting field work from 1885 to 1886 in the North Pacific Coast of North America, he published in 1897 in the Bulletin of the American Museum of Natural History the essay ‘The decorative art of the Indians of the North Pacific coast’.

Boas participated later on to the Jesup North Pacific Expedition (1897–1902), an impressive research project funded by a rich American banker aiming to identify the origins of native American populations. The scope of the project was such that it is still

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<sup>4</sup> <https://anthropology.columbia.edu/department-history/franz-boas>



considered as *'the foremost expedition in the history of American Anthropology'* (Freed et al. 1988).

The work of Boas had a significant influence on Levi-Strauss, and it should be even added that Boas actually died in his arms, on December 21<sup>st</sup> 1942, at Columbia University Faculty Club (Levi-Strauss, 1984). A tragical event that could have undoubtedly reinforced this influence. As I suggest in the case study of the Ainu people (7.2), the sum of publications and reports from the Jesup North Pacific Expedition that were coordinated by Franz Boas might also have been the main source of information for Levi-Strauss about tribes from the surroundings of the Bering strait area, before he wrote his essay on the split representation.

In his essay on the art of the Northern West Coast, through his study of carved, painted, tattooed and woven designs of the Haida and Tlingit people, Boas interrogates amongst other things the possible underlying connections and chains of chronology between figurative, abstract and symbolical representation; the use of perspective, and the ways to represent on a flat surface a three dimensional object, within a Northern West Coast context. Analysing by doing so the artistic and representational techniques of the Northern West Coast Indians (Coquet, 2005).

As I will show, even though his systemic study of the modus operandi of the Northern West coast artists and craftsmen provides an invaluable contribution to modern

MEMOIRS  
OF THE  
AMERICAN MUSEUM OF NATURAL HISTORY.

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The Jesup North Pacific Expedition.

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INTRODUCTION.

It is only a few years since anthropology has begun to take its rank among other sciences, and it would seem that it is already approaching the solution of its problem,—that it is laying down the laws governing the growth of culture.

The history of anthropology is but a repetition of that of other sciences. When the facts begin to array themselves in seeming order, the ultimate goal of inquiry appears to be near at hand. The fundamental laws which governed the growth of culture and civilization seem to manifest themselves conspicuously, and the chaos of beliefs and customs appears to fall into beautiful order. But investigation goes on incessantly. New facts are disclosed, and shake the foundation of theories that seemed firmly established. The beautiful, simple order is broken, and the student stands aghast before the multitude and complexity of facts that belie the symmetry of the edifice that he had laboriously erected. Such was the history of geology, such the history of biology. The phenomena, as long as imperfectly known, lend themselves to grand and simple theories that explain all being. But when painstaking and laborious inquiry discloses the complexity of the phenomena, new foundations must be laid, and the new edifice is erected more slowly.

FIGURE 2 : INTRODUCTION BY FRANZ BOAS OF ' "FACIAL PAINTINGS OF THE INDIANS OF NORTHERN BRITISH COLUMBIA. MEMOIRS OF THE AMNH' , (BOAS, 1898)

anthropology and art history that has not lost any of its relevance to these days, I have some reservations regarding his presuppositions about the anteriority of figurative representation to the production of decorative abstract patterns throughout human history, that appears to not be applicable at least within the groups from the split representation. Nonetheless, even if it must be clearly taken into considerations that this intellectual postulate was arguably part of the Zeitgeist of the epoch and is not *stricto sensu* symptomatic of the sole theoretical work of Franz Boas, I will demonstrate that this hypothesis -be it borrowed from Boas, as I suggest it, or stemmed from the work of other researchers- led Levi-Strauss, who later adopted those presuppositions for the study of the SRQ, to an apparently quite inaccurate path of research (Moore, 2000). These presuppositions are indeed clearly imprinted on the first page of Boas's essay on the art of the Northern West Coast:

It has been shown that the motives of the decorative art of many peoples developed largely from representations of animals. In course of time, forms that were originally realistic became more and more sketchy, and more and more distorted. Details, even large portions, of the subject so represented, were omitted, until finally the design attained a purely geometric character. The decorative art of the Indians of the North Pacific Coast agrees with this oft-observed phenomenon in that its subjects are almost exclusively animals. It differs from other arts in that the process of conventionalizing has not led to the development of geometric designs, but that the parts of the animal body may still be recognized as such.

(Boas, 1897)

Even though the path of evolution of the art 'of *many* peoples' might have indeed followed a chronological development from the figurative to the symbolic and the abstract, it certainly wasn't the case for many -if not all- artistic styles encompassed by Levi-Strauss in the group of the SRQ. As we will see in the section related to the study of the Upper Palaeolithic (U.P) cognitive revolution (1.4.2), and the wider study of the emergence of the production of abstract representation by AMH from the dawn of human history, abstract representation probably predates figurative representation (Von Petzinger, 2017).

It is however indubitable that Boas successfully demonstrated the influence of three dimensional carving on the development of the artistic style of the Northern West Coast on flat surfaces, a point acknowledged until today by many scholars that was also raised by Levi-Strauss in his essay on the split representation. I comment further the work of Boas in the Chapter 6 dedicated to the case studies of the Haida people and throughout this dissertation.

### 1.1.3 Claude Levi-Strauss

Claude Levi-Strauss (Brussels, November 28th, 1908 – Paris, October 30th, 2009), was a French social anthropologist, mostly known for his seminal work ‘Structural Anthropology’ and his book ‘Tristes Tropiques’ (A World on the Wane). Throughout his career as an anthropologist, his domain of research mainly covered questions of kinship, structure of myth and artistic representation (Godelier, 2018).

Levi-Strauss is still considered by many scholars as one of the ‘fathers of modern anthropology’ and even as the ‘heroic anthropologist’. Even if his work was well-recognized in the academic circles in the 1940’s and 1950’s, it is only after the publication of ‘A World on the Wane’ in 1955 that Levi-Strauss became at that time one of the most famous French intellectual, in a manner that is probably akin to contemporary prominent media personalities.

(...) The ascent of Lévi-Strauss to such pinnacles of esteem has confounded any number of commentators and the heroic anthropologist himself. Lévi-Strauss’s popularity was the French intellectual’s equivalent of the hula hoop, as Sanche de Gramont observed (1970:8). Steiner wondered if those who invoked “Lévi-Strauss” and “structuralism” like the words of a magic spell had actually read his works (1977:239). And Robert Murphy grouched that Lévi-Strauss’s “vogue has spread throughout the United States . . . making him as unavoidable at cocktail parties as the cheese dip” (1970:165).

(Moore, 2000:232)

This should be taken into consideration regarding the undeniable influence that Levi-Strauss exercised during his lifetime on generations of following anthropology and art history researchers, for better or for worst. A strong influence reflected in numerous studies that were conducted by following researchers, even decades after Levi-Strauss's essay, on some of the groups encompassed in the SRQ taxon, thus complicating my task of gathering relevant data about those groups.

The son of a painter, Levi-Strauss followed a successful academic route, studying Law and Philosophy at the Sorbonne University, and graduated in Philosophy in 1932 (Moore, J.D., 2000 ). He married the same year his wife Dina , who was at that time an ethnology researcher, *'a graduate ethnologist, a student of Marcel Mauss, and most importantly a foster child of Paul Rivet, the great Americanist and later director of the "Musée de l'Homme"'* ( Spielmann, 2016). After few years teaching at a high school in France, he pursued postgraduate studies in Sociology. This led him to follow his wife and join a French education mission at the University of Sao Paulo, Brazil in 1935 through the invitation from *'his wife's scientist-foster parent, Paul Rivet'* (Spielmann, 2016).

It is fair to mention that Levi-Strauss developed his interest in anthropology and ethnology through his wife. And that he joined her for his first field work among the

tribes of the Mato Grosso in Western Brazil, and not the opposite. Taking into account that at the time he was still 'technically' only a sociology researcher; I provide some further comments and historical details about his participation to this field research campaign in the Mato Grosso in the company of his wife in the chapter 6 dedicated to the case study of the Kadiweu people.

Despite the undeniable influences of his wife's work on the development of his own researches in anthropology, it should be highlighted that he mentions her on only one occasion in his book 'A World on a Wane' that covers their joint field work in the Mato Grosso amongst the Kadiweu and Bororo (Spielmann, 2016). Dina's influence on Levi-Strauss career seems to have been clearly underestimated and erased from historical accounts about Levi-Strauss's work, until recent time, as Ellen Spielmann highlights it (Spielmann, 2016: 690-691).

After various brief supplementary research trips into the interior of Brazil, and in 1938 a longer expedition to the far North Western part of the country where he conducted field research amongst the Nambikwara and Tupi-Kawahib, with the support of a research grant from the French government (Spielmann, 2016), Levi-Strauss returned to Europe. The second World War started shortly after his return and he was able to

escape Nazi occupied France in 1941 through an invitation from the Rockefeller Foundation (Lévi-Strauss, 1945), crossing the Atlantic in a boat amongst refugees and intellectuals including Andre Breton, the founder of Surrealism, an avant-garde artistic movement, with whom he had numerous discussions during their journey (Spielmann, 2016). An intellectual and artistic encounter that might have influenced his mindset at the time he wrote his essay on the SRQ. From 1942 to 1945, Levi-Strauss taught at the New School of Social Research in New York,

(...) interacting with anthropologists at Columbia (Boas, Linton, Benedict, Mead) and other scholars such as Kroeber and Lowie who visited New York. This personal exposure to American cultural anthropology with its emphasis on values and ethos influenced Lévi-Strauss and complemented his concerns with classifications and representations derived from Durkheim and Mauss.

(Moore, 2000:234)

Levi-Strauss finally published in 1944 his essay on the split representation in 'Renaissance' a quarterly Revue published in New York by 'l'Ecole Libre des Hautes Etudes'. The 'Free school for advanced studies' was a French university in exile founded during the war and located at the New School of Social Research in New York. It reassembled mostly French and Belgian scholars in exile and was partly funded by the Rockefeller Foundation. After the War it became the model for France based 'École des Hautes Études en Sciences Sociales' or EHESS, the 'School for Advanced Studies in



the Social Sciences', that still maintains strong links with the New School of Social Research (Rutkoff and Scott, 1983).

The essay on 'the Split representation in the art of Asia and America' was later included by Levi-Strauss in his compelling book 'Structural Anthropology' (Levi-Strauss, 1958), three years after his book 'A World on a Wane' which provided him an international recognition beyond the academic circles .

It must be finally mentioned that it is in New York that Levi-Strauss met Roman Jakobson, whose work on linguistic would have as well an important impact on Levi-Strauss's approach to anthropology research. A linguistic researcher born in Moscow in 1896, Roman Jakobson met Levi-Strauss at the 'Ecole Libre des Hautes Etudes' in New York in the early 1940's.

Lévi-Strauss, fascinated by Jakobson's account of binary oppositions in phonology, decided to apply the principle to his study of myth. According to Edith Kurzveil (1980, 1), 'Lévi-Strauss was first to adapt Saussurean linguistics to the social sciences', with the help of 'elaborations from linguistic theories' by Jakobson, Hjelmslev and Martinet.

(Lesic-Thomas, 2001: 7)

It is unquestionable that Levi-Strauss's attempts throughout of his career to establish a structuralist approach to anthropology research were largely indebted to Jakobson's pioneering researches in structural linguistics. The two intellectuals maintained an epistolary correspondence from 1942 to the death of Jakobson in 1982 (Lévi-Strauss and Jakobson, 2018).

Since the 1950's, 'structural anthropology' has been largely reconsidered. Probably as much because of the inner flaws of the research method and theory in themselves as to the incredible advancements in other fields and subfields of anthropology like genetic anthropology, forensic anthropology or cultural anthropology, that definitely brought this rather new discipline, at the dawn of the 20<sup>th</sup> century, to a status of science in the 21<sup>st</sup> century.

As summarized by Rupert Stasch, associate professor of anthropology at Reed College:

Structuralism holds that meaning in sociocultural life rests in the positional configuration of signs relative to each other in a system. The structuralist paradigm, forwarded by Lévi-Strauss, prompted anthropologists to be more thorough in noticing patterns of interconnection across heterogeneous cultural data. Notwithstanding this methodological impact, structuralism is widely rejected for reifying structures as transcendental entities, on the model of Saussurean *langue*. Other anthropological paradigms conceive structural order as being intrinsically involved with time, history, pragmatics of sign use, consciousness of sign users, and coexistence of multiple structural orders.

(Stasch, 2006)

For intellectual transparency It must be stated that the author still holds in high esteem the contribution of Levi-Strauss to the study of myths, which is however not the subject of this present dissertation, that mainly focus on his work on the 'Split representation in the art of Asia and America', an essay written at the early beginning of the development of his structural approach that has been widely put into reconsideration. I would also argue that his research on the SRQ is in a way much more 'Boasian', even though a clear structuralist approach crops out along his essay.

## 1.2 Contemporary perspectives on the split representation question

As we saw, even as ground-breaking as 'structural anthropology' was at the time of its founding by Levi-Strauss, some of his theoretical approaches tend to be largely rejected nowadays. Over the years and in fact as early as his first publications including his essay on the SRQ, Levi-Strauss's work received as much criticism as he got critically acclaimed.

The work of Lévi-Strauss has been criticized intensely on varying levels; a bibliography (Nordquist 1987) lists over one hundred critical writings in English alone. Structuralism, once, as Hénaff rather exuberantly proclaims, "a triumphant theory," has been attacked as reductionistic and unnuanced; if its influence has waned it is not because "it has been fulfilled so completely

(Moore, J.D., 2000)

Before presenting the historical context of Levi-Strauss essay, which seems as much mandatory to expose as the understanding of the influence of Boas on his research, in order to fully comprehend the meanings and implications of his body of work and his particular essay on the SRQ, I present in the next part of this dissertation my view points on ‘a note on the possible determinant of “split representation” as an artistic style’, a critical perspective on Levi-Strauss’s essay published by Jan B Deregowski in 1970. Even if this particular essay by Levi-Strauss was not exempt of criticism along the years, including by Marvin Harris, an anthropology graduate research professor emeritus (Florida University anthropology department), who coined the term ‘materialism anthropology’, and suggested in 1968:

Claude Lévi-Strauss—far from plumbing the hidden structures of another culture— “may not even understand what’s going on in his own head”

(Moore, 2000: 206)

Regarding the existing critical approaches to Levi-Strauss theories, I decided to expose primarily in this thesis the essay written by Deregowski, because it seems to me that it is a textbook case of the common misunderstandings about Levi-Strauss’s work, as well as a demonstration of the flaws in his methodology. One point must be however highlighted before we approach the critic by Deregowski. As Bois (2015) mentions:

I do not know if Lévi-Strauss's argument has been disproved—my guess is that it has not, not because it is foolproof, of course, but simply because it does not seem to have interested the specialists in the field.<sup>23</sup> I would also add that, later in life, responding to new data gathered by specialists of prehistory, he would be less hostile to certain aspects of diffusionist theory—but still without accepting the idea that prehistoric contacts could provide a stronger explanation of the phenomenon he is tackling.

(Bois, 2015)

The most important point in my opinion is the footnote attached that tells a little anecdote about Levi-Strauss's perception of the critical reception of his work:

“23. My friend Marcel Hénaff, who teaches anthropology at Uc san Diego, asked Lévi-Strauss on my behalf if his essay had ever been commented on (discussed, approved, rebutted) by his peers. The laconic answer was : no.”

A puzzling answer, that doesn't however corroborate the facts, as we will see.

### 1.2.1 Jan Deregowski 's 'a note on the possible determinant of "split representation" as an artistic style'

There is, however, a worrisome element in what Levi-Strauss does-or, perhaps better, what he does not do. He has not yet defined with any precision at all the rules by which he selects and manipulates data. His concepts, it seems to me, are clear (as clear, at least, as any of our concepts are); his purpose, his end- in-view, is clear; and the results of his analyses are clear and convincing- but there is his disquieting panache. He seems almost to use it as a magician's wand. Levi-Strauss "brings it off," but I cannot help muttering "by the skin of his teeth" and wondering "how does he do it?" By what criteria-sensitivity alone? in- sight?-does he select as "significant" this fact, rejecting that fact? There is artistry, at least, in what he does, and there may well be science; but we are justified, I think, in asking Levi-Strauss to write his Rules, his Methodology."

(Ackerman, 1965: 215)

Levi-Strauss had left a set of unresolved questions at the end of his essay on the SRQ. An attempt was made to offer a critical perspective by Jan Bronislaw Deregowski, a Polish-born psychology educator. He conducted a study of drawing habits on various groups, like Zambian or American school children, and suggested in his paper "A note on the possible determinant of "split representation" as an artistic style" published in 1970 in the International Journal of Psychology that:

(...) preference for chain-type drawings is present in children from diverse cultural backgrounds and that it also exists in adults from cultures lacking highly developed tradition of pictorial art, such as the cultures of most of the Zambian tribes

(Deregowski, 1970)

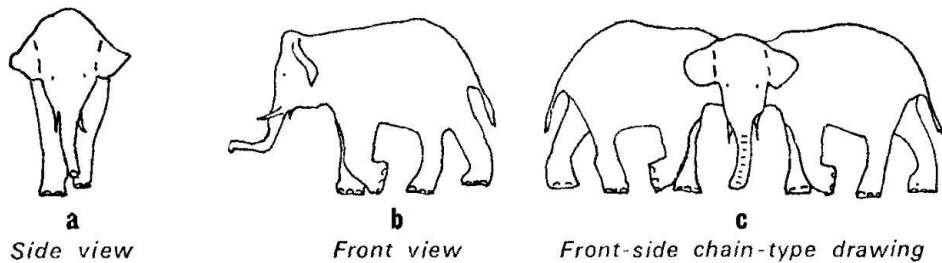


FIG. 1 — Drawing of an elephant used as stimuli.

FIGURE 3 CHAIN-TYPE DRAWING EXAMPLE FROM DEREGOWSKI, 1970

and that « *Levi-Strauss suggest that 'Split representation can be explored as a function of a sociological theory of splitting of the personality'.* He finally maintained that Levi-Strauss tried to demonstrate that:

this is a trait common to those « Mask cultures » in which a chain of privileges, emblems and degrees of prestige » is validated by means of masks. The above may be characteristic of the cultures in which, according to Levi-Strauss, such representations occur ; however, as has been shown above, a very distinct form of split representation occurs also in cultures to which such a description cannot be applied (e.g. , Black South Africans, American school children, Zambians) ; hence his explanation does not appear to be entirely satisfactory and a more basic psychological explanation as that advanced here may present a better alternative

(Deregowski, 1970)

Regarding the perspectives of Deregowski, I would argue that his training as a psychologist prevented him to 'catch the bigger picture', but it should be noticed in his defence that he wrote his essay in response to Levi-Strauss's work, a work which was already influenced and fuelled by Boas and other anthropologists.

Levi-Strauss's essay is a work by and for well-informed anthropologists, archaeologists and art historians. Many points in his essay are suggested, connections aren't always fully developed, and even if the similarities between the artistic styles of all the people and civilization encompassed in the SRQ are quite undeniable, it seems that maybe more than the flaws in Levi-Strauss demonstration (that I expose however throughout this dissertation), it is the difference between the language of psychology and the one that Levi-Strauss uses in his essay that led to this refutation by Deregowski. Or to summarize it in another way, I consider that Deregowski is right in his refutation but that he failed to ultimately grasp the whole idea of the SRQ as an anthropological theory as it was developed by Levi-Strauss in his own peculiar way.

### 1.2.2 Partial refutation of Jan Deregowski

I partially refuted Jan Deregowski's perspective on the SRQ in a talk I delivered at the Consciousness reframed conference in Shanghai in 2015. My views have not changed since I wrote in 2015 :

(...) I consider that Deregowski failed to identify what makes those typical type of representation similar. He only focused on the chain-type style of drawing that is quite typical and only to a certain degree to the style of the Haida people amongst the split representation group. Symmetry, but also the



presence of spirals and whorl displayed in specific manners is what makes patterns from the split representation group so unique.<sup>5</sup>

I think this point should be discussed further. Indeed, even if the comments from Deregowski might be of some relevance, I consider that the phenomenon of the 'split representation in the art of Asia and American' cannot be in fact reduced to 'chain-type drawings'. As we will see along this dissertation, amongst these cultures and civilizations and their artistic styles, chain-type 'drawings' (including carvings, embroidery, etc...) appear mainly in the art of the Haida people. For some reasons exposed in the chapter 5 dedicated to the study of the art of the Shang dynasty, and except probably for few examples, I argue the Chinese Taotie cannot be really considered as a 'chain-type drawing', even though it presents for some of them the clear figurative representations of 'animals (in this case 'mythical dragons') in a rather symmetrical style.

It must be highlighted that Levi-Strauss doesn't use the words 'Chain-type drawing' in his essay, but the words 'Split representation' that could be interpreted in various ways, and I suggest that this kind of 'polysemy' might be the core of the misunderstandings.

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<sup>5</sup> Conference talk, Pothier, 2015

If I do agree with Deregowski when he highlights that *'(...) the examples of Caduveo art given by (Levi-Strauss) do not fall easily into the chain-type category'*, stressing the disparities of the caduveo styles, that led him to even suggest that *" it is therefore difficult to see how these psychologically disparate forms (Attneave,1955) can be grouped together"* (Deregowski, 1970), it should be clearly stated that there is however an obvious similarity in style between the art of the Kadiweu, Haida, Ainu, Shang and Māori.

### 1.2.3 Alfred Gell . Art and Agency

The British social anthropologist Alfred Gell (June 12, 1945 – January 28, 1997) approached Levi-Strauss's theories on the SRQ in his seminal book 'Art and Agency: An Anthropological Theory' published in 1998 . I refer to this essay in my case study of the art of the Māori people (chapter 4), as Gell mentioned and critiqued Levi-Strauss theories on the art of the Māori in his own case study of the art from the Marquesas Islands, another artistic style that flourished in a Polynesian context and can reasonably be considered to have predated Māori styles on the basis of the current accepted models of human dispersal in Polynesia.

I must say that I feel an intellectual acquaintance with his research methodology and anthropological approach to art that seems to offer the necessary ontological and epistemological hindsight in order to accomplish such task.

Brilliantly exposing a relevant point for this present research, while deconstructing the intellectual posture of the 'structuralist semiotic anthropology' and its failure, Gell demonstrated that not all -if not any- indigenous or pre-historical art should be considered as a 'language' that would consist of the sum of the geometrical forms in use within a group linked together through a 'Visual Grammar' (Gells, 1998:165).

And it seems indeed that Levi-Strauss proceeds however in such a way in his essay, basing his comparative approach on a search for a common socio-political denominator and underlying psychological and artistic mechanisms that would explain apparent similarities between diverse artistic styles. Suggesting in a way that those styles were de facto visual languages whose structure would reflect by essence the socio-political structures of those various groups of population.

Furthermore, Gell stressed, and in my opinion clearly demonstrated, that some of Levi-Strauss's claims regarding certain groups from the SRT and the alleged causal links between their socio-political structures and this aesthetic particularism were, to say it politely, very loosely founded:

Levi-Strauss says that societies which are both very hierarchical and very competitive are ones in which these conditions are fulfilled. Such societies typically compete over genealogical credentials linking men with gods, as was the case among the tribes of the north-west coast of America, among the hierarchical societies of South America, the archaic societies of the Far East (producers of the Shang bronzes, whose affinities with Polynesian art have been noted by E. Gombrich 1984: 26210), among the Māori, and, equally, the Marquesans. This competitive struggle to assert genealogical status is the sociological rationale behind split representation. (...) I would not care to argue for the universal validity of Levi-Strauss's sweeping generalization; evidently, competition over genealogical credentials can be engaged in without this finding expression in the particular modality of masking, split representation, or anything of the kind.

(Gell, 1998: 196)

What Gell demonstrates here is that the socio-political structure can be barely considered as the main determinant of the aesthetic particularities of those artistic styles, nor of some of the behavioural habits like the use of Masks. Or it is indeed precisely what Levi-Strauss attempts to do throughout his essay. I find those critiques by Gell more accurate and in touch with my core research subject than the views of Derogowski, as Gell quite undeniably conducts an ontological and epistemological reconsideration of the anthropology of art that brought to light the flaws in the 'structuralist semiotic anthropology' methodology used by Levi-Strauss throughout his essay.

### 1.3 Historical context of Claude Levi-Strauss essay (1945)

Levi-Strauss's essay was first published in 1944-1945, therefore before a discovery that changed anthropological and archaeological researches: the discovery of DNA that opened decades later the path to genetic researches linked to human dispersal theories. As I will demonstrate, new discoveries in the fields of genetic geography and human dispersal tend to 'surprisingly' confirm theories mentioned by Levi-Strauss regarding external transmissions, even though he considered as unlikely the chances to find any proofs of this 'simplest hypothesis':

How shall we explain the recurrence of a far from natural method of representation among cultures so widely separated in time and space? The simplest hypothesis is that of historical contact or independent development from a common civilization. But even if this hypothesis is refuted by facts, or if, as seems more likely, it should lack adequate evidence

(Levi-Strauss, 1944)

Regarding the historical context of his essay, it should be also mentioned that being published in 1944-45, it was published at the very early beginning of indigenous peoples' political struggles to have their rights respected and their cultures recognized worldwide. At that time the cultural trend in most part of the world was of a strong attempt of 'cultural integration' of the indigenous populations into the Western or Communist mindset. To summarize, it should be reminded that even though the research of Boas and later Levi-Strauss are not exempt of any flaws, as they were in a way 'clamped' in the Zeitgeist of their epoch, they still represent a stepping-stone in

anthropology's history, and an acknowledgement of the indigenous peoples and cultures they studied. And to recontextualize the quote about Franz Boas featured on the website of Columbia University Department, In their own way they both '*argue(d) the diminished significance of theories of racial distinction between humans.*'

Levi-Strauss starts his essay with a lot of cautions, a move that in a way shows the intellectual climate at the time the essay was published. He even felt the need to prove his rights to conduct such comparative researches:

Comparative studies of primitive art have probably been jeopardized by the zeal of investigators of cultural contacts and borrowings. But let us state in no uncertain terms that these studies have been jeopardized even more by intellectual pharisees who prefer to deny obvious relationships because science does not yet provide an adequate method for their interpretation. The rejection of facts because they appear to be unintelligible is surely more sterile from the viewpoint of scientific progress than the formulation of hypotheses. Even if these should prove to be unacceptable, they will elicit, precisely because of their inadequacy, the criticism and research that will one day enable us to progress beyond them. We reserve, therefore, the right to compare American Indian art with that of China or New Zealand (...)

(Levi-Strauss, 1944)

It should be understood that at that time 'modern anthropology' was in a way a new discipline waiting to attain a recognition as a science. And that 26 years after the writing of his essay, Levi-Strauss was still pretty circumspect on that matter in an interview he gave to Peter Kussell :

You are one of the greatest living ethnologists as well as the founder of structural anthropology. Do you consider the human sciences to be sciences?

L.-S.- I don't know if we must totally despair, but in any event, they are far from it. The physical and natural sciences have achieved this stage by succeeding in isolating for each type of problem a small number of significant variables at the heart of quite complex phenomena. We of the human sciences, or those claiming such status, remain overwhelmed and submerged by the number of variables and all the more so since, for us at the outset, this number is incomparably higher. Besides, science studies objects, and it is particularly difficult for man to agree to become an object for himself by making an abstraction of his subjective existence, since he is at the same time both subject and object. One can foresee that, as they progress, the human sciences, much more than their sister fields, will be constantly running into this irreducible antinomy.

(Lévi-Strauss, 1971: 44-50)

Finally, we can reasonably consider that his essay on the SRQ was partially inspired to Levi-Strauss by his own ethnographic field research in Brazil, amongst the Caduveo (Kadiweu) and Bororos Indians. He certainly found some puzzling similarities between the art of the Kadiweu that he had visited in 1936 and the art of the Northern West Coast Indians that Boas explored in his own essay. I have to confess that despite my repeated efforts I have not been able to find within the framework of this research any confirmation nor refutation that Levi-Strauss was aware of the work of Boas on the Northern West Coast style before he conducted his field studies in Brazil. A possibly interesting historical detail which is however not particularly critical for this present study. It must be however mentioned that he was apparently already interested by Haida art as early as 1936:

Lévi-Strauss's interest in the Northwest Coast cannot be explained simply by his academic research. He has frequently avowed his "emotional" and "intellectual" ties to the Northwest Coast, by which he means a deeper sort of connection, a meeting of the minds, that occurred in the first instance in his encounter with Northwest Coast art (Lévi-Strauss, this volume). He took to the study of the arts and culture of these societies during his New York exile in the early 1940s, but he was already attracted to this outstanding civilization of the North Pacific Coast as exemplified through the acquisition of his first Northwest Coast piece—a Haida argilite pipe—at the Parisian antique dealer Level in 1936 (Lévi-Strauss, personal communication with author, December 1998)

( Mauzé et al. , 2004)

### 1.3.1 D.N.A discovery and genetic lineage mapping (1950 to present days)

Eight years after the publication of Levi-Strauss's essay, the American biologists Watson and Crick identified for the first time the 3-Dimensional structure of DNA (Pray, 2008:100). Needless to say that this discovery led to many scientific advances, like the famous human genome project. But it also signed the rise of a new discipline: 'genetic anthropology' a sub-class of biological anthropology that focuses mainly on the re-construction of human dispersal patterns, using archaeological findings, and genetic research. One of the most well-known genetic anthropology research project being National Geographic's Genographic project.

Genetic anthropology researchers are also largely indebted to Sir Alec Jeffreys, a British researcher who developed in 1985 the '*variable-number tandem repeat method*'



used to identify individuals and giving researchers the first DNA fingerprints. These initial methods were used in anthropological genetics, a field that uses a comparative approach to answer questions about human history, including the discernment of the origin of Native American populations and the discrimination of clan affiliation from individuals in Siberia.

(Crawford and Beaty, 2013:.23)

To understand the scientific and technical progresses accomplished since the time Levi-Strauss wrote his essay on the split representation, suggesting an '*historical contact or independent development from a common civilization*' of tribes from the Siberian-Asia area and Northern West Coast and South America, it should be noted that DNA samples of Siberian populations became only available to the Western researchers in the late 1980's, following the political period of the 'Perestroika' (Crawford and Beaty, 2013: 23).

Finally, the invaluable work of Luigi Luca Cavalli-Sforza, an Italian population geneticist who later became professor emeritus of genetics at the Stanford University School of Medicine, represents in my opinion another stepping-stone in the field. As I will demonstrate, all those recent discoveries from the fields of genetic anthropology and affiliated sciences, can bring new lights to the question of the 'Split representation in the art of Asia and America' and to Levi-Strauss's assumptions on the subject.

### 1.3.2 Ritualistic use of entheogens and tribes: contemporary studies

The proven relations between shamanism and the group of the SRQ, that I document and explore in this dissertation, led me to inquire the potential influence of ‘hallucinogenic’ plants used during shamanic rituals on the shapes of the ‘decorative’ patterns from our taxon. As I mentioned, Levi-Strauss shown very few interests, if any, about the ritualistic use of plants by indigenous people at large and shamans in particular. This complicated to some extent my research, mostly due to the fact that for example apparently no taxonomy of the plants used by Kadiweu people for healing or shamanic practices had ever been conducted (this was confirmed to me through an email conversation with the Dr Mônica Thereza Soares Pechincha, who spent time with the Kadiweu people in the 1980’s <sup>6</sup>). Another case being the alleged fact that Inuit and Māori populations are two human groups who did not used psycho-active drugs prior to western contact (Durrant and Thakker, 2003). A point that I would retrospectively suggest to be reconsidered, at least for the Māori, as we will see in the case studies.

But this is hardly surprising. The use of any mind-altering substance be it for recreational or spiritual purpose was, and is still, a controversial topic in most modern

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<sup>6</sup> (Pothier – Soares Pechincha, personal communication, 27 April, 2017)

western and non-western societies. At the end of the alcohol prohibition in the United States many laws were passed to prohibit the use of most mind altering substances that were in fact much less controlled by governments before the 1930's (McWilliams, 1990). Due in part to the rise of the political influence of the United States, this prohibition trend extended worldwide in the following decades to the present day. A rise of interests toward the indigenous use of mind-altering substances was however visible in the 1960's, due in part only to the psychedelic movement. This very slow cultural shift finally led to a new scientific and academic definition of the ritualistic use of a certain type of mind-altering substances. In a collective paper, Carl A. P. Ruck, Jeremy Bigwood, Danny Staples, Jonathan Ott & Gordon Wasson proposed in 1979 the word 'Entheogens' to describe a specific type of plants and active principles used by indigenous people for spiritual purpose for millennia :

(...)We commonly refer, for example, to the alteration of sensory perceptions as "hallucination" and hence a drug that effected such a change became known as an "hallucinogen."(1) The verb "hallucinate," however, immediately imposes a value judgment upon the nature of the altered perceptions, for it means "to be deceived or entertain false notions." It comes from the Latin (b)al(l)ucinari, "to wander mentally or talk nonsensically," and is synonymous with verbs meaning to be delirious or insane. It appears, moreover, to have been borrowed from the Greek, where it is related to a group of words that imply restless movement and perplexed excitement, such as that caused by grief and despair. How can such a term allow one to discuss without bias those transcendent and beatific states of communion with deity that numerous peoples believe they or their shamans attain through the ingestion of what we now call "hallucinogens?" (...)

However, not only is "psychedelic" an incorrect verbal formation, but it has become so invested with connotations of the pop-culture of the 1960's that it

is incongruous to speak of a shaman's taking a "psychedelic" drug. It is probable, moreover, that even its anomalous formation cannot isolate it from confusion with the psycho- words, so that it suffers from the same problem as "psychotropic," which tends to mean something that "turns one toward psychotic states" instead of merely toward an altered mentality.

We therefore, propose a new term that would be appropriate for describing states of shamanic and ecstatic possession induced by ingestion of mind-altering drugs."

In Greek the word *entheos* means literally "god (theos ) within," and was used to describe the condition that follows when one is inspired and possessed by the god that has entered one's body. It was applied to prophetic seizures, erotic passion and artistic creation, as well as to those religious rites in which mystical states were experienced through the ingestion of substances that were transubstantial with the deity. In combination with the Greek root *gen-*, which denotes the action of "becoming," this word results in the term that we are proposing: *entheogen*. Our word sits easily on the tongue and seems quite natural in English. We could speak of *entheogens* or, in an adjectival form, of *entheogenic* plants or substances. In a strict sense, only those vision-producing drugs that can be shown to have figured in shamanic or religious rites would be designated *entheogens*, but in a looser sense, the term could also be applied to other drugs, both natural and artificial, that induce alterations of consciousness similar to those documented for ritual ingestion of traditional *entheogens*.

(Wasson et al., 1979)

And there are few doubts that this collective paper had an impact on the research direction of many contemporary archaeologists and anthropologists, as it opened the gates for legitimate scientific researches on the subject.

More recently, various well respected anthropology researchers like Dr Jeremy Narby (Stanford University), Dr Christian Ratsch, an anthropology researcher and

ethnopharmacologist, or Dr Richard Lewis Burger, an archaeologist and anthropology professor at Yale University, have shown and stressed the importance and cultural influence (even at the level of artistic representation) of the taking of entheogens within past and present tribes worldwide, like the ritualistic taking of Ayahuasca by the Peruvian Amazonian tribes, or the taking of various drugs in the Chavin culture, a prehistoric civilization that developed in the northern Andean highlands of Peru, and I provide various case studies related to those topics in this dissertation.

### 1.3.3 Relevance of a new contemporary study of the split representation phenomenon

First of all, the potential ritualistic taking of entheogens by those groups of populations and its possible influence on this aesthetic particularism have, to my knowledge, never been inquired by Levi-Strauss himself nor by any academic researchers (even though the use of entheogens might have been studied in the framework of researches on some groups from the split representation, the aesthetic particularism itself has never been the subject of a dedicated study suggesting the possible influence of entheogens). This first observation at the early beginning of my research convinced me of the relevance of such inquiry that could lead to a reconsideration of Levi-Strauss postulates and theories on the subject, considering that such influences had been

clearly established, for example between the ritualistic taking of Ayahuasca, an entheogenic brew, and the shapes of the decorative style of the Shipibo-Conibos.

Second, even if the rights of indigenous people worldwide have been at least acknowledged in 1994 by a United Nations resolution, their lifestyle, culture and knowledge, including their languages and artistic styles, tend to disappear worldwide, due mainly to the expansion of the so-called western civilization. Climate change and the Anthropocene (industrialization, mining, industrial agriculture and over-fishing) are some of many factors responsible for this result. It is however striking to realize that those groups of populations might actually possess some of the keys to our survival as a species. As it was highlighted by Mrs. María Fernanda Espinosa Garcés, President of the 73rd Session of the UN General Assembly, on April 22<sup>nd</sup> 2019 :

(...) We still have a long way to go to ensure the full realization of the rights of the Indigenous Peoples around the world. Although the 2007 United Nations Declaration on the Rights of Indigenous Peoples meant significant progress in the acknowledgement of their rights, there are still challenges for its effective validity.

(...)However, we have no time to lose. We must do much more to overcome the still significant implementation gap. We still have a historical debt with the Indigenous Peoples, their collective rights, their cultural and identity rights and their rights to health, education and development, according to their aspirations and needs.

(...) I would like to highlight the relevance of the generation, transmission and protection of traditional knowledge, which is the central topic of this Forum.

Many of the solutions that the world needs to fight climate change reside in the Indigenous Peoples: they protect 80% of the planet's biodiversity and they have coexisted in peace with Mother Earth for centuries.<sup>7</sup>

Third, it is even more striking to realize that those unique groups of population and their cultures disappear at a time we have just invented -as a species- several tools and founded new disciplines, like genetic researches and neurosciences, that could lead us to understand what were the reasons for the U.P cognitive revolution, a boom in human creativity that happened at a certain period of our ancient past, and that tends to be connected to some extent to my research question. Those tribes being one of the clues to understand this historical trait that could potentially provide an enormous amount of implication regarding our understanding of human creativity, the importance and origins of arts and craft, and the functioning of our brains at large.

Fourth and finally, the 'digital revolution', with amongst other things the invention of digital documents and networked research databases accessible through telematic networks, has revolutionized scientific research at large, including of course the fields of anthropology, archaeology and allied sciences. I already mentioned in the chapter dedicated to my research methodology my own use of such databases, but it should be

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<sup>7</sup> <https://www.un.org/pga/73/2019/04/22/permanent-forum-on-indigenous-issues/>

noted that of course Levi-Strauss didn't had access to similar research assistance at the time he wrote his essay on the SRQ.

All those facts have reinforced throughout the years of research my assessment of the pertinence of an inter-disciplinary research on 'the split representation in the art of Asia and America'.



## 1.4 Patterns and tribes

### 1.4.1 Early modern human dispersal and the Out of Africa (OoA) model

The fossil evidence for an African origin for modern humans is robust. It is clear that modern humans (*H. sapiens sensu stricto*) were certainly present in Africa by 130 ka (Day & Stringer, 1982; Deacon, 1989), and perhaps as early as 190 ka if specimens such as Singa are considered modern (McDermott et al., 1996; Stringer, 1996). Modern humans do not appear in Europe or Central Asia before ca. 40 ka; earliest dates for the Levant range between ca. 80 ka and 120 ka (...)

(McBrearty and Brooks, 2000: 455)



FIGURE 4 : EARLY HUMAN DISPERSAL . (DEMENOCAL AND STRINGER, 2016)

Even if this thesis focuses mainly on the 'Split representation in the Art of Asia and America', I would argue that the diversity of civilizations and peoples encompassed by this question in terms of historical periods and geographic locations makes it quite mandatory to approach the context of the peopling of Earth by AMH in order to potentially identify proofs of existence, or at least clues, of what Levi-Strauss defined in his essay as *'historical contact or independent development from a common civilization'* (Levi-Strauss, 1944), that could help to explain in part this aesthetic particularism. I would also add that an in depth understanding of the human peopling of Earth in terms of human dispersal could potentially provide some clues in order to build a kind of genealogical model of the evolutions of artistic styles in the geographic areas we study.

As of today (2020), the OoA theory is still the dominant model used in palaeoanthropology to explain the peopling of Earth by AMH. And as stressed I subscribe in this sense to the theories developed by Cavalli-Sforza (1994) through his research. Even if this OoA model will be probably (and is already as I am writing those lines) fine-tuned by new researches in the fields of archaeology and genetic anthropology, the background of my research in terms of the understanding of human dispersal and peopling of Asia, Siberia and North and South America, stems directly from the work of Cavalli-Sforza. In any cases, most models tend to agree on an African

origin of the Homo Sapiens around 250 000 years ago, and then of a peopling of our planet through diverse dispersal routes, around 130 000 and 70 000 years ago (Rito et al. , 2019).

There are two broad theories about the origins of H. sapiens. A few researchers still support a version of the 'multiregional' hypothesis, arguing that the anatomical features of modern humans arose in geographically widespread hominid populations throughout the Pleistocene epoch (which lasted from around 1.8 million to some 12,000 years ago)<sup>6</sup>. But most now espouse a version of the 'out of Africa' model, although there are differences of opinion over the complexity of the processes of origin and dispersal, and over the amount of mixing that might subsequently have occurred with archaic (non-modern) humans outside of Africa<sup>2,7</sup>. Within Africa, uncertainties still surround the mode of modern human evolution — whether it proceeded in a gradual and steady manner or in fits and starts (punctuational evolution). Other questions concern the relationship between genetic, morphological and behavioural changes, and the precise region, or regions, of origin.

(Stringer, 2003:692)

As we will see throughout the case studies, a basic knowledge of current models of human dispersal since the OoA event, and its cross-checking with for example geographic distribution data of particular entheogenic plant species or case studies of recorded and dated non-iconic petroglyphs patterns from the Palaeolithic, or painted pottery patterns from a specific geographic area predating my main corpus of research, can potentially provide critical information or blueprints for new paths of research in an attempt at reconstructing a 'genealogical' model of the decorative patterns from the split representation groups, and assess their possible cultural

dissemination and/or borrowing between tribes, cultures and civilizations. And I would highlight that Levi-Strauss's research methodology seems to lack any kind of 'genealogical perspective' on that matter, apart from maybe his inaccurate quotes about a supposed evolution of the Taotie in Shang art history that I expose in the part of this dissertation dedicated to the case study of the art of the Shang dynasty.

It must be clearly stated that my research is far from providing an extensive taxonomy nor a complete study of decorative and/or non-figurative patterns from Asia, Siberia and North and South America, from the dawn of humankind to the period of each cultures and civilizations that I have studied. As exciting and intellectually appealing such corpus would be, it is an incommensurable task for one man, and it was never my aspirations to accomplish such a task within the framework of this research. My hope is however that in the future, advances in visual and digital databases of archaeological artefacts as well as techniques like visual clustering could provide some definitive insights regarding the genealogy of artistic styles in the Asian-Siberian and North and South American context.

#### 1.4.2 Hunter-gatherers and the (Upper?) Palaeolithic cognitive revolution

Considering that all the cultures and civilizations encompassed in the SRT are either (and to a certain degree) hunter-gatherers, or their artistic style show proofs of influences from older hunter-gatherers cultures from the area (like the art of the Shang dynasty), and as their religion and beliefs systems involved to various extents shamanism, I considered mandatory to include in this dissertation a study of the Palaeolithic cognitive revolution, and cross-examine it's possible underlying links with the SRQ and the practice of shamanism. Even though the 'Birth' of shamanism is supposed to have happened during the Middle or Upper Palaeolithic, depending on the researchers, there are solid proofs that surviving contemporary hunter-gatherers cultures worldwide are for more than a majority 'shamanistic' cultures (Peoples et al., 2016) -and even more for the groups that we focus on in the framework of this research, as they are all considered to have shamanic rituals- notwithstanding the fact that Shamanism '*may represent humanity's earliest spiritual practice, predating all known religions*' (Flor-Henry, 2017; VanPool, 2009).

The Palaeolithic cognitive revolution being considered as well as a period showing a 'creative explosion' and therefore a significant increase in the quantity of figurative but also geometric and non-iconic motifs and patterns drawn or carved by AMH (even

though apparently abstract or at least geometric representation by other hominid like the Neanderthal is clearly attested), I would argue that I could not neglect any possible insights from this period to my research. It must be however mentioned, as remarked by Ofer Bar-Yosef (2002) that *'The nature of the Upper Paleolithic revolution is at the center of current debates'*, and researchers like McBrearty & Brooks or Von Petzinger have stressed the Eurocentric bias of modern archaeological research on the subject. In any case, I consider that existing researches on a period that shows at least quite undeniably a rise in the production by hominids of artefacts, rock art, and the practice of shamanism, can bring new lights to our study. The U.P cognitive revolution, a *'big bang of human culture'* showing *'more innovation than the previous six million years of human evolution'* is described in this way by Gabora :

Known as the Upper Paleolithic Revolution, this collective archaeological signal is unmistakable evidence of the modern human mind at work (p. 93-94). Mithen (1996) refers to this period as the 'big bang' of human culture, claiming that it shows more innovation than the previous six million years of human evolution. It marks the beginning of a more strategic style of hunting involving specific animals at specific sites.

(Gabora, 2003)

We must also take into consideration in the framework of this thesis the specificities of the Palaeolithic cognitive revolution in the Asian/ Siberian area. It is for example now

clearly established that the invention of pottery predates the Neolithic in the Asian and Siberian context. An important detail regarding for example my study of the Ainu people, and most importantly their Jōmon ancestors, or my study of ancient China and Siberia.

*(...) Japan was not unique in the production of early pottery, as Late Pleistocene sites with pottery were also discovered in the Russian Far East and eastern Siberia, with a series of well-known sites indicating dates for the early pottery of ca. 14,000e15,940 cal BP (Buvit and Terry, 2011; Kuzmin, 2013, 2015; references therein; Tsydenova and Piezonka, 2015; Zhushchikhovskaya, 2009). This additional information from Russia made it fully acceptable that Terminal Pleistocene hunter-gatherers across a wide area of East Asia manufactured pottery, and so it was therefore not surprising that early, simple pottery began also to be found in Late and Terminal Pleistocene cave sites in southern China*

(Cohen et al. , 2017)

And many contemporary researches tend to suggest as well that the development of a bamboo-based technology explains some specificities of the particular stone tools development in Asia that didn't occurred in Europe (Bar-Yosef et al. , 2012).

My focus for this thesis should be therefore on the recent developments in the study of the U.P cognitive revolution within the Asian and Siberian context, even though and as we will see, the archaeological study of those areas is unfortunately in a way only at its 'beginning', at least compared to the corpus of rock art studies in Europe (Clottes and Smith, 2019). Thus complicating this present study.

## 1.5 Cognitive sciences, human creativity and the Upper Palaeolithic cognitive revolution

The U.P cognitive revolution and its apparent 'sudden' surge in human creativity have puzzled researchers in art theory and art history, archaeology, cognitive sciences and allied disciplines. With the understandable will to identify the possible triggers for those behavioural changes. What interests me in the framework of this research is to identify in which ways the habit of creating decorative patterns and the shape of those patterns could be related in one way or another to this supposed cognitive step in human evolution. And what clues we could deduce from those studies for the researches on the SRQ.

In a ground breaking and largely discussed paper published in 1988 in 'Current Anthropology', and titled 'The signs of all times: entoptic phenomena in Upper Palaeolithic art', J.D. Lewis-Williams and T.A. Dowson built the bases for a now emerging sub-discipline that could be described as 'cognitive archaeology'.

In an attempt to provide an explanation to some apparently abstract designs found in Palaeolithic rock art worldwide whose meanings had eluded the understanding of previous researchers, Lewis-Williams and Dowson borrowed from physiologists and psychologists the concepts of entoptics, phosphenes and form constants.



(...), we follow Tyler (1978:i633) in using entoptic phenomena (from the Greek, "within vision") to mean visual sensations derived from the structure of the optic system anywhere from the eyeball to the cortex. This term covers two classes of geometric percept that appear to derive from different parts of the visual system-phosphenes and form constants. Phosphenes can be induced by physical stimulation, such as pressure on the eyeball, and are thus entophthalmic ("within the eye") (Walker i98i). Form constants derive from the optic system, probably beyond the eyeball itself (Knoll et al. 1963, Siegel 1977). We distinguish these two kinds of entoptic phenomena from hallucinations, which have no foundation in the actual structure of the optic system.

(Lewis-Williams and Dowson et al. , 1988)

What Lewis-Williams, Dowson et al. formulated in their collective paper is the postulate that the shape of abstract -and even for some parts figurative- European rock art from the Palaeolithic era were either representation of entoptic phenomena or form constants usually associated with ASC arising from shamanic trance. In order to do so they compared identified shamanic arts still produced in modern times within some tribes, with Palaeolithic rock art.

It must be taken into consideration in the framework of this present research that they didn't strictly considered that those ASC were always the result of the taking of any kind of entheogenic substances. This being clearly shown in my opinion by the fact that

the first comparative model they provide, the art of the San Bushmen from

	ENTOPTIC PHENOMENA		SAN ROCK ART		COSO
	A	B	ENGRAVINGS	PAINTINGS	
I					
II					
III					
IV					
V					
VI					

FIG. 1. Six categories of entoptic phenomena compared with San and Coso rock-art depictions. Redrawn from the following: IA, Siegel (1977:138a), B, Richards (1971:93); C, Thackeray et al. (1981:fig. 3); D, Manhire, Parkington, and Yates (1985:fig. 4); E, Grant (1968:82); IIA and B, Siegel (1977:138d and c); C, Fock and Fock (1984:fig. 258); D, Pager (1971:fig. 307); E, Grant (1968:102); IIIA and B, Siegel (1977:138b and k); C, Fock (1979:pl. 100); D, Lewis-Williams (1981a:fig. 20); E, Wellmann (1979a:pl. 164); IVA, Siegel (1977:138e); B, Horowitz (1975:fig. 2); C, Fock and Fock (1984:fig. 259); D, Pager (1971:fig. 338); E, Grant (1968:66); VA, Siegel (1977:138j); B, Richards (1971:91b); C, Wilman (1968:pl. 59); D, Lewis-Williams (n.d. b); E, Grant (1968:28); VIA, Horowitz (1975:fig. 2); C, Fock and Fock (1984:fig. 251); D, Lewis-Williams (1981b:fig. 2); E, Grant (1968:101).

**FIGURE 5 : COMPARISON OF ENTOPTIC PHENOMENA AND ROCK ART, (LEWIS-WILLIAMS ET AL., 1988)**

South Africa, was considered at the time they wrote their paper to arise from a type of trance attained without the use of any entheogenic substances by the San shamans.

To examine the applicability of this neuropsychological model we apply it to two known shamanistic arts from different continents. If the model proves appropriate to these arts, we can use it to assess arts not known a priori to be associated with altered states. The first shamanistic art is that of the San. Because San rock art is now widely accepted as shamanistic,<sup>3</sup> we do not rehearse the debate about it here.<sup>4</sup> We merely point out that 19th- and 20th-century ethnography records San shamanistic practices in some detail and provides a firm foundation for the interpretations that follow

(Lewis-Williams and Dowson et al. , 1988: 204)

A point that I discuss later, as the possible entheogenic origin of the San shaman's trance has since then been the subject of a reconsideration (Mitchell and Hudson, 2004). Two points arise from Lewis-Williams and Dowson's article and the larger case of the ongoing contemporary studies of rock art from the Pleistocene and beyond.

- One, as we saw previously is that there are nowadays solid proofs that geometric representation predates figurative representation, at least in human, or hominid (pre-)history, wherever it did or not happened in such chronological order within certain cultures or civilizations in a certain time frame is another story.
- The second point raised by Lewis-Williams and Dowson is that the existence of Palaeolithic geometric imagery doesn't imply per se the invention of drawing, which is a clearly debatable point, nor -and I argue this is hardly refutable- that the production of geometric motifs or patterns is per se the proof of the development of an abstract way of

thinking, a question at the core of the ongoing debates on the U.P cognitive revolution.

Indeed, as stated by Lewis-Williams and Dowson, entoptics and form constants are in some cases geometric designs that don't require abstract thinking either to be perceived and therefore nor to be represented:

Because altered states of consciousness produce iconic images that are "completely disengaged from any kind of natural surroundings" and are perceived "without regard to size or position relative to one another," as well as distorted and geometric percepts, and, further, because these images, as they are projected onto a wall, attain their "own free- floating existence, independent of scene or surface" (Halverson's [1987:66, 671 phrases to describe Palaeolithic art), early people were neurologically provided with the salient features of Upper Palaeolithic art. They did not have to "invent drawing," as Delluc and Delluc (1986) suggest. Tracing projected mental images with a finger in the sand or on the soft wall of a cave to experience them more fully would have "fixed" them and would have been an initial step in the history of art. They were merely touching and marking what was already there. The first depictions were thus not two- dimensional representations of three- (even four-) dimensional reality. Rather, they were "fixed" mental images. In all probability their makers did not suppose that they stood for "real" animals any more than the accompanying entoptic depictions represented (iconically) things in the real world. It is, furthermore, possible that, for their makers, the earliest depictions were visual images: hallucinations and depictions were one. The social circumstances in which mental images that had been experienced for millennia came to be fixed will clearly require elucidation; the images must have acquired a significance that caused people to reach out to touch and fix them.<sup>5</sup> This is not to say that all Upper Palaeolithic depictions are images fixed by people in altered states"

(Lewis-Williams and Dowson et al. , 1988: 215)

Even if the question of the postulate on the 'invention of drawing' is debatable, the question of the possible lack of causality between abstract thinking and geometric representation seems to be built on solid ground. As we will see in the next parts dedicated to the study of the Shipibo people and their ancestral ritualistic consumption of Ayahuasca, it is undeniable that the consumption of some specific entheogenic substances triggers the visualization of geometric patterns and motifs, and that abstract thinking is not de facto a prerequisite for such visualization and therefore to some extent for its later artistic representation.

I would even go further by postulating that there might even be a 'reversed causality' between abstract thinking and geometric representation in hominid history . I.e. , that the voluntary or involuntary taking of entheogens, and the perception of geometric visions that they would have inevitably produced within some group of AMH or even hominid, could have been a trigger for the development of certain types of abstract thinking and other types of internal processes and external behaviours that we will discuss throughout this essay.

I want to present three cases here in relation to the question of cognitive sciences, human creativity and the U.P cognitive revolution within my framework of research on the SRQ, that I comment later in other parts of this essay.

### 1.5.1 Nested diamond pattern petroglyph found in the Billasurgam Cave complex in the Kurnool District



Fig. 5. The nested diamond petroglyph panel (scale in centimeters).

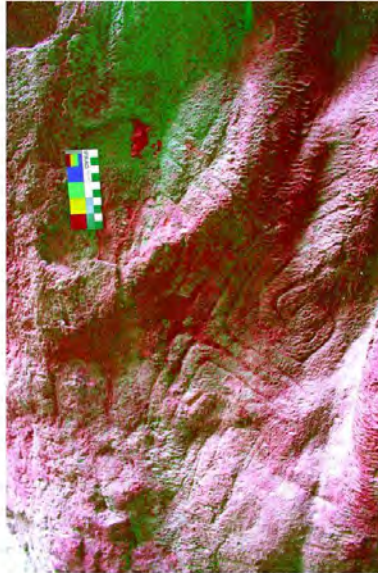


Fig. 6. The nested diamond petroglyph panel modified with Dstretch enhancement program (RGBD matrix).

**FIGURE 6:** NESTED DIAMOND DESIGN DATED BETWEEN 5400-5000 BP, (TAÇON , BOIVIN ET AL. 2013)

The first case is a 'quite recent' discovery and formal dating of a nested diamond pattern petroglyph found in the Billasurgam Cave complex in the Kurnool District, southern India (Figure 5). Even if the petroglyph is dated from the Mid-Holocene, it provides an interesting case regarding my previous postulates. First, it should be noted that this Mid-Holocene dating of a petroglyph is in fact, as of 2014, and according to Dr James Blinkhorn (McDonald Institute for Archaeological Research, University of Cambridge), *'The first directly dated prehistoric rock art figure in India – an engraved, nested*

*diamond design dating between 5400 – 5000 cal BP* (Blinkhorn, 2014). A point quite enlightening regarding the advances of archaeological research in South Asia, an entry point for the peopling of Asia through the Southern Coastal route; and evidential of the Eurocentric development of rock art studies. I would argue that this geometric petroglyph is symptomatic of the pitfalls of the built theories on AMH and hominids cognition and artistic representation. Indeed, as strongly suggested by Taçon , Boivin et al. (2013) This '*engraved, nested diamond design*' presenting spiral shapes that presents the full characteristics of geometric designs that could denote proofs of abstract thinking, might probably be an actual, and therefore figurative, representation of '*honeycombs still found in the cave complex.*' (Taçon and Boivin et al. 2013)

*The Billasurgam panel is not only the oldest surviving securely dated petroglyph from India but also the oldest dated honeycomb like design. This illustrates that the preference for this type of design has ancient roots, with probable origins among Mesolithic foragers. It also supports the long-held hypothesis that a chert core with a similar engraved design, found at Chandravati, Rajasthan, could have been made in the Mesolithic, as we now know that the design was being made near the Mesolithic/Neolithic boundary elsewhere, in southern India.*

(Taçon and Boivin et al. , 2013)



**FIGURE 7: HONEYCOMBS STILL FOUND IN THE CAVE COMPLEX.’ ( TAÇON AND BOIVIN ET AL. 2013)**

Of course my comment is on the possible misinterpretation of apparently geometric designs (even though in this particular case the design is actually geometric and figurative at the same time), not a postulate on the supposed level of cognitive development of the Mesolithic foragers who probably engraved this honeycomb design. I will however comment this case later, for various reasons I expose throughout this thesis, including the importance of honey for hunter gatherers worldwide (Lévi-



Strauss, 1973; Mayor, 1995) including Palaeolithic and Mesolithic foragers, and it's possible incidence on their behavioural and artistic development. As well as the interesting aspect of this case that we could arguably categorize as an 'inter-species knowledge transfer of abstract geometric shapes' and its puzzling similarities with Mandalas.

### 1.5.2 Ainu patterns and Abstractness

We might consider that the second case I want to expose briefly here before I close this section contradicts more or less directly some of my previous postulates and comments. But I interpret this paradox as food for thoughts for the reading of this dissertation, and it also explains why I have chosen to present the Ainu people as the first case study in my research on the cultures and civilizations from the split representation Taxon. Indeed, in the chapters that present a 'taxonomy' of the groups encompassed by Levi-Strauss in the split representation, the cultures are not arranged in alphabetical order, even though the Ainu come firsts. I have chosen to expose first the case of the Ainu people, an indigenous tribe from Japan, due to many reasons including the fact that they are, as far as I know, the only group of population from the SRT for whom the abstractness of their pattern is actually a part of their spiritual beliefs. Indeed, as stressed by Chisato 'Kitty' Dubreuil, an Ainu-Japanese art history

expert and arguably one of the most respected scholar on the topics of Ainu culture and history:

KD: Neither is true. First, there isn't anything to detect in Ainu designs. As stated we believe that the evil gods (wen-kamuy) are so clever that if there was something 'hidden' in the design, they would know, and they could enter the image and cause great harm. The beautiful art on the clothes, platters, etc. is our way of honoring and respecting the gods, but the designs are not spiritual in any way. Importantly, tradition dictates that all designs be original. To make a 'reproduction' would be disrespectful to kamuy. When looking at a robe, the designs may look the same, but each is different, although admittedly the design differences may be subtle. Part of the problem is the subtle differences between design elements; for example, eight out of the nineteen design elements identified are variations of the whorl.

(Dubreuil, 2007)

As we will see, the patterns themselves can be tracked at least to 1000 – 300 AD (Kaner, 2009.), but based on the overall framework of this research that include a study of their Jōmon ancestors, I think it is reasonable to consider that they might be even older, and I would even argue that this intent on the 'pure abstractness' in their artistic processes might date back as well to millennia.

### 1.5.3 Spiral motifs in European rock art

My third and last case is the fact that spiral motifs seems to have been surprisingly less used than expected, at least in rock art found in the French caves, and probably most Europe, at rock art sites from the U.P. As Palaeontologist Genevieve Von Petzinger stresses, she found only two sites where spiral motifs were represented, while conducting a taxonomy of the geometric signs found in 146 cave sites from Ice age France (Von Petzinger, 2009). According to the Bradshaw foundation website:

It is worth noting that other than the portable mammoth ivory piece, the spiral motif is rare in European rock art sites from the Upper Palaeolithic [approximately 40,000 to 12,000 years ago]. According to Genevieve von Petzinger, it is strange that it is not present more often considering that it is a very common entoptic shape reported in trances, and how central this motif becomes in later time periods. To her this lack of spirals in the Upper Palaeolithic raises some very interesting questions about where people were getting their inspiration for the non-figurative art (possibly altered states of consciousness were not a regular phenomenon yet) as well as the choices they were making about what to depict or leave out. The use of the spiral does not become a regular occurrence in Europe until after the Upper Palaeolithic and that the mystery of why not still remains to be solved.<sup>8</sup>

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<sup>8</sup> [http://www.bradshawfoundation.com/ancient\\_symbols\\_in\\_rock\\_art/ancient\\_symbols\\_in\\_rock\\_art.php](http://www.bradshawfoundation.com/ancient_symbols_in_rock_art/ancient_symbols_in_rock_art.php)

A fact raising questions regarding the connection between SSC and early human geometric representation, as well as a possible hypothesis of a cultural transmission / dissemination of the spiral motif from Siberia and /or central Asia to Europe during the late UP and/or Neolithic that would be directly connected to the SRQ. As we saw in the previous parts, those are some of the essentials implications, inter-relations and possible causal links, between the questions of abstractness, figurative and geometric representation, humans and hominid cognitive developments and peopling of Asia and America, to the study of the SRQ.

## 1.6 Ayahuasca and the Shipibo people, a case study.

Hunter-gatherers have a long history of an arguably 'expert use' of plants for purposes as various as hunting (poisons), and '*The ethnographic documentation teaches us that hunters of every latitude poison their weapons with toxic substances derived from plants and animals.*' (Borgia, 2015), but also as food or medicine. This knowledge, that we can reasonably consider to have originated during the Palaeolithic, extends as well to the use of hallucinogenic or entheogenic substances.

Mostly for shamanic purposes, this use of entheogenic substances might be traced back at least up to 7000-9000 BC in rock art found in Tassili, in the Sahara desert, southeast Algeria, and featuring potentially hallucinogenic mushrooms, probably a shaman, and dancing figures (Samorini, 1992). Other cases largely documented worldwide in ethnobotanical and archaeobotanical records, include the use by shamans of plants, mushrooms (and even in a few cases animals) as various as Amanitas, Psylocibe, Datura, Rhododendron, the Peyote Cactus, Coca leaves, etc... (Samorini, 2019)

The ritualistic use of Peyote and the chemical activity of its main active principle Mescaline having been studied and documented by various researchers, including

Heinrich Klüver, a German American who received a Ph.D. in physiological psychology from Stanford University

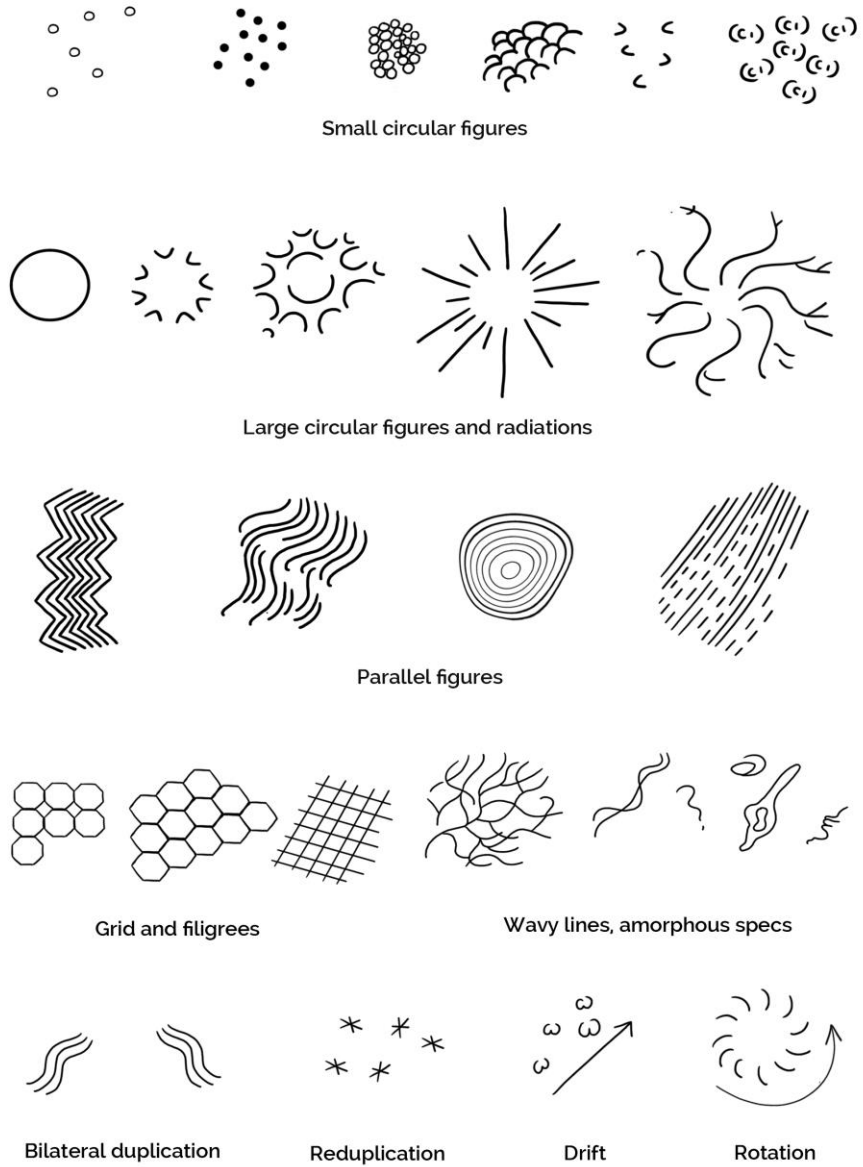
What Klüver demonstrated in his ground-breaking work is that : *'mescaline-induced imagery could be observed with the eyes either closed or open and that with the eyes open it was impossible to look at a blank wall without seeing it as covered with various forms.'* ( Siegel, 1977). Klüver proved through his research that *'recurring patterns with a remarkable uniformity were seen across subjects'* who took Mescaline :

The first systematic analysis of hallucinogen-induced geometrical images was conducted by Heinrich Klüver by administering mescaline-containing peyote cacti to several subjects, including himself (Klüver 1928, 1942). Despite large inter- and intra-individual differences in the descriptions of the ensuing geometric figures, recurring patterns with a remarkable uniformity were seen across subjects (Fig. 1). Klüver called these patterns "form constants" and categorized them into four classes, as follows: (1) lattices (including gratings, fretworks, honeycombs, filigrees, and chessboard designs), (2) cobwebs, (3) tunnels (including alleys, funnels, *cones and vessels*), and (4) spirals.

(Commuter et al. , 2016)

The theories on form constant and Palaeolithic rock art proposed by Lewis-Williams, Dowson et al. I exposed in the previous sections of this essay arise in a way from Klüver's findings but it was Reichel-Dolmatoff who was the first to apply the notion of drug induced entoptics (or form constant) to the study of indigenous art (Reichel-Dolmatoff, 1978) .





Adapted from: Heinrich Klüver's Form Constants in Mardi J. Horowitz, 1970, Image Formation and Cognition.

**FIGURE 8: HEINRICH KLÜVER'S FORM CONSTANTS, (HOROWITZ, 1970: 216)**



As we will see, the Shipibo-Conibo, an indigenous people from the Peruvian Amazonia, are well known for their ritualistic use of Ayahuasca, an entheogenic beverage. Even though the Shipibo-Conibo are not traditionally considered as being part of the split representation group, many points I list hereupon, brought me to include a case study of the ritualistic use of the Ayahuasca by the Shipibo in this essay.

- First of all, being located in the Peruvian Amazonia, the Shipibo have lived for several millennia in a geographic area situated reasonably near the 'end' of the long journey that brought modern humans from Africa to the Americas , through Asia and Siberia.
- Second, there is a solid body of scientific proofs that the consumption of Ayahuasca, an entheogenic brew traditionally consumed and prepared by the Shipibo-Conibos amongst other tribes of the Amazonia, and whose preparation attests of an expert use of plants, provides amongst many other interactions with the human body the clear visions of geometric patterns that are of the order of the form constant.
- Third it is well documented in academic literature that those geometric patterns are widely reproduced by the Shipibo on tattooing and textiles. An asserted fact demonstrating the possibility of a connection between indigenous

'decorative' pattern making and the consumption of entheogenic substances providing the visions of those patterns.

- Fourth, even though those previous points are documented extensively in the scientific literature, the author himself has participated to an Ayahuasca ceremony in Brazil in the framework of his PhD research, and can provide additional first person comments on the effects of this brew.
- Fifth and finally, those aforementioned facts are so well established they have been imprinted in the Peruvian constitution. Providing, if I am correct, the first case of the legal recognition of a connection between traditional geometric patterns from a tribe, the origin of their shape from the consumption of an entheogenic preparation, and its implications within the tribe itself in terms of cosmogony and metaphysics.

### 1.6.1 Ayahuasca, a summary presentation.

Ayahuasca is a brew traditionally used for healing and spiritual purposes by indigenous populations of the Amazon Basin (Luna, 2011; Spruce and Wallace, 1908).

(...) Ayahuasca is most often prepared by decoction of two plants (McKenna et al., 1984): *Psychotria viridis* that contains the psychedelic N,N-dimethyltryptamine (N,N-DMT), a serotonin and sigma-1 receptors agonist (Carbonaro and Gatch, 2016), and *Banisteriopsis caapi*, rich in reversible monoamine oxidase inhibitors (MAOi) such as harmine, harmaline, and tetrahydroharmine (Riba et al., 2003).

The acute psychological effects of ayahuasca last around 4 h and include intense perceptual, cognitive, emotional, and affective changes (Shanon, 2002; Riba et al., 2003; Frecska et al., 2016). Although nausea, vomiting, and diarrhea are often reported, mounting evidence points to a positive safety profile of ayahuasca. For instance, ayahuasca is not addictive and has not been associated with psychopathological, personality, or cognitive deterioration, and it promotes only moderate sympathomimetic effects

(Palhano-Fontes et al. , 2019)

The entheogenic brew ayahuasca '*a Quechua term meaning "vine of the souls"*' (McKenna et al., 1998), shows an apparent complexity of its mode of preparation that suggests a reasonably arguable expert use of plants dating back to at least 1500 AD<sup>9</sup> though there is still a controversy about the proper dating. As McKenna et al. highlighted, Ayahuasca has played a unique role in the botanical, chemical and ethnographic (and I would add

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<sup>9</sup> <https://chacrana.net/is-ayahuasca-possibly-less-than-five-hundred-years-old/>

artistic, as the artistic styles -both visual and musical- of the tribes who consumed traditionally Ayahuasca are unequivocally interlinked with the taking of the entheogenic brew) context of the Amazon Basin, and this for millennia (McKenna et al. , 1998).

### 1.6.2 Ayahuasca visions and geometric patterns

The aesthetic importance of ayahuasca is particularly evident in the songs and artifacts of the Shipibo-Conibos people of the Ucayali River region of Peru, whose experience with the brew inspires sophisticated word-play and metaphor in their healing songs and chants, and intricate geometric lattice designs in woven fabrics and pottery decorations

(Tupper, 2011)

Warren Hern, adjunct professor in anthropology (University of Colorado), recalls in those terms his own experience with Ayahuasca in the Peruvian jungle:

I sat transfixed, ecstatic, consumed by the vision before me, and it was in my voice. The figures, the brilliance and beauty of the patterns commanded my whole consciousness, and I felt such a strength of concentration as I had never experienced before, and an overwhelming vividness of the sensation. It was as though nothing stood between the figures and the core of my being, that I was looking at death itself, afraid but with an intense feeling of strength and awed by the truth, the almost supernatural nature, of the experience. One of the thoughts that immediately came to me, that seemed vividly true, was that the Shipibo design patterns, with the strongly geometrical, angular sense and the three-dimensional effect achieved by alternating heavy and light lines, the patterns one saw everywhere on the faces, the pottery, the woven cloth and carved wood paddles, came from this vision. There was just no question about it..."

(Hern, 2016)



1) Shipibo, Anthropomorphic storage jar for manioc alcoholic drink (masato), the Israel Museum, Jerusalem

2) FM342112, man's vest, 2000. 77 X 76 cm. White cotton commercial plain weave fabric, tocuyo. Painted with black kené figures and multicolor accents of unknown paint. Commercial cloth. Collected by R. Weber from maker Juana Cumapa Regnifo, Nuevo Chicago. Photo: J. C. Odland.

3) José Roque Maynas and his wife, Juana Cumapa Rengifo, dressed for a special occasion in 1995. Juana is wearing a finely embroidered chtonie or skirt made of commercial black cloth. José is wearing a white tari or cushma decorated with painted black kené designs. Photo: R.L. Weber

4) Shipibo ceramic vessel used for storing beverages, such as masato, collected by Borys Malkin in Colonia Calleria, Loreto, Peru, in 1961 and received in 1962 as part of Accession 2771. See also Figure 4.8 of the same object. 70 cm in diameter X 46 cm high. Photo: Sarah Rivers

(2) taken from Odland, J. Claire, and Ronald L. Weber. "CHAPTER 6: SHIPIBO-CONIBO MATERIAL CULTURE: TEXTILES AND CERAMICS IN THE FIELD MUSEUM COLLECTIONS." *Fieldiana. Anthropology* (2016): 63-79.

(3 & 4) taken from : Odland, J. Claire. "CHAPTER 4: THE MAKING OF" SHIPIBO: LA PELÍCULA DE NUESTRA MEMORIA (SHIPIBO: THE MOVIE OF OUR MEMORIES)." *Fieldiana. Anthropology* (2016): 35-49.

## FIGURE 9 : VISUAL OVERVIEW, SHIPIBO PATTERNS

Numerous similar and reliable testimonies abound about the effects of Ayahuasca. As stressed, I have experienced its effects during my participation to a Santo Diame ritual in Brazil in 2014 in the framework of my PhD research program. I testify to have experienced similar visions, notably the intricate geometric patterns similar to the one featured on Shipibo Artistic productions.

### 1.6.3 Shipibo patterns, ayahuasca and Peruvian copyright laws , a case study : 'A legally acknowledged connection between patterns visualization under the influence of an entheogen and pattern making on textiles'

The tight connection between the traditional taking of entheogenic substances and the shape and design of traditional drawing, carving, painting or embroidering of geometric patterns, or the use of specific colours, amongst certain group of indigenous people have been largely confirmed by scientific studies. Those confirmations being grounded by robust results from studies conducted in the fields of ethnology, ethnobotanic, anthropology and allied sciences.

The connection between the use of certain kind of colours and designs by the Huichol Indians from the Sierra Madre in their textile work and the visions produced by their ritualistic use of Peyote is for example widely documented:

Brilliantly colored designs in Huichol embroidered clothes, bags, and woven belts, as well as beaded and yarn art for outside consumption, are visually stimulating reminders of peyote in the cultural lives of the community. In fact, women are expected to duplicate the bright geometric designs they experience from peyote into their embroidery (Eger, 1978). These designs are considered communication from the gods and a gift that must be visually shared.

(Schaefer, 2011:156 )

Numerous rock art studies tend to prove that those inter-relations between ritualistic taking of entheogens and artistic production probably date back to the dawn of humankind. A point widely documented in the South and North American context (Wellmann, 1978).

Those possible connections between the consumption of entheogenic substances and the design of indigenous decorative patterns are so well grounded in the case of the Shipibo-Conibo and the Kené (the name of their geometric patterns), such acknowledgements by the scientific and academic community and the civil society led to a political and legal recognition of this inter-connection between the traditional use of entheogens and the artistic patterns and style of a community. Indeed the Peruvian government approved the 'Resolución Directoral RD N 540/INC-2008' protecting the Shipibo-Conibo patterns known as Kené. The document stipulates :



(...)That, the Kené is the term that, in shipibo language, designates the characteristic design system of the shipibo-konibo people that expresses itself through diverse base materials such as fabric, wood and ceramics. The Kené is a reference to the elements that compound the shipibo universe in the amazonian world, that is to say, through the visions that are produced through the introspection induced by the rao plants ( Teacher plants, whose ritual consumption produce an alternate version of the world that is considered profound and real) like the ayahwasca and the chakruna; That, the lineal design or Kené makes a reference – in a manner which is very different from a realistic representation – to the cosmology and the live elements that conform it in the diverse levels of the complex amazonian cosmovision. The designs called Kené make a reference to concrete beings, but intermix and have more or less complexity according to the ordering thought and the ability of the one who designs it;

That, the Kené is a polysemic manifestation, that transcends much more than the decorative character that has been attributed by the western world to these beautiful designs. The elaboration of the Kené, will depend on the ability of the author in mimetizing oneself with the energy of the teacher plants and through them, with the elements of a universe that is conceived as being alive: rivers, plants, animals, stars, atmospheric elements, even objects. It is in reality, a writing system about the cosmos and its components, a representation of the world from a personal vision obtained through the ritual, an expression of the harmony between oneself and the world – health and knowledge – an thus of the beauty (kikín) in the aesthetics of the shipibo - konibo universe;

That, in the technical case file elaborated by the anthropologist Luisa Elvira Belaúnde, it is clearly explained that this is a conjunction between the universe and the self, therefore through both the ritual and the design, from which the other is the inspirator; Being allowed by the Policy Director, the Director of Registry and Culture Studies in Contemporary Perú, and the Director of the Office of Judicial Affairs; According with that ordained by Law N28296, “General Law of Cultural Patrimony of the Nation” and the Supreme Decree N 017-2003-ED, that approves the Organizational Ruling and Functions of the Cultural National Institute;”<sup>1011</sup>

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<sup>10</sup> [http://administrativos.cultura.gob.pe/intranet/dpcn/anexos/41\\_1.pdf?1566927](http://administrativos.cultura.gob.pe/intranet/dpcn/anexos/41_1.pdf?1566927)

<sup>11</sup> (My translation, with the help of Dr Julietta Rodriguez)



## Resolución Directoral Nacional N° 540/INC

Lima, 16 ABR. 2008

Visto, el Informe N° 032-2008-DRECPC/INC de fecha 04 de abril de 2008, emitido por la Dirección de Registro y Estudio de la Cultura en el Perú Contemporáneo;

### CONSIDERANDO:

Que, el artículo 21° de la Constitución Política del Perú, señala que es función del Estado la protección del patrimonio cultural de la Nación;

Que, el inciso 1 del artículo 2° de la Convención para la Salvaguardia del Patrimonio Cultural Inmaterial de la UNESCO, establece que "se entiende por Patrimonio Cultural Inmaterial los usos, representaciones, expresiones, conocimientos y técnicas –junto con los instrumentos, objetos, artefactos y espacios culturales que les son inherentes – que las comunidades, los grupos y en algunos casos los individuos reconozcan como parte integrante de su patrimonio cultural. Este patrimonio cultural inmaterial, que se transmite de generación en generación, es recreado constantemente por las comunidades y grupos en función de su entorno, su interacción con la naturaleza y su historia, fundiéndolos un sentimiento de identidad y continuidad y contribuyendo así a promover el respeto de la diversidad cultural y la creatividad humana";

Que, el artículo VII del Título Preliminar de la Ley N° 28296 – Ley General del Patrimonio Cultural de la Nación, dispone que el Instituto Nacional de Cultura, está encargado de registrar, declarar y proteger el Patrimonio Cultural de la Nación dentro del ámbito de su competencia;

Que, el numeral 2) del artículo 1° del Título I de la citada Ley establece que integran el Patrimonio Cultural de la Nación las creaciones de una comunidad cultural fundadas en las tradiciones, expresadas por individuos de manera unilateral o grupal, y que reconocidamente responden a las expectativas de la comunidad, como expresión de la identidad cultural y social, además de los valores transmitidos oralmente, tales como los idiomas, lenguas y dialectos autóctonos, el saber y conocimiento tradicional, ya sean artísticos, gastronómicos, medicinales, tecnológicos, folclóricos o religiosos, los conocimientos colectivos de los pueblos y otras expresiones o manifestaciones culturales que en conjunto conforman nuestra diversidad cultural;

Que, Mediante Resolución Directoral Nacional N° 207/INC, del 10 de noviembre de 2004, se aprobó la Directiva N° 002-2004-INC, "Reconocimiento y declaratorias de las manifestaciones culturales vigentes como patrimonio cultural";

Que, corresponde al Instituto Nacional de Cultura en cumplimiento de la función que le asigna la Ley, y con la participación activa de la comunidad, realizar una permanente identificación de dichas manifestaciones tradicionales del país que deben ser declaradas Patrimonio Cultural de la Nación;

FIGURE 10: RESOLUCIÓN DIRECTORAL RD N 540/INC-2008 (EXTRACT)

The document therefore officially acknowledges the direct connection and causal links between the visions seen during ayahuasca sessions and the Kené Design produced by the Shipibo-Conibos.

## 1.7 Split representation and Shamanism

### 1.7.1 Shamanism

Most basically, shamanism can be defined as a religious belief system in which the shaman is the specialist in knowledge. The shaman knows the spirit world and human soul through “ecstasy,” the power of an altered state of consciousness, or trance, which is used to make a connection to the world of the spirits in order to bring about benefits to the community. Mircea Eliade, in his book *Shamanism: Archaic Techniques of Ecstasy*, saw the essence of shamanism in the techniques by which the shaman is able to travel into the supernatural world in a state of ecstasy induced by drumming or other means.”

(Neumann Fridman, 2004)

Shamanic states of consciousness (SSC) go back to the dawn of the middle Palaeolithic “cognitive revolution” some 70,000 years ago. They represent humanity’s most ancient spiritual tradition that lies at the core of religion and culture as we know them today.

(Flor-Henry and Shapiro and Sombrun, 2017: 2)

Shamanism is commonly regarded by scholars as a set of techniques and systems of thoughts, related generally to hunter-gatherers cultures and predating the world's religions. Probably originating from Siberia for the geographic area covering Europe, Asia, the Arctic areas and de facto the lands of the indigenous tribes of both North and South America (Guenther, 1999). Shamanism as we know it is estimated to have emerged and started to disseminate worldwide during the Upper-Palaeolithic, roughly 50,000 to 10,000 years ago. The ‘birth of shamanism’ is supposed to have coincided

with a remarkable rise in the production of human artefacts and the expansion of modern humans through Asia, even though this Upper-Palaeolithic model tends to be challenged nowadays.



**FIGURE 11 : A SHAMAN IN SIBERIA, EARLIEST EUROPEAN DEPICTION OF A SHAMAN, BY DUTCH EXPLORER NICOLAES WITSEN IN THE LATE 17TH CENTURY.**

Shamans enter through specific techniques and rituals into ‘Shamanic States of Consciousness’ (SSC), a type of ‘Altered State of Consciousness’ (ASC ). Even though in modern times the term ‘shaman’ was coined from the word ‘Saman’ from the Siberian

Tungusic language, it should be understood that shamanism is a worldwide phenomenon (Guenther, 1999: 427).

Common features in hunter-gatherer religions find considerable explanation in the life ways of the people, and their proximity to nature. Living within and off nature, foragers have both their practical and conceptual consciousness focused on animals, plants, the landscape and seasons, and meteorological and astronomical phenomena. At the metaphysical level, hunter-gatherer regard nature as pervasively animated with moral, mystical significance; there is a hovering closeness of the world of myth to the actual world" (Bellah 1965:91) . Shamanism is a technique and a thought system for entering and conceptualizing such a universe and for relating to, channelling and transforming its beings and forces for the benefit of humans.

(Guenther, 1999)

I would advance that shamanism is of critical importance regarding the study of the SRQ phenomenon, for geographical and historical reasons. As we will see in the case studies, all groups from the SRT are labelled in one way or another as featuring shamanic traits and hunter-gatherers specificities, apart for the Shang dynasty, but I explain its connection with hunter and gatherers culture later in this essay. The 'shamanic context' of the groups from our taxon seems of some interest for different points in relation with our core research topics:

- First, of course, like any other cultural traits, shamanism might have had an influence on the abstract motifs and figurative representation in fashion amongst the cultures that we study. A point, as we will see, at least widely

acknowledged nowadays for the Shang dynasty and the art of the Northern West Coast.

- Second, I would argue that if many shamanic techniques include the use of rhythms (usually from drums), it should be noted that rhythms are also found on decorative patterns, through ways of repetition and symmetry in many cultures worldwide, including the groups from the split representation taxon. And we might find a chain of causality or at least an underlying influence between the two different types of visual and auditory rhythms (As it is for example the case for the Shipibo-Conibo, as we saw).
- Third, even though I do agree that the use of entheogens doesn't appear to be necessary to attain SSC (Flor-Henry et al., 2017), it seems quite undeniable on the other hand that many past artefacts, cave paintings and petroglyphs appear to be the representation of form constants and entoptics. And I would argue this stresses the possible implications of the ritualistic taking of entheogens on the shapes of the geometric patterns from the split representation taxon.

Even if, as highlighted by Luke (2010) those form constants might originate much more from the mind than from the optical system, in the case of the consumption of entheogens, at least the representation of those form constant and the access our ancestors might have had to those sometimes geometric shapes would still result from SSC and ASC.

### 1.7.2 conclusion

As we saw, on one hand numerous robust research results tend to suggest the eventuality that the split representation styles are of the order of form constants and in relation with the ritualistic taking of entheogens within those groups. And I have exposed and highlighted the historical and intellectual reasons why this particular point seems to have never been enquired by Levi-Strauss himself nor the following researchers.

On the other hand, I have demonstrated how new advances in genetic geography could potentially provide a confirmation or refutation that those similarities between the artistic styles of various groups originate from *'historical contact or independent development from a common civilization.'* A point Levi-Strauss (1944) mentioned briefly only to quickly reject it in favour of his structuralist epistemology theory that he developed in his essay (Bois, 2015). We have started to tackle the possible cognitive

implications and the specificities and similarities of the split representation taxon's styles. I mentioned the U.P cognitive revolution, the specificities of human evolution in the Asian-Siberian area (in terms of biological and technological evolution), the holistic nature of the patterns that are irremediably connected to the order of the sacred and to some extent to shamanism or at least religious beliefs within the cultures from the split representation taxon. And in a comparative approach I mentioned the case of the Shipibo-Conibos Kené and the legal recognition of its qualities that can only be grasped through a holistic approach .

As we will see in the next part dedicated to the case studies, the Asian context seems to play a large part in our 'story', and as much as I highlighted the apparent specificities of the U.P cognitive revolution within an Asian context, I highlight the importance of mandalas in those cultures in the last part and throughout our case studies.

Finally, each cases are an opportunity to fact check Levi-Strauss's postulates and claims. By doing so, and deconstructing his overall demonstration, I hope to provide a critical assessment of his views and potentially build an alternate theory grounded on up to date research results that could provide a new understanding of the SRQ.



**Preamble to the case studies : an inter-disciplinary study of the Ainu people, Haida people, Māori people, Shang dynasty, Kadiweu people and the split representation question.**

I want to state that my research results and comments apply solely to a study of early ethnographic records of the cultures studied, and contemporary research results from the fields of anthropology and allied sciences. My comments are in no ways the expression of any kind of point of view about the contemporary representatives of those cultures, in terms of customs, social and political behaviour and so on. My sole purpose being an inter-disciplinary study of the SRQ, as described by Levi-Strauss.

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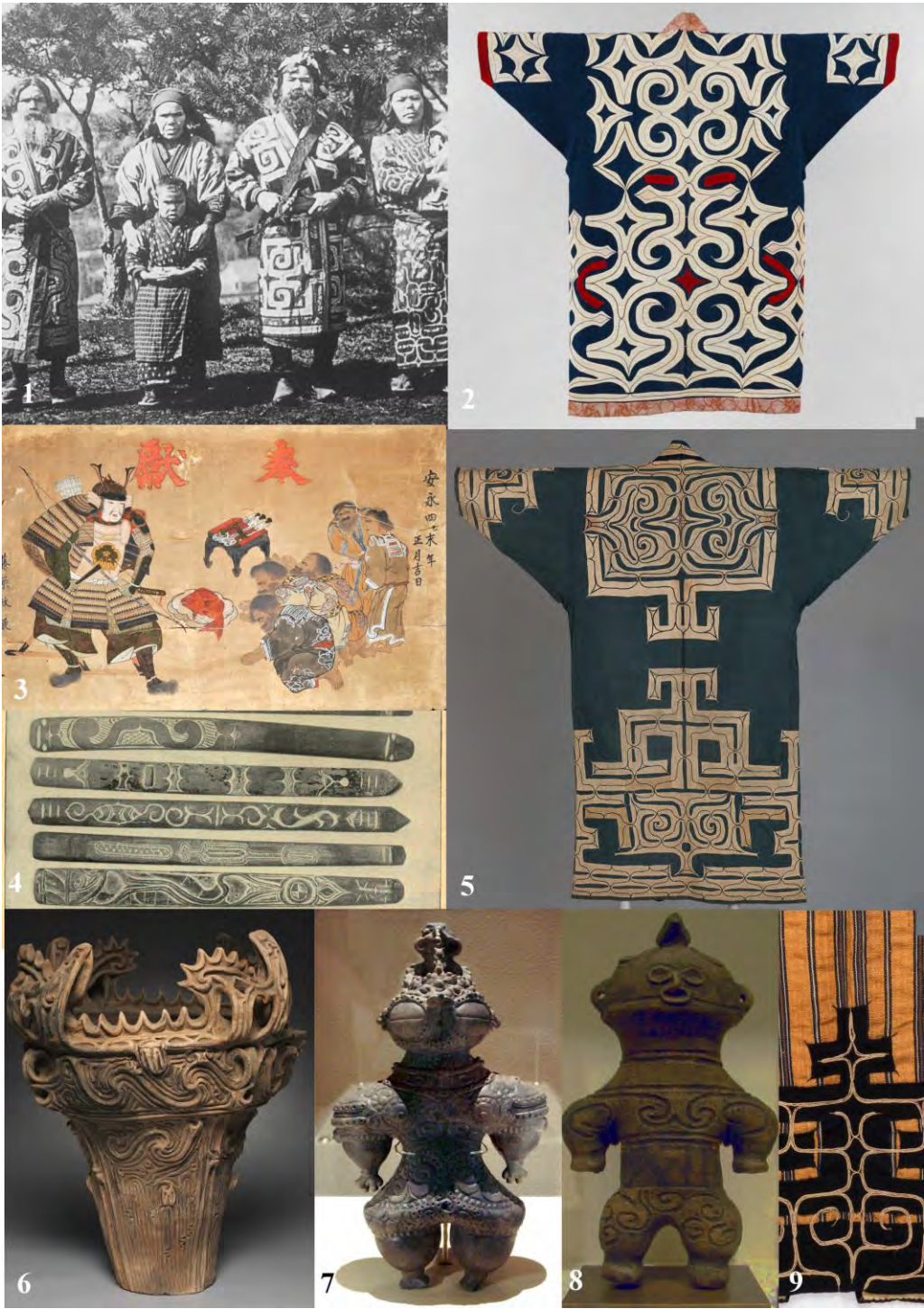


FIGURE 12: VISUAL OVERVIEW : AINU STYLES

## 2 AINU

### Preamble:

Even though this case study is focused on the Ainu people, for reasons related to pre-existing research results from the fields of genetic geography, archaeology, archaeo- and ethno-botany and art history exposed in this thesis, it extends for some parts to a study of a broader area including the surroundings of the sea of Oshkosh and parts of the areas of the river Amur region in the South eastern part of Siberia. As it is briefly mentioned by Levi-Straus in his essay on the 'Split representation in the art of Asia and America', the art of the Neolithic Japan's Jōmon people that predates Ainu culture<sup>12</sup> seems undoubtedly closely related to the ones of the Neolithic Amur and of the Sea of Oshkosh area :

- 
- <sup>12</sup> 1) Ainu people in Tokyo before leaving for St. Louis. (1904) by Frederick Starr (1858-1933). Library of Congress.  
2) Ainu robe, Meiji period (1868–1912) Accession Number: 67.172.2 Met Museum  
3) A Japanese samurai and Ainu in Hokkaido around 1775. Hakodate City Museum, Hokkaido, Japan  
4) Ikupasuy, Report of U. S. National Museum, 1896. —Culin. Plate 19.  
5) Ainu robe, late Edo period (1789–1868)/ Meiji period (1868–1912), Ref. 1943.32. Art Institute of Chicago  
6) Fire-flame Cooking Vessel Jōmon Period 2500 BC Japan, The Cleveland Museum of Art. Ref 1984.68  
7) Dogu\_Miyagi\_1000\_BCE\_400\_BCE; Tokyo National Museum  
8) Dogu figurine "with snow goggles" Jōmon period (145th century BC –300 BC) REF: MA 1714 Guimet Museum.  
9) Ainu robe (attush). Hokkaido, Japan, 19th century. Cotton appliqué and embroidery on elm bark (ohyo) cloth. Gift of Alice Boney. 1962-67-1. Cooper Hewitt, Smithsonian Design Museum

we note that Neolithic art of the Amur— some of whose themes (such as the bird, with wings unfolded, whose abdomen is formed by a solar face) are almost identical with themes of the Northwest Coast— exhibits, according to some scholars, “an unexpectedly rich, curvilinear ornamentation related to that of the Ainu and Māori on one side and to the Neolithic cultures of China (Yangshao) and Japan (Jōmon) on the other; consisting particularly of that type of ribbon ornamentation characterized by complex motifs such as the weave, spiral and meander in contradistinction to the rectangular geometric decoration of the Baikalian culture.

(Levi-Strauss, 1944)

Quoting however only in the footnotes the work of Henry Field and Eugene Prostov, ‘Results of Soviet Investigation in Siberia, 1940-1941,’ published in *American Anthropologist*’ in 1942, and from which he based his assumptions. As we will see in this case studies, those similarities have been studied more recently, including by Dr Irina Zhushchikhovskaya, Senior researcher, Institute of History, Archaeology and Ethnography of Peoples of Far East, Far Eastern Branch of Russian Academy of Sciences.

## 2.1 General overview

The Ainu are an aboriginal people from what is now considered as Japan. According to the most recent genetic anthropology studies, *“the Ainu people are indigenous to the northernmost islands of Japan and currently comprise ~0.03% of the Japanese”* (Takeuchi, F et al, 2017)

The obvious fact of a remaining and reasonably large contemporary Ainu population in the Islands of Hokkaido, Sakhalin and Kurile led to the common acceptance in modern

times that Ainu used to populate the Islands of Hokkaido, Sakhalin and Kurile, and the northern part of Honshu, the main Island of Japan.

Distinct Ainu groups have populated Hokkaido, Sakhalin, and the Kurile Islands, as well as northern Honshu, the main island of Japan. Ainu were fishers, hunters and gatherers on the edge of the subarctic. Their core activity was river fishing. The word Ainu means “most humanly being.” For several hundred years they were known as the Ezo by the Japanese. The old Japanese name for Hokkaido is also Ezo.

(Svensson, 1999)

First recorded as a distinct people in 660 AD, Ainu developed trading contact with different neighbouring peoples: most intensely with the Japanese to the South, the Manchurians to the West, the Oroch and Nivkhs to the North in Sakhalin, and the Itel'men (Itel'meni) in Kamchatka to the East/Northeast. *'Ainu are known for their rich exploration of the supernatural world and their ceremonial life, especially Iyomante, the bear festival. Ainu is unrelated to other languages in the region.'* (Daly and Lee, 2012). Recent genetic researches tend to bring new light to the peopling of Japan and indicate that at some point in ancient history the Jōmon ancestors of the Ainu peopled probably the whole Honshu (Main Island) as well as the Island of Hokkaido (Takeuchi et al., 2017). We must notice that even if the Ainu are considered as the Japanese ethnic group showing the largest genetic heritage from the Jōmon, they also present their own specificities. I develop therefore later in this chapter the genetic anthropology study of the Ainu people.

It is interesting to note that apparently Ainu from the Sakhalin and Kurile Island might present more genetic admixture with other ethnic groups from the Mainland but shared to some extent the same culture with the Ainu from Hokkaido (Tajima et al., 2004).

In accordance with most studies, I would suggest that this is due to the inevitable mixing of population with neighbouring tribes on a possibly 14000 years or longer period, and the most probable common origin of the populations of the wider geographic area coming from human dispersal since the OoA event, as well as to the particularity of culture itself that can be the common frame of reference for a mixed population. Those local variations are also clear at a cultural and behavioural level between the Ainu from the Hokkaido, Sakhalin, and Kurile islands in regard to shamanism practices.

Despite a common assumption that Ainu culture is monolithic, not only are there significant differences between the three major Ainu groups - the Hokkaido, Sakhalin, and Kurile Ainu - but there also are significant intra cultural variations within each group. All of the Ainu, however, share some basic cultural features, such as the high development of oral tradition and the basic subsistence economy which consists of hunting, fishing, and gathering plants.

(Ohnuki-Tierney, 1980)

Those intra-cultural differences occur to complicate my research and I have therefore tried to maintain a good balance between in-depth inquiry and the necessity to gather usable data related to our core subject in the framework of this research that requires some arguably unavoidable generalizations.

Finally, Ainu people, like most of the indigenous and hunter-gatherer people on Earth, have been historically the subjects of local political discriminations and attempts at cultural and political integration by the usually farming then industrialized ethnic majority ruling the lands where they had lived, for some of those peoples for thousands of years. It must be however clearly stated that this case is in no way unique to Japan, as documented in section 1.3.

In the case of the Ainu people, their rights were only officially acknowledged by the Japanese Government on June 6<sup>th</sup>, 2008 (Winchester, 2009) .

This point is of course not incidental regarding the accessibility of accurate data about Ainu culture in the framework of this research. As we will see, past and present-day Ainu society is an holistic system that encompasses various spiritual practices, as well as body modifications and the use of specific patterns on clothing and objects. Of course, as stressed, and with due respect to present day Ainu society, this study will



mainly focus on the earliest ethnographic records that are much more likely to provide some explanations to the specific shapes of their traditional visual patterns.

### 2.1.1 Jōmon – Ainu Lineage

Robust studies in archaeology and affiliated sciences show a lineage between Ainu and Jōmon people. The Jōmon period is the prehistoric era of Japan, dating from about 12 000 BC to about 300 BC. At that time Japan was inhabited by a complex hunter-gatherers' culture.

Complex hunter-gatherers are hunter-gatherers whose cultures and societies have cultural, social, and economic traits that anthropologists and other scholars had long assumed required agriculture for them to develop. Permanent inequality is the trait that has attracted the most attention among archaeologists, but others include large, dense populations; large, relatively permanent settlements; and intensive economies among other characteristics. First widely recognized by archaeologists in the late 1970s, they have been a focus of major research efforts since.

(Ames K.M., 2014)

It should be however highlighted that the peopling of Japan by 'proto-Jōmon' hunter-gatherers tribes can apparently be tracked back to 40 000 BP :

The currently accepted model for the history of Japanese populations is the 'dual structure model' [1,4±6]. This model assumes that there were two waves of human migrations from the Korean Peninsula or the Asian continent to the

Japanese Archipelago. The latter could be divided into more than one wave, as some authors [6] addressed in the three migration waves model. The first wave of migrations by hunter-gatherers took place from 40,000 Before Present (BP); the origin of the early migrants (i.e., Jōmon people) is assumed to be Southeast Asia in the dual structure model but remains to be determined.”

(Takeuchi et al., 2017)

As we will see, beyond the undeniable similarities between the Jōmon use of ‘spiral type’ patterns on clay anthropomorphic figurines called the ‘Dogū’ that were excavated in the North of Japan, and the Ainu patterns used on clothing (Munro, 1908; Hitchcock, 1892; Fitzhugh and Dubreuil, 1999), anatomical and physical anthropology as well as recent genetic researches have proven the close connection between the Jōmon and Ainu People, compared to the Yayoi, the ‘dominant’ ethnic group in contemporary Japan in terms of the size of population (Tokunaga et al., 2001 ; Adachi et al., 2009).

### 2.1.2 Proven genetic Lineage:

The origins of the Ainu and Jōmon have been quite mysterious for western commentators since the early contacts with the Ainu. As stressed, Levi-Strauss had no genetic data regarding Ainu lineage at the time he wrote his essay. And I also suspect that most of his knowledge about the Ainu and their culture came from the report

written by Berthold Laufer (1902) on 'The decorative art of the Amur tribes' presenting the field work of the Jesup North Pacific Expedition directed by Franz Boas.

Amongst the diverse theories that have spread across Ainu studies, they have been categorized in the past as being Proto-Caucasian (Harvey and Brothwell, 1969), some researchers have stressed a possible similarity and therefore genetic connection with Australian aboriginals. According to the most recent researches in the fields of genetic anthropology, none of those theories are true.

I was granted an access to the DAR genetic database of National Geographic's Genographic project in November 2017<sup>13</sup>. Unfortunately, the database contained only one DNA sample identified as 'Ainu' at the time I was allowed to consult it, and the presence of only one identified sample made that research quite unfruitful. However, a compelling collaborative research paper published in 2017 in the interdisciplinary research journal PLOSS ONE and two research papers published in Human immunology (2001) and in the American Journal of physical Anthropology (2009) provide us some quite striking data regarding the questions of human dispersal models in connection

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<sup>13</sup> <https://www.nationalgeographic.com/sorry/genographic/>

with the study of the SRQ. According to recent DNA analysis of HLA alleles and Haplotypes

Ainu, the indigenous population in North Japan, is a key population: their HLA profiles are intermediate between Amerindians and the majority of Northeast Asians and they are considered to be relatively pure descendants of Upper Palaeolithic people in East Asia.

(Tokunaga et al., 2001)

Those research results tend to match the data provided by studies of the Palaeolithic



and Neolithic artefacts found and excavated in the North of Japan. First, as we will see, the Ainu-Jōmon Lineage is definitely acknowledged

amongst the academic circles. Second, there is a definitive difference in style in the Dogū, some small humanoid and animal clay figures, that were excavated in the extreme North of Honshu with the one found on the other parts of the main Island. Humanoid Dogū from the Late Jōmon era found in the North presenting decorative patterns that resemble modern Ainu decorative patterns as well as patterns from other tribes from the Amur region (Kaner, 2009) .

**FIGURE 13 : 'SNOW GOGGLE DOGU' (MIYAGI 1000 BCE -400 BCE) AND INUIT WITH 'SNOW GOGGLES'**

Recent genetic anthropology researches stress that :

conventionally, it is widely accepted that the Ainu are descended from the Jōmon people with little admixture with other populations. For instance, there is no distinct proof of intensive genetic influence of mainland Japanese on the Ainu before the Meiji government started sending settlers to Hokkaido in 1869 (Fumoto, 2004). However, recent studies on nonmetric cranial traits (Shigematsu et al. 2004) and mitochondrial DNA (mtDNA) analysis (Tajima et al. 2004; Sato et al. 2007) suggested considerable genetic influence of the aboriginal people of the Lower Amur/Sea of Okhotsk region on the Ainu.

(Adachi et al., 2009: 256)

I would therefore suggest that what we are facing here is a case of a probable geographic dissemination of an artistic style that seems to be confirmed by genetic anthropology research results and archaeological findings. This tends to corroborate the theory I developed in a paper published in 2015 (Pothier, 2015), regarding the possible influences and Siberian origins of the Ainu patterns that I include in Appendix [B] in this dissertation.

It has been discussed if 'Snow Goggles Dogū' feature or not 'snow goggles' (also dubbed 'Inuit goggles'), that in my opinion would strongly suggest a northern influence. As we can see, recent genetic geography research results tend to back up this hypothesis, based on the most recent dispersal models provided by genetic researches and the confirmed apparition of this style around 1000-300 AD in northern

Japan (Kaner, 2009). I would make the hypothesis that those Dogū were mostly inspired by ‘aboriginal people of the Lower Amur/Sea of Okhotsk region’. A point confirmed in a way by genetic research.

Despite recent advances in population genomics, much remains to be elucidated with regard to East Asian population history. The Ainu, a hunter-gatherer population of northern Japan and Sakhalin island of Russia, are thought to be key to elucidating the prehistory of Japan and the peopling of East Asia. Here, we study the genetic relationship of the Ainu with other East Asian and Siberian populations outside the Japanese archipelago using genome-wide genotyping data. We find that the Ainu represent a deep branch of East Asian diversity more basal than all present-day East Asian farmers. However, we did not find a genetic connection between the Ainu and populations of the Tibetan plateau, rejecting their long-held hypothetical connection based on Y chromosome data. Unlike all other East Asian populations investigated, **the Ainu have a closer genetic relationship with northeast Siberians than with central Siberians, suggesting ancient connections among populations around the Sea of Okhotsk.**<sup>14</sup> We also detect a recent genetic contribution of the Ainu to nearby populations, but no evidence for reciprocal recent gene flow is observed. Whole genome sequencing of contemporary and ancient Ainu individuals will be helpful to understand the details of the deep history of East Asians.”

(Jeong et al., 2016)

Current genetic geography models tend therefore to confirm archaeological studies and findings about the similarities between Neolithic pottery of Japan, Eastern China and the Amur Basin. And the lineage between Jōmon people and contemporary Ainu is

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<sup>14</sup> My bold

also confirmed, leaving few doubts in my opinion about the (Pre-) historical artistic connections between the Ainu and Jōmon 'Styles' and their use of similar patterns.

Regarding the framework of this research on the SRQ, I think we must notice that Levi-Strauss mentioned only one time in his essay the Jōmon and Ainu cultures, comparing as he stated it (and quoting the work of Henry Field and Eugene Prostov) : 'Ainu and Māori on one side' and 'the Neolithic cultures of China (Yangshao) and Japan (Jōmon) on the other' ( Field and Prostov, 1942 ; Levi-Strauss, 1944).

We can probably deduce that those categorizations made by Levi-Strauss were based on the 'historical dating' of those different cultures (two Neolithic cultures and two cultures discovered by westerners in the 17<sup>th</sup> century), but I must highlight the proven 'genealogy' of the Ainu patterns that are undoubtedly connected to the style of the North Jōmon. A point clearly confirmed as well by genetic anthropology that Levi-Strauss was not aware of at the time he wrote his essay. It seems that in his quest for underlying 'structures' within different cultures, systems of representation and artistic styles, Levi-Strauss paid few attention to the possible genealogy of those artistic styles. And he quite strongly refuted the diffusionist theories on the subject (Bois, 2015).



Finally, I argue those genetic anthropology research results are also confirmed by cognition studies clearly indicating the similarity between Ainu and Arctic peoples, a group of population who '*generally have the largest crania of any human group*' -probably due to the human's biological adaptation to the extreme conditions of the far North- , and their shared tendencies toward high aptitudes in non-verbal skills :

The Ainu showed stronger non-verbal skills, mostly logical and spatial, than verbal. As the control group was Japanese, who show strong visuospatial and weak verbal skills, it is surprising that the Ainu's IQ profile is further tilted toward non-verbal skills. This profile is similar to that of Arctic people like the Inuit (...), consistent with the genetic similarity between the Ainu and Arctic peoples.

(Kura et al., 2014)

A point that I put in perspective with their hunter-gatherer way of Life encompassing an alleged symbiosis with nature (Watanabe, 1973), their link with Arctic tribes, as well as with the quite strict abstractness of their traditional 'decorative' patterns.

## 2.2 Culture

Ainus are known for their rich exploration of the supernatural world and their ceremonial life, especially iyomante, the bear festival. Ainu is unrelated to other languages in the region. The number of Ainu-speaking people has rapidly decreased, although the last decade has seen an increasing interest in the newly established Ainu language classes across Hokkaido.

(Svensson, 1999)

Ainu culture and lifestyle showed to some extent some similarities with at least the Haida and the Māori cultures that I document in the following chapters. They were 'maritime hunter-gatherers', with a skilful knowledge of fauna and flora, including natural poisons, and '*a rich exploration of the supernatural world*' (Svensson, 1999). A point that we can put in perspective with the fact that they are considered '*to be relatively pure descendants of Upper Palaeolithic people in East Asia*' (Tokunaga, 2001), considering the case studies about shamanism and the U.P cognitive revolution that I exposed in sections 1.4.2 and 1.7. I would therefore suggest that some of their practices and customs described in the earliest western and Japanese ethnographic records could date back to centuries if not millennia ago.

As mentioned, their culture presented some 'ultra-local' specificities (Ohnuki-Tierney, 1980). A point stressed as well by Joseph m. Kitagawa , The University of Chicago, in his Book review of Neil Gordon Munroe 'Ainu Creed and Cult' :

Certainly, some of his views do not coincide with those of other equally reliable scholars on the subject. This is partly due to the fact that there are local variations among the Ainus that lead to different interpretations.

(Kitagawa, 1963)

According to Romyn Hitchcock (1892) and many other explorers and scholars, the Ainu had developed a fine artistic and craft production, including embroidered cloths and carved wood cookware and ritualistic objects, most of them being 'decorated' with the type of design in common use within their culture that include to a large part the use of spirals and whorls.

### 2.2.1 Religion and Belief System

Many practices of the Ainu include ways to avoid evil spirits from entering the body, be it through tattooing of the mouth, or embroidery on specific parts of clothing (Dubreuil and Fitzhugh, 1999; Hunger, 2017). Ainu religion and culture have been studied and described by many western observers in the 19th and early 20<sup>th</sup> Century, including George Montandon, a Swiss-French who travelled in the 1920 to six villages in

Hokkaido in order to collect field data. Basil Hall Chamberlain one of the foremost British Japanologists active in Japan during the late 19th century. And Rev. John Batchelor, an Anglican English missionary to the Ainu people of Japan, who lived from 1877 to 1941 among the indigenous Ainu communities in the Northern Japanese island of Hokkaido. Finally, the Ainu inhabiting the Sakhalin Island were also documented in the framework of the Jesup north pacific expedition by Bertold Laufer (Laufer, 1902).

### 2.2.2 Shamanism and Animism

As we saw, Ainu people are '*known for their rich exploration of the supernatural world and their ceremonial life*' (Svensson, 1999). Their belief systems include a type of shamanism and animism. Two spiritual practices that are very common amongst hunters and gatherers tribes worldwide, as well as in contemporary Asian, Siberian and Subarctic regions.

According to oral traditions, ancient Ainu male shamans had characteristics similar to those discussed by Michael Winkelman in that they were social leaders who provided divination and healing. »

( Tanaka, 2003)

Animals, plants and natural phenomenon like rain or the Sun and stars as well as objects like the lacquerware boxes which were used for important rituals are/were

considered as 'kamuy' (or 'Kamui') which can be translated as 'Gods' 'spirits' or 'form of energy'. 'Ainu' meaning 'human' as opposed to 'kamuy'. Their animism is very specific and to some extent different from the Japanese Shinto.

The Ainu belief system is complex. Ranging from the protection of the home to the significance of remains found in nature, there was meaning ascribed to the smallest details of life. Munro describes three important aspects of Ainu religion: ramat, kamui, and inau. Ramat translates to heart, soul, or spirit. It is a religion of animism, as explained by an elder to Munro, "Ramat is all pervading and indestructible" (Munro 8) Ramat was believed to inhabit even personal items. Therefore, utensils and weapons were broken and buried with their owners so that the ramat might move on with the deceased

(Hunger, 2017)

They also developed a gender specific division of labour, including spiritual practices, that started after the 17th century when traditional Ainu shamanism went into decline (Tanaka, 2003). I would suggest that this could be in relation with the gender specific use of tattooing amongst Ainu people that was recorded in modern times. Even though many clues tend to suggest that tattooing amongst hunter gatherer in the area was first developed by women (Krutark, 2014).

Most ethnographic records, and in accordance with the widely acknowledged similarities between Ainu and Siberian shamanism, that tend, as stressed, to match archaeological findings and visual similarities between the visual patterns of the

Neolithic and indigenous people of this wider area, testify the use of a local variety of *Ledum palustre* (*Rhododendron tomentosum* subsp. *mentosum*, or 'Nuhca', in Ainu language), a plant from the rhododendron species, for the Shamanic rituals as well as an herbal tea:

Amidst smoke and aroma produced three plants (a branch of spruce or larch, a mildly narcotic called nuhca, and a minced dried leek)' placed on embers and by a salty drink (sea water or river water with tangle coated salt) which the shaman takes, he or she reaches the climax

(Ohnuki-Tierney, 1980)



FIGURE 14 : LEDUM PALUSTRE, THOMÉ, O. W. "FLORA VON DEUTSCHLAND, ÖSTERREICH UND DER SCHWEIZ GERA." GERMANY, KÖHLER (1885).

As we will see further, I tend to suggest that *Ledum's* influence on the ASC of the Ainu shamans and on the style of the Ainu pattern themselves might have been under-estimated by previous early commentators for various reasons that I exposed in sections 1.3.2 and 1.7. I provide further comments about the potential effects of the taking of *Ledum palustre* in this chapter, in the

section dedicated to the possible origins of the Ainu patterns (2.3.4), and I document the potential connections between Grayanotoxins, a poisonous active principle of *Rhododendrons* species, and Siberian Asian shamanism in Appendix [C].

### 2.2.3 Iyomante, the Bear ritual

Iyomante, the Bear ritual, a ceremony to send back the spirits of bear cubs to the divine world, was/is an important aspect of Ainu beliefs systems. It seems that it is commonly misunderstood from an external (and western) point of view, as it involves the sacrifice of a bear cub. Ainu believed that Gods took the form of animals to visit humans :

The Ainu iyomante practice involves capturing and rearing a cub for a year or more before killing it and sending its spirit with human gifts of *inaw* and sake off to the god world in an elaborate ceremony,- this process not only demonstrates human respect for *kamuy* (gods), but the offerings petition the gods to return to visit humans on earth again in the future (Watanabe 1972: 71-73,-Akino, Utagawa, this volume). There is little doubt about Ainu connections with Amur-area Siberian bear rituals (Black 1973,- Ikeya 1997), and some believe its appearance in Ainu culture originated from the intrusion of Siberian-oriented Okhotsk culture into Hokkaido (Utagawa 1989). Northwest Coast bear ceremonies take different forms but have a similar purpose and have strong ritual linkages to shamanism and salmon ceremonialism (Boas 1894: 92-101)

(Kono and Fitzhugh, 1999 : 112)

Iyomante was forbidden by Japanese law in 1955, but the law itself was abolished in 2007, as the Ministry of the Environment of Japan announced that animal ceremonies were generally regarded as an exception to the animal rights law of Japan. I got the opportunity to view at the research department of the French National Library the 1961 film about Iyomante directed by Neil G. Munro for the Royal Anthropological

Society. What is striking for a western viewer is the sanctity and seriousness of the ceremony as well as the quasi burlesque way practitioners are playing with the Bear head once he has been killed. But this indeed can be misunderstood, and I suppose that we could rely on traditions like European middle ages 'carnival' to find a way to understand this part of the ritual.



## 2.2.4 Tattooing

As opposed to other tribes encompassed in the split representation taxon, Ainu use of tattoo was apparently generally only reserved for women, even though some exceptions might have occurred. The last fully tattooed Ainu woman died in 1998.

According to Dr Lars Krutak, a cultural anthropologist specialized in tattoo history :

For the Ainu, tattooing was exclusive to females, as was the profession of tattooist. According to mythological accounts, tattoo was brought to earth by the "ancestral mother" of the Ainu Okikurumi Turesh Machi who was the younger sister of the creator god Okikurumi.<sup>15</sup>

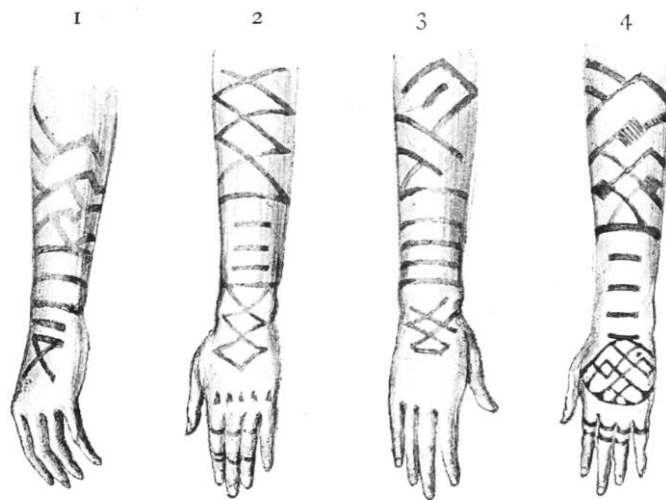
The process could take several years to get fully tattooed, as reported by Hitchcock (1892). I would argue that even if the tattoos present some symmetrical features, mostly on the hands and wrists, they cannot be categorized as showing the specificities of the split representation, and don't include any types of spirals. Women used to tattoo as well their lips and surroundings of their mouths. And even though this point has been quite widely documented and highlighted by early western commentator, it is in no way a practice unique in the Asian Siberian context. From the Sub-Indian continent to the islands of Formosa one can find example of this practice of tattooing

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<sup>15</sup> <https://www.larskrutak.com/tattooing-among-japans-ainu-people/>

the lips and surroundings of the mouth, mostly for women, of course in styles that varies from the Ainu fashion.

kobets (Tokachi River); Figs. 2 and 3 are the two arms of Kawata Tera, a girl of Tobuts (north-east coast of Yezo); and Fig. 4 is the left arm of a girl at Piratori.



TATTOO-MARKS ON WOMEN'S ARMS.

FIGURE 15 : AINU WOMEN WRIST TATTOO , (LANDOR, 1893:253)

I would of course tend to highlight this point, as I wonder how this divergence between the hand and wrist tattoo styles and the many spirals in the clothing and wood work of the Ainu would be explained by Levi-Strauss's structuralist theory he developed in his essay on the SRQ. My suggestion would be that this style featuring basic entoptic shapes is probably anterior to the time of the settlement of the

ancestors of the Ainu in the Area, but of course the genealogy of prehistoric tattoo is an almost impossible task.



AINU WOMAN OF FRISHIKOBETS, ON THE TOKACHI RIVER.

**FIGURE 16 : : AINU WOMAN WITH LIPS TATTOO, (LANDOR, 1893:60)**

Quoting the work of Hilger and Munro, Hunger highlights the connections, at least within an Ainu context, between tattooing and fire making that I also comment and document in this dissertation. I tend to be however quite sceptical regarding her identification of a similar motif between the mouth tattoo and some motif

embroidered on Ainu robes (Hunger 2017). Finally, as mentioned by Hitchcock (1891) and other commentators, Ainu 'tattooing ink' consisted of birch soot:

The tattoo marks are made by cross-hatching the skin with knives, which they get from the Japanese. Into the cuts thus made the soot of burning birch (kaba) bark is rubbed, which is collected on the bottom of a dish held over the fire.

(Hitchcock, 1892)

Stressing once again the importance of birch trees in connection with ritualistic practices in what I would label as 'Siberian-Asian shamanism', as documented and commented by Eliade (1959).

### 2.2.5 Medicine and ethnobotanic records.

The Ainu, who are known for their Aconit poison bear hunting and whaling techniques, shown in my opinion at the turn of the 18th century an expert use of plants and a skilful knowledge of natural poisons. In accordance with most researchers I find it very reasonable to consider that most of those techniques had been used for centuries if not millennia by the Ainu and their ancestors in an area that encompasses at least the North of Japan and the coasts of the Amur Basin probably up North to Kamchatka.

*Aconitum* spp. (Surku, surugu-ra)

The tuberous roots are collected in late autumn and used in the manufacture of an arrow poison for hunting brown bears. The preparation of the arrow poison (Ainu name-surku-kik) is a very important magico-religious ceremony.”

(Mitsubishi, 1976)

Of course, this knowledge extended to edible plants and animals, and also for a part to the medicinal use of natural resources. One of the oldest record on Ainu Pharmacopoeia, the report from the 1799 Japanese expedition sent by the Shogun to ‘Ezo’, the land of the Ainu, in order to conduct a taxonomy of the medicinal plants of the Ainu, had listed ‘178 herbs, 57 trees and 9 fungi’ with their Ainu and Japanese names, (...) their habit and the uses made of them by the local population.

In 1799, the Shogun, the feudal ruler of Japan, sent an expedition to Ezo under the leadership of Tshohako Shibue, a trained doctor, to collect and survey the medicinal plants of the region. They started from Matsumae and proceeded along the sea coast to the eastern part of Hokkaido into Atsukeshi. In the report of this expedition, "Toi-butsumanshi" (3), 178 herbs, 57 trees and 9 fungi were described, giving their Ainu names, their Japanese plant and drug names, their habit and the uses made of them by the local population."

(Mitsuhashi, 1976)

Around one hundred years later, a study of this taxonomy was conducted by the reverend Batchelor and Kingo Miyabe, and the results published in 1893. The two authors had cross-checked the data contained in the 'Toi-butsumanshi' report, as stated in their essay:

These works were consulted by us in the preparation of the present paper, but those statements which have not been confirmed by the Ainu we have personally questioned about them have been all excluded.

(Batchelor and Miyabe, 1893.)

Through my preliminary study of this essay by Batchelor and Miyabe on the 'Toi-butsumanshi', I would highlight in the framework of this research the rarely mentioned and confirmed use as food, herbal tea or 'tobacco' of at least five different plants containing to some extent psychoactive compounds, including the widely documented use of *Ledum palustre* during shamanic rituals that I mentioned, a practice that, as we will see, was commonly shared with neighbouring tribes including the Tungus.

Amongst those plants that we can find listed in the essay by Batchelor and Miyabe, I would highlight the presence of two potentially psychoactive plants that are reported to have been used 'extensively' as common food by the Ainu, and apparently for the sole purpose of alimentation, a point that as we will see might raises questions about the accuracy of contemporary studies of the relation between SSC and the ritualistic use of entheogens in the area.

48-TOMA

*Corydalis ambigua*, Cham. et Schlecht.

Engosaku.

The bulbs of this plant are extensively eaten by the Ainu, especially by those in the Ishikari valley, Saghalien, and Southern Kuriles. The bulb has a slightly bitter taste, which is removed by repeated boilings in water. In Etorup, the Ainu boil with a certain kind of earth to remove its bitterness. They are eaten either simply boiled or mixed with rice. In Saghalien, it is said that they are cooked generally with the fat of seals. The bulbs are often boiled and then dried for future use. “

(Batchelor and Miyabe, 1893)

*Corydalis ambigua* being a plant that contains a psychoactive compound, the Tetrahydropalmatine, ‘a berberine alkaloid obtained by formal addition of two molecules of hydrogen to the pyridine ring of palmatine. It has a role as an adrenergic agent, a non-narcotic analgesic and a dopaminergic antagonist<sup>16</sup>, used in modern times to reduces drug craving and relapse and promotes detoxification in recovering heroin addicts.’ (Wang and Mantsch, 2012). The Plant has a long history of use in Chinese medicine, including as an analgesic , and should I highlight it, as an hypnagogue:

Rhizoma *Corydalis* (RC), belonging to *Corydalis* species and the family of Papaveraceae, is a perennial herbaceous plant and grows mostly in Northeastern China. The tubers of RC have been employed as analgesic, sedative, and hypnagogue for long times [1, 2], which is a well-known

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<sup>16</sup> <https://pubchem.ncbi.nlm.nih.gov/compound/Tetrahydropalmatine>



traditional Chinese herbal medicine, *Corydalis yanhusuo* W.T. Wang and acts against myocardial ischemia, gastric ulcer, and tumour in the medical field. The bioactive constituents, corydaline, have analgesic efficacy but little toxicity”

(Guo, Zhifeng, et al. 2014)

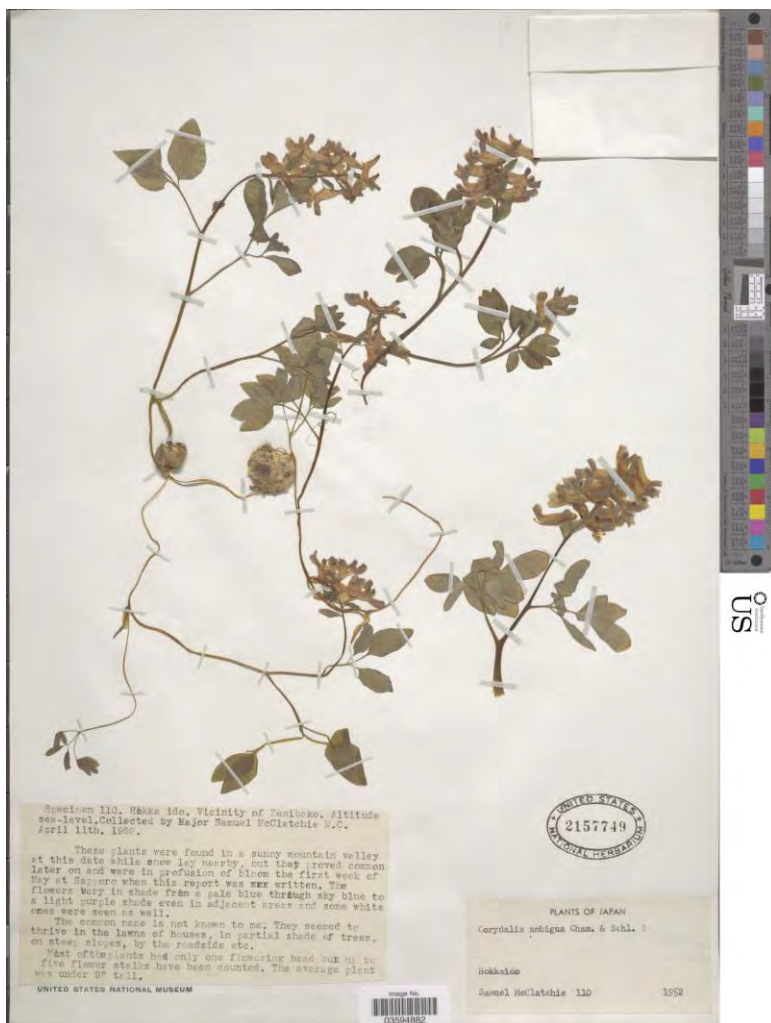


FIGURE 17 : CORYDALIS AMBIGUA CHAM. & SCHLTDL.

The other potentially psychoactive plant consumed by the Ainu as food and quoted in the essay being the local variety of Mugwort:

78.—NOYA. *Artemisia vulgaris*, L. Yomogi. The Mugwort.

The stem and leaves of this plant are used as food when very young in the early spring. They are taken and first boiled; next they are well pounded in a wooden mortar ; and lastly made into cakes and dried for future consumption. A good deal, however, is eaten at once,

having been first pounded with millet, or, if obtainable, rice. When the dried cakes are to be eaten they are re-boiled and pounded with millet or rice. This is said to be a very nutritious food and of itself quite sufficient to sustain life und keep the body in a healthy condition. It is said to be of a very sweet flavor, and the people are remarkably fond of it. The ancient Ainu used to live upon this herb a great deal, we are told, and it has been the means of keeping them alive throughout more than one famine. Later on in the year, when the plant becomes older, the leaves only are taken (without the stem) and dried for future use. “

(Batchelor and Miyabe, 1893)

A plant showing a strong variation of the concentration of its active principles depending on its geographic location (Zhigzhitzhapova et al. , 2016). And containing amongst its active principles the potentially psychoactive compounds Thujones and

Sesquiterpenes. Thujones are a type of psychoactive compound that were suspected

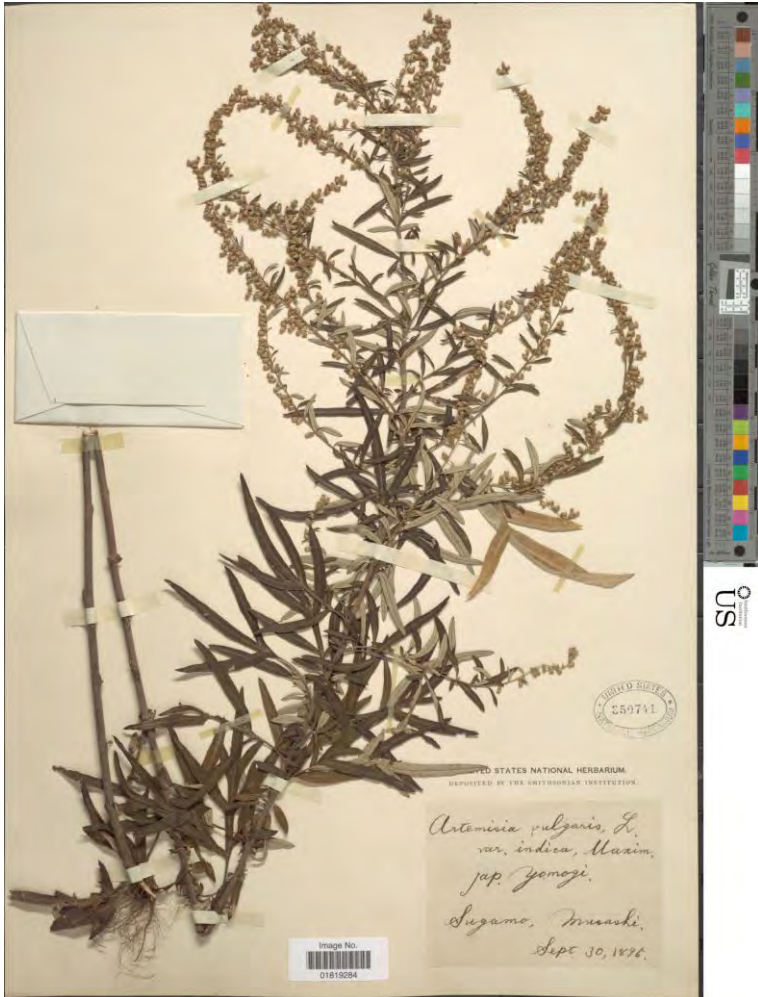


FIGURE 18 : ARTEMISIA VULGARIS L.

to be the cause of hallucinations amongst Absinthe drinkers (Even though this point tend to be reconsidered, the potential psychoactive properties of the Thujones themselves are however confirmed (Padosch et al. ,2006) , and Sesquiterpenes 'are likely implicated' in 'hallucinogenic and aphrodisiac potential' (Alrashedy and Molina,

2016). The plant itself *'has also been traditionally applied because of its effect on the central nervous system, including analgesic, sedative, anti-depressant and antiepileptic effects'* ( Nguyen et al. , 2016).

I would therefore argue that those two rarely-if ever-mentioned confirmed cases of *extensive consumption*, as everyday life food, of potentially psychoactive plants, with confirmed and respectively: *'analgesic, sedative, anti-depressant and antiepileptic'* effects on one side, and *'sedative, analgesic, hypnagogue'* effects on the other side, could certainly have had an impact on the *weltanschauung* of the Ainu (an probably on Neolithic populations from the area), and therefore as well possibly on their artistic practices and styles, though there are no evidence that those plants could trigger the vision of entoptics.

As stated, intra-cultural variables make it of course an unfathomable task to present here the whole Ainu Pharmacopoeia. In my opinion their skilful use of poisons highlights as well as their tight knowledge of the natural resources, and in accordance with ethnological records, their *'life in symbiosis with nature'* ( Watanabe, 1973) also manifested in their animist beliefs.

The Ainu, a tribe who has inhabited in the northernmost area of Japan, the area which has traditionally been called "Yeso", used toxic substances of various kinds for hunting and fishing. Aconite (surku in Ainu), Ikema (penup in Ainu), Naniwazu (ketuhas in Ainu) and Aka-ei (aikoro chiep in Ainu), Japanese sting ray, were the most popular toxic substances used for the purposes.

(Ishikawa, 1962)

As mentioned, the Ainu used as well *Ledum palustre* (*Rhododendron tomentosum*) and other local sub-species of *Rhododendrons*, both as an herbal tea in daily life and as an ‘Incense’ during shamanic rituals (Ohnuki-Tierney, 2014). A plant from the *Rhododendron* genus which contains, amongst various potentially psychoactive chemical substances, the active compounds Ledol and possibly low levels of Grayanotoxins<sup>17</sup>, whose intoxication can produce ‘*psychedelic optical effects such as whirling lights and tunnel vision*’ (Ott, 1998) (Kasper et al., 2010).



**FIGURE 19 : RHODODENDRONS DISTRIBUTION, (KUTTAPETTY ET AL., 2014)**

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<sup>17</sup> Koda et al reports one case of contemporary intoxication to *Rhododendron japonicum* mad honey poisoning in Niigata, mainland Japan (Koda et al., 2015)

Even though the potential hallucinogenic properties of the *Rhododendron tomentosum* itself is subject to controversies<sup>18</sup>, as those effects have mostly been observed during an intoxication to another plant from the Genus, the *Rhododendron ponticum* (Mayor, 1995), I find it particularly appropriate to mention this eventuality, considering the ritualistic use of the plant in a shamanic context within a culture that shown a great importance to Whorl and Spirals (Zhushchikhovskaya and Danilova, 2008 ; Humphrey, 2013).

The area of native distribution of the potentially 'poisonous' Rhododendron species encompasses mostly China and South Asia as well as Japan, and the Northern Eastern Russian far East and the area around the Bering strait up to America, some areas that are very important for our core study. It should be noted that during the LGM the part of Europe that features some native species of Rhododendron (figure 18) was covered by ice, thus potentially corroborating the possibility of a 'cultural transmission / dissemination of the spiral motif from Siberia and/or East Asia to Europe during the late UP and/or Neolithic' I proposed in section 1.5.3, if we consider that those spirals were influenced by the consumptions of rhododendrons species (the low distribution

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<sup>18</sup> Ledum palustre is mentioned by some authors as containing traces of andromedotoxins (nowadays labeled grayanotoxins) see (Kuhnlein and Turner, 1991), while (Dampc and Luckiewica, 2015) claim the contrary quoting a 1885 study by Plugge and de Zaayer (Plugge and Zaayer, 1885)

of the species in Europe during the LGM explaining therefore the lack of spirals in Palaeolithic Europe, see Von Petzinger, 2017 )<sup>19</sup>.

Finally, it must be stressed that as of today Neolithic Japan's Jōmon culture provides us the world's earliest recorded proof of cultivated cannabis (8000 BCE) (Clarke and Merlin, 2013 ; McPartland and Hegman, 2018). To my knowledge there are however no direct proofs of the use as Cannabis as an entheogen by the Ainu. As documented by Clarke and Merlin :

The Ainu made heavy cloth from fibers extracted from native elm trees (*Ulmus davidiana* var. *japonica*) and fabricated a finer cloth from various species in the nettle family (*Urticaceae*). Although these plants were apparently the primary sources of fiber used to make their distinctive coat-like garment, known as *attush*, hemp fiber may have been used for weaving some articles of clothing as well as for cordage, although Cannabis may have been more important as a food source. The Ainu are known for their shamanistic beliefs and rituals derived from Siberian traditions, and shamanism is one of the original sources of Shintō, the native Japanese religion. Although hemp is widely used in present-day Shintō rituals, it is not used in Ainu shamanic rituals. Nevertheless, it can be argued that among the most significant traditional Japanese uses of Cannabis were for its special ceremonial symbolism and protective spiritual power. The ritual use of hemp in Japan is still very important, and hemp fibers

have long been used ceremonially by Shintō priests because of their association with purity; this includes Japan's emperor "who acts as a kind of chief priest of Shintōism".

(Clarke and Merlin, 2013.)

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<sup>19</sup> Dampc and Luczkiewicz (2015) also mention that 'the major volatile compounds of essential oil vary in a wide range, depending on habitat.'. Meaning that the same plant species could trigger form constants visions in some geographic areas only (I.e. Asia Vs Europe) if the triggering of form constant through the consumption of those *Rhododendron* species was to be clearly established. The distribution should be put in perspective as well with AMH dispersal since the OoA event in my opinion.

But I think that the confirmed presence of Cannabis should raise some reasonable suspicions about a possible use as an entheogen in ancient Asia and possibly amongst early Ainu populations (see figure 41 in section 5.6).

### 2.3 Ainu Patterns

According to Levi-Strauss (1944), arts from our taxon were of two distinctive styles. I would make however some precisions to this statement, first for the Ainu, beyond the obvious fact as we remarked, that the hand-tattoo patterns could be reasonably categorized as a third style among Ainu culture.





**FIGURE 20 : AINU PEOPLE IN TOKYO (1904) BEFORE LEAVING FOR ST. LOUIS. “THE AINU GROUP AT THE SAINT LOUIS EXPOSITION” BY FREDERICK STARR. LIBRARY OF CONGRESS**

My comments apply to the clothing and mostly wooden artefacts I was able to study in the collections of the Quai Branly Museum in Paris, Leiden ethnographic Museum in the Netherlands, as well as the ones reproduced in various exhibition catalogues and monographs. A corpus of artefacts and clothing produced at least before the 20<sup>th</sup> century, in order to avoid as much as possible an unnecessary study of ‘tourists’art’.

Where Levi-Strauss would identify one figurative and one abstract style, I would tend to identify two distinctive abstract styles. On textiles, one style includes the use of very

thick lines, with a strong contrast with the background (Figure 11 (1), (2) and (5)). The other one includes very thin lines, with an extensive use of whorls, but very few spirals. Both patterns are indeed generally deployed on a vertical symmetry. The whole rendering is however quite organic. The balance is also quite remarkable, something that, beyond my own opinion, is attested by many researchers as well as by the neighbouring tribes of the Ainu that seem to have held their sense of design in high esteem. The 'thin lines' style is also used for carving on wood and bones, usually consisting of a mix of figurative and abstract drawings. Beyond the whirling patterns, most carved patterns, and the women's hand tattoo motifs, are quite similar to the entoptic type (zig-zag lines, dots filling, etc...), and I find in this sense the categorizing attempts by Levi-Strauss in two different styles as unfruitful, quite superficial and fragmentary on that matter.

The Ainu from the Sakhalin Islands and Hokkaido wore handmade and usually embroidered clothing. Ainu clothing were later influenced by trade exchanges with their Japanese neighbours :

In the late Edo era, the Ainu obtained large volumes of cotton through trade with the Japanese who lived in Honshu (Japan's mainland) and through other activities. They wore appliqued or embroidered cotton clothes called "chikarkarpe," which means "the things we embroider." Besides the aforementioned categories, Ainu clothes are classified as follows. Clothes called "kaparamip" used a large volume of white cloth for applique. "Kaparamip" means thin clothes. Clothes called "ruunpe" were the ones elaborately embroidered with delicate applique. These traditional clothes can

be seen only in a limited area, including Shiraoi. "Chijiri" is a general term for clothes which are directly embroidered without applique.<sup>20</sup>

Patterns embroidered on clothing were also carved on various objects, including wooden cookware and the Ikupasuy<sup>21</sup> a sacred object used for prayer.

The ikupasuy is the most important personal object. We believe that humans cannot express their prayers properly, and the ikupasuy transforms human prayer to an acceptable form for the gods.

( Dubreuil, 2007)

On a more mathematical and geometric approach, Zhushchikhovskaya deduced from a study of '*published data on pottery assemblages from Japan, Eastern China, and the Amur River basin from the 6th to the beginning of the 1st mil. BC*', that:

The pottery decoration of Neolithic cultures of Eastern Asia and the Russian Far East presents cases of spiral motif configurations corresponding to all the basic types of plane spiral figure. These are the Archimedes, logarithmic, clothoid spirals, and the spiral of yin-yang type, or tai chi figure. It may be considered as evidence that the spiral was one of the main and most developed geometrical concepts of the Neolithic population in this part of the world.

(Zhushchikhovskaya and Danilova, 2008)

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<sup>20</sup> <http://www.ainu-museum.or.jp/en/study/eng07.html>

<sup>21</sup> (Figure 11, (4) )

As we will see Zhushchikhovskaya's comments seems to be in adequacy with the proposed model that I develop at the end of this case study.

### 2.3.1 Meaning of the Patterns

The most striking and peculiar point about Ainu patterns, compared to other artistic styles from the split representation taxon, seems to be the numerous proofs that traditionally the Ainu themselves claim the importance of a kind of 'abstractness' of the patterns. A point never mentioned by Levi-Strauss. The Ainu have many differing designs largely based on two basic patterns: one is a swirl pattern called 'Moreu' in Ainu language and the other is a parenthesis pattern called 'Aiuushi' which means 'things with thorns'. Many commentators, including Levi-Strauss, identified 'eyes' in Ainu decorative patterns, as well as figurative representation of plants and fauna from the Arctic and sub-arctic.

Other characteristic patterns can be seen on the clothes. A spiral motif called "the eye of God" is found on the back and parentheses-like shapes and a net motif are found along the collar and cuffs. The tip of the "parenthesis" is called a thorn and represents a hunting arrow and the net motif, a fishing net. Bracken ferns and water chestnuts also figure among the patterns, both of which represent birth."

(Okamura, 1993)

This however doesn't match with Ainu's own perspective on the subject. And it sounds quite relevant to me, in a bi-cognitive approach, to take their views on the subject in high consideration. For the Ainu, according to many sources and a personal email discussion I had with Dr Chisato O Dubreuil, one of the most prominent experts on the subject, and a PhD in anthropology of native Ainu descent, the patterns don't 'represent' anything. (which doesn't mean however that the patterns are only "decorative", without any symbolical meanings nor shamanic-magical properties).

As Chisato O Dubreuil answers to the question of the abstractness of the pattern and the postulate that no one can detect what they represent, while at the same time some observers guessed that the patterns represented animals:

(...) Neither is true. First, there isn't anything to detect in Ainu designs. As stated we believe that the evil gods (wen-kamuy) are so clever that if there was something 'hidden' in the design, they would know, and they could enter the image and cause great harm.<sup>22</sup>

A point also confirmed by Kameda ( 2011). I want to highlight here this emphasis on 'pure abstractness' as both a protective feature and a celebration of the gods, from a people that *' are considered to be relatively pure descendants of Upper Palaeolithic people in*

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<sup>22</sup> Ainu Art and Culture, A Call for Respect, an interview with Chisato O. Dubreuil," in Kyoto Journal, Issue 63, Spring 2006

*East Asia.* ' (Tokunaga et al., 2001), as the type of geometric pattern they produce are supposed to have appeared (at least on potteries) during Neolithic Japan's early Jōmon period (5300 - 3500 BC) (Zhushchikhovskaya and Danilova, 2008 ; Kaner, 2009 ; Humphrey 2013). I think it is at least reasonable to consider that this artistic, intellectual and spiritual attitude toward abstractness could date back to the same period or before.

### 2.3.2 Sermaka omare: the Ainu concept of 'Spiritual protection'

Quoting the work of Dr Chisato O Dubreuil, in her solid MA dissertation in art history 'sermaka omare: the ainu motif of protection. An analysis of traditional ainu artwork' that consists of an inter-disciplinary study of the art of the Ainu people, Kristie Hunger highlights the concept of 'Sermaka omare', or Spiritual protection, in relation to the decorative patterns of the Ainu people:

Sermaka omare is an Ainu phrase that encompasses the main motif of their artwork, which is protection for one another. Traditional designs corresponding to this motif are found on many of the hand-made artifacts in Ainu culture and symbolism is infused in each design. Ainu designs symbolize spiritual protection of the wearer or user, while the actual item is used for physical protection either against the elements or physical danger. Visual

elements of Ainu artwork found on garments consist of labyrinths, braces, nets or fences, thorns, and swirls that thwart and repel harmful spirits. These elements all reinforce the centrality of sermaka omare in Ainu culture and artwork. The word sermak means “back” or “shadow.” It was thought that evil spirits could more easily enter the body from behind, perhaps because it is a universal human blind spot. When an Ainu exited a home, their host would say, “sermaka omare,” translated to “put something on your back” (...)

(Hunger, 2017)

I would suggest that we can therefore deduce from those data that the Ainu context of artistic patterns’ production denotes an intentional abstract use of various types of geometric shapes including spirals, and that this design and its abstractness (even though the western word ‘abstractness’ is probably not appropriate to englobe and categorize the intrinsic qualities of the patterns for the Ainu) are considered to have ‘protective qualities’.

### 2.3.3 Mandalas, pattern-making and cognitive sciences

Considering the later influence of mandalas in the Asian context, it seems relevant to me to highlight that the practice of pattern making by itself tends to develop mental focus, an important skill for survival that could be considered as a ‘protection’ (Hunger, 2013). The perceived connection between the practice of embroidering the patterns and a meditative state of consciousness within an Ainu context being even confirmed in my opinion by those verses from the traditional Ainu tale “The Spider Goddess”:

Doing nothing but needlework,

I remained with my eyes

focused on a single spot,

and this is the way I lived

on and on

uneventfully

Song of spider goddess traditional Ainu tale

(Phillipi, 2015)

A point raised as well by Professor David Michael Levin (City of NY University):

As I interpret that strophe, it is an allusion to the goddess's visionary wisdom, a wisdom she teaches as a meditative practice, a discipline and skill of the eyes: a practice with vision which can develop a capacity for concentration and focus. (In Tibetan, zhignas.) What is to be developed by this practice is a capacity which modifies the normal character of our visionary concentration and focus. Speaking phenomenologically, I want to suggest that the 'single spot' is a resting-place, an Ort der Stille, a place where the eyes can become, and remain, unperturbed, tranquil, at peace, and relaxed: a place often experienced as providing a therapeutic sense of eternity and immortality. The practice is not one of fixation, a gaze rigid, tight, and unmoved, but one, rather, of centering: a centering, moreover, which decentres the form of subjectivity which lives only in the narrowness of the atomized, immediate present. The 'Song of the Spider Goddess' can teach us Gelassenheit as a practice for the development of our visionary potential

(Levin, 2008)



And I would even suggest that we might have here, with this traditional song of *'relatively pure descendants of Upper Paleolithic people in East Asia'* (Tokunaga et al. , 2001), a small evidence of a connection between the evolution of hominids' cognitive processes and the practice of crafts and arts that flourished during the U.P cognitive revolution (1.5).

Donalds (1991, 2001) explanation is that material culture began to function as an externalized symbol storage. Certainly artifacts serve the purpose of anchoring knowledge or desirable states of mind so that they can be referred back to later. (...) One looks at notches in a log and knows how many days have gone by. The result is not so different from retrieving knowledge from memory, though the source of the knowledge is external rather than internal.

(Gabora, 2003)

As the connection between pattern-making practices and higher order states of consciousness like flow state and deep focus has reached quite a scientific acknowledgement in the 21<sup>st</sup> century (Kapitan, 2012; Nakamura and Csikszentmihalyi, 2014; Forkosh and Drake, 2017). And It seems to me that the traditional intent on the 'abstractness' of the patterns could also be put in perspective with the confirmed high aptitudes of the Ainu toward non-verbal skills that I mentioned in section 2.1.2. This led me to enquire the possible origins of those 'protective qualities' and the importance of the 'abstractness', mental focus, and the use of spirals within those patterns.

### 2.3.4 Possible origin of the Patterns

The Ainu, suspected as having Indo-European origins, inhale a species of wild rosemary *Ledum palustre*, as did Tungus shamans for trance purposes. The Indo-European tribes descended from the Scythians in the Ossetian region "go to caves to inebriate themselves on the smoke of *Rhododendron caucasicum*, which would cause them to sleep deeply" and inspire prophetic dreams

(Dannaway, 2010)<sup>23</sup>

I develop throughout this dissertation various postulates regarding the possible origins of the SRT patterns, as I take into consideration the implications of the similarities and reasonable geographic proximity between the art of the Ainu, Neolithic Jōmon, Neolithic China and Siberia and the art of the Haida people and other tribes from the northern west coast.

As we saw, according to most ethnographic records on the subject, Ainu shamanism rituals include the consumption of *Ledum palustre* (*Rhododendron tomentosum*), as herbal tea and as 'Shamanic incense' (Ohnuki-Tierney, 2014) or 'Shamanic aroma' (Hamayon, 1977), which can be properly described I argue, as a fumigation technique. I therefore detail here the series of clues that lead me to hypothesize that this plant species might be considered at least as a 'trance facilitating substance' if not as an entheogen.

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<sup>23</sup> I need to mention that the correct spelling of the name of the plant is "*Rhododendron caucasicum*"

Even though the importance of the impact of the taking of *Ledum palustre* during the Ainu rituals has been subject to discussion (Ohnuki-Tierney, 2014), I want to highlight that the confirmed case of Grayanotoxin<sup>24</sup> and Ledol intoxications through the consumption of other Rhododendron species that can lead to the visions of 'Whirling lights' and 'Tunnel vision' (Mayor, 1995)<sup>25</sup> seems to puzzlingly match with the confirmed fact that :

The pottery decoration of Neolithic cultures of Eastern Asia and the Russian Far East presents cases of spiral motif configurations corresponding to all the basic types of plane spiral figure. These are the Archimedes, logarithmic, clothoid spirals, and the spiral of yin-yang type, or tai chi figure. It may be considered as evidence that the spiral was one of the main and most developed geometrical concepts of the Neolithic population in this part of the world.

(Zhushchikhovskaya and Danilova, 2008)

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<sup>24</sup> Also known as andromedotoxin

<sup>25</sup> Grayanotoxyn poisoning can also trigger tonic-clonic seizures that by themselves can procure visual hallucinations, including moving geometric shapes, see Kasper et al. (2010)

As puzzling as it might be we must however take into consideration the fact that the



triggering of form constant through the consumption of those Rhododendron species has not been proven at this point. Another point that seems to corroborate my hypothesis is the confirmed use of *Ledum palustre* fumigations during various shamanic rituals as well as daily

**FIGURE 21** : LEDUM PALUSTRE , HAMILTON, EDWARD. "THE FLORA HOMOEOPATHICA: OR, ILLUSTRATIONS AND DESCRIPTIONS OF THE MEDICINAL PLANTS USED AS HOMOEOPATHIC REMEDIES/BY EDWARD HAMILTON." LONDON:, LEATH & ROSS (1852).

consumption as an herbal tea amongst other tribes from the area of 'Eastern Asia and the Russian Far East', including the

Tungus (Ott, 1998), Yakuts (Hamayon, 1977), Evenki (Helander-Renvall, 2005), Nanai (Bulgakova, 2018), Orochen-Evenski (Anderson, 2011) and so on:

Both *L. palustre* and *L. hypoleucum* Kam. are used as shamanic inebriants by Tungusic tribes of Siberia (Brekhman and Sam 1967); while 'Labrador tea', *L. groenlandicum* Oeder of the Kwakiutl Indians is said to have 'narcotic properties' (Turner and Bell 1973). Similarly, the well-known ericaceous kinnikinnick, *Arctostaphylos uva-ursi* (L.) Sprenger, is smoked as an inebriant by Kwakiutl and other North American Indians (Ott 1993; Turner and Bell 1973), pointing to possible content of ericolin or grayanotoxins

(Ott, 1998:261)

Some recorded ethnographic facts that seem to accentuate the probability of an ancestral origin of those practices that seem to also puzzlingly match as we saw the geographic distribution of spiral motifs as '*the main and most developed geometrical concepts of the Neolithic population in this part of the world.*' (Zhushchikhovskaya and Danilova, 2008 ; Humphrey, 2013), though of course correlation doesn't imply causation .

It should be also highlighted, that the Ainu, and probably other tribes from the area (including undoubtedly tribes peopling Neolithic northern China), used to consume other potentially psychoactive, and alkaloid and sesquiterpenes containing plants, even as everyday food. In my opinion this consumption would have only facilitated the access to trance through the supplementary taking of *Ledum palustre* or other grayanotoxin-containing plants. I would suggest that we might face in this case a context presenting some similarities with the case of the historical, ethnographic and anthropological study of San Bushmen in South Africa, as recent studies tend to corroborate the fact that various plants were used as trance facilitating substances by shamans, despite the fact that earlier studies tended to mitigate those assumptions (Mitchell and Hudson, 2004).

Taking all the aforementioned clues into consideration, I would therefore advance that the spiral type patterns found in the Ainu culture, as well as in the artefacts of the Neolithic populations of the Russian Far East and North East Asia, might have been influenced by the consumption of those plants, and I would even postulate that those spirals might consist of the representations of form constants seen through the consumption by various means of *Rhododendron* species by those populations, including during rituals that were an important part of their daily life.<sup>26</sup>

In this sense, and with all respect to the traditions and beliefs of the Ainu people, I would like to make the speculation that the insistence on the abstractness of the design might have been as well, in the origin, a cognitive warning to focus on the abstractness without letting the mind to 'loose itself' through interpretations of perceived geometric hallucinations<sup>27</sup> experienced through the consumption of *Ledum palustre* and/or other local psychoactive compounds. Even if it seems quite impossible to prove this assumption<sup>28</sup>, I think that the confirmed extensive consumption of a

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<sup>26</sup> (See Appendix [C] on the subject).

<sup>27</sup> See as well the case of the 'Spider Goddess' Ainu song on section 2.3.3

<sup>28</sup> The Author being based in France and due to the legislation he wasn't able to test by himself this hypothesis by conducting bioassays of the *Rhododendron Tomentosum* in the framework of this research.

potential hypnagogue as food could only reinforce this theory. I suggest some development of this theory in the article published in 'technoetic arts a journal of speculative research': 'A walking Man from the far North' (Pothier, 2015) (Appendix [B])

Setting aside the entheogenic factors, the data on which I based this previous speculation could also lead in my opinion to interpret the importance of the abstractness of the pattern for the Ainu people as an early U.P / Neolithic cognitive warning within those populations to avoid 'Pareidolia', a human brain's tendency to incorrectly interpret neutral visual stimuli as objects. This seems highly relevant in my opinion in a comparative study of the way the art from Neolithic China, originally very similar to the one of the Amur area and the one of the Jōmon, had evolved in the Shang era to a curvilinear style including to a large extent the figurative depiction of monsters and fantastic beasts, while the Ainu and their ancestors had kept probably for millennia a rather abstract and non-figurative style, under the assumption that *'the evil gods (wen-kamuy) are so clever that if there was something 'hidden' in the design, they would know, and they could enter the image and cause great harm.'* (Dubreuil, 2007). And the case of the origins of the artistic depictions of the Chinese Taotie that I expose in section (5.4) seems very evocative and puzzling on that matter.

I want however to pinpoint that my comments and postulates are not a suggestion of a plain explanation of the origins of the Ainu patterns nor of their Weltanschauung. It seems to me that this case could and should be compared with the ritualistic use of Ayahuasca by the shipibo people. As it seems very puzzling to remark that we are facing a troubling case of matching similarities between the artistic styles of various neighbouring tribes, with a common use of whorls and Spiral-shaped patterns that are part of the metaphysical landscape of those people, with a widely documented use for fumigation rituals of the same plant species whose intoxication is established to potentially trigger "*psychomotor stimulation, then to seizures and cramps, finally to paralysis, breathing problems and even death*"( Dampc and Luczkiewicz, 2013). And this probably for millennia in the same geographic area. If correlation seems clear, causation would require more researches to be established.

I would advance that the importance of this genus that is endemic in the area (Kolbek et al. , 2013) can be explained as well by its various use amongst those tribes. A proven potent remedy against cold and cough (Popescu and Kopp, 2013), the plant was also used as a daily beverage, and fumigations were not only used during strictly shamanic rituals, but also during hunting rituals, in my opinion probably to hide to large mammals the human smells of the hunters before they left the villages, as it is still documented for the Orochen-Evenski ( Anderson, 2011.) Fumigations in the area also involve nowadays the use of other potentially psychoactive plants like Juniper (Henry



et al, 2018) and I have few doubts that those multiple uses of *Ledum* as well as fumigation practices, probably in conjunction with other plants, date back to the times of the Asian Neolithic and maybe U.P in the area.<sup>29</sup>

### 2.3.5 Estimated date of the Patterns

As far as I know, and through a quite extended research in available monographs on the subject, the presence of very similar patterns on Jōmon Dogū anthropomorphic

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<sup>29</sup> On speculative side of this question, I want to bring to the reader's attention a puzzling fact. As we saw, Birch and *Ledum* have both an importance in Ainu culture, regarding rituals, Tattooing and Fire. As stressed by Eliade (1952), the Altaian Shaman, who represents one of the oldest shamanic tradition in the area, climbs a birch pole during rituals that also include the burning of *Ledum* bushes. It appears that a 2010 research paper suggest that Birch and *Rhododendron tomentosum*, seem to interact in a rather symbiotic way:

“*R. tomentosum*-emitted aromatic volatiles are passively adsorbed to *Betula* spp. Foliage. When re-released, these volatiles were repellent to birch herbivores, which suggest the presence of associational resistance.” (...) “We found that birch (*Betula* spp.) leaves adsorb and re-release the specific arthropod-repelling C15 semi-volatiles ledene, ledol and palustrol produced by *Rhododendron tomentosum* when grown in mixed association in a field setup. In a natural habitat, a higher concentration of ledene was released from birches neighbouring *R. tomentosum* than from birches situated > 5 m from *R. tomentosum*.”

(Himanen et al., 2010)

In other words, it seems that when ritualistically climbing a birch pole while being inebriated by the smoke of *Ledum palustre*, the Altaian shaman actually follows the path of the volatile active compounds of the *Ledum palustre*, and the way they interact with birch in a natural environment. Of course I let to the reader the choice to decide if this is a simple coincidence or due to the way of Life of the Neolithic Asian-Siberian hunter-gatherers who used to live in a tight symbiosis with Nature that most members of urbanized contemporary populations, including the author himself, can barely imagine.

clay sculptures found in the North of the main island (Honshu) can be tracked to around 1000-300 AD according to radiocarbon dating (Kaner, 2009).

It should be stressed that to my knowledge no Dogū figures older than that seems to feature the same kind of patterns that show this distinctive similarity with the one found on Ainu clothing. Even though clay figures and pottery presenting very sparse spirals date back to the early Jōmon era ( 5300 – 3500 AD ) (Zhushchikhovskaya and Danilova, 2008 ; Kaner, 2009).



**FIGURE 22 : 'SNOW GOGGLE DOGU' GUIMET MUSEUM, 1000-300 AD**

I have suggested that those Dogū represent 'visitors from the North' (Pothier, 2015) (Appendix [B]) as clay figures presenting the distinctive patterns also feature what is considered by many researchers to be 'Inuit snow goggles'. Considering the geographic location where most 'snow goggles Dogū' were found, and according to my research in available monographs on the subject, most spiral-shaped designs in the final Jōmon era were found in Tohoku and

Kamegaoka in the Aomori prefecture ( Kaner, 2009) in the North of the main island, and based on the geography of the Japanese islands at large, I would argue that the most probing theory regarding a dissemination of the pattern in ancient Japan is of a cultural borrowing from neighbouring tribes coming from the extreme North of Japan, including of course Hokkaido and possibly from the Kuril islands in the Sea of Okhotsk but probably even up north on the mainland and in Siberia, thus explaining the presence of 'Snow, or Inuit goggles'. A fact that seems to be corroborated by solid linguistic, genetic, anthropological and ethnographic researches. One being in my opinion the recorded presence of local clusters of Northern Tungusic language in the Kurile island as well as on the coasts of the mainland up to Kamtchatka (Whaley et al. 1999). A language supposed to have emerged around 500 BC, therefore around the time of the apparent appearance of similar design patterns on Dogū figures.

I would like however to make few comments regarding this point. First of all, the first presence of such pattern on a Dogū figure doesn't necessarily imply per se that it marks the date of creation of such patterns, even within a Jōmon context, as spirals appear on pottery around 5300 AD. We cannot dismiss the possibility that this type of patterns wasn't as well anteriorly used in tattooing, or on textiles, mobile art or even rock art, be it in the North of Japan or the surrounding area up North and on the mainland .

Second, due to the mostly probable South Asian origin of the Jōmon people, clearly expressed in the part dedicated to the study of Jōmon-Ainu dispersal, there is the slight probability that the similarity between Ainu pattern and intricate decorative patterns from M.P or U.P central India (1.5.1) are not only due to random circumstances. Even though I personally tend to consider this eventuality as quite unlikely and at least quite impossible to prove.

I would therefore estimate at this point that the origins of the Ainu artistic patterns can be at least tracked back up to around 1000 AD, while keeping in mind that spirals were presented in pottery since the 6<sup>th</sup> Millennium BC in the Amur area, therefore showing an enduring interest for this specific shape in the wider area of North East Asia and the Russian Far East.

## 2.4 Conclusions and limitations

I want to start the conclusions of this chapter, and as food for thought for the following cases, by putting into perspective the insights of social anthropology Professor Peter Gow (St Andrews University), who works on the traditional design of the Piro people, an amazonian tribe which tends to create a traditional pattern similar to the one of the Shipibo people.

The anthropology of art has always been a minor sub-discipline. This is probably because its key questions have been set by the agenda of the aesthetic tradition with which most anthropologists have grown up, the Western tradition in its classical and modernist phases (see Gell 1992). The power of this tradition is such that it has constrained ethnographers endlessly to ask the same questions of other visual aesthetic systems, and to receive the same bemused answer. Even when they are fully aware Western one, ethnographers continue to ask the questions they ask in a Western gallery when confronted with a new piece of work: 'Who made it?', 'What is it called?', 'What does it look like?', 'What does it mean?'. These questions tell us most of what we need to know about Western art, but there is no reason to think of them as universal.

(Gow, 1999)

Of course, this comment by Gow about the 'anthropology of art' reminds us about the limits of this first case and the ones to follow. As it seems indubitable that despite the numerous clues that I tried to bring to the light in this first case, it is ultimately the 'Ainuness' of the patterns, so to speak, that makes them by essence probably out of

the total reach of 'western' or 'Non-Ainu' comprehension, and would it be so surprising coming from a people showing high aptitudes in non-verbal cognition ?

What I want to pinpoint here is that in my opinion they are not, or not solely, 'decorative patterns'. Like the Shipibo Kené, they are part of the Weltanschauung of those people, and in the case of the Ainu the causes and circumstances of the development of their specific shapes date probably back to the dawn of humankind, as I think it was clearly demonstrated that they are the result of 'chronological developments' of a style that appeared probably during the last phases of the U.P in North East Asia, the Russian Far East, the region of the Amur Basin, and Northern parts of the archipelago of Japan. A point that in my opinion Levi-Strauss doesn't articulate correctly in his essay. Even if the structure of a society might have an impact on its artistic style, a theory that I am clearly reluctant to follow, I think I have clearly exposed that other factors like cultural borrowing and transmission, I.e. a 'genealogy', as well as ethnobotanic data in relation to the use of entheogenic substances, and a multiplicity of other factors that makes a culture 'a culture', must certainly not be neglected. Finally, If the potential influence of Cannabis should be at least taken into consideration, as I demonstrate later in the case study of the art of the Shang dynasty, the possible influence of *Rhododendron tomentosum* or grayanotoxin-containing plants seems suggested by robust ethnographic data. It would of course require further studies to strictly prove my theory and I have included in Appendix [C] a summary of

the potential connections between the symptoms of grayanotoxin poisoning, the artistic styles from our taxon and the manifestations of Siberian-Asian shamanism that provides further support to my postulates though the controversy about the presence or not of grayanotoxins in *Rhododendron Tomentosum* limits currently my study. It should be also clearly understood that I mentioned the case of *Corydalis ambigua* and *Artemisia vulgaris* (mugwort) only to highlight the fact that food habits in ancient time also included potentially mind-altering substances that render this research more complex, though in the two aforementioned cases it is very unlikely that those could have triggered the visions of form constants. Though I focused mainly on a study of *Ledum Palustre* for this case study as it is widely recorded in ethnographic studies about Ainu shamanism, it should be noticed that the *Amanita muscaria*, a psychedelic mushroom native to Hokkaido (Imai, 1938) which was widely used by Siberian tribes including the neighbouring Chukchi tribes for at least the last 2000 years (Schultes, 1969), but to my knowledge never mentioned for the Ainu, might also have been the source of the vision of form constants in the wider geographic area.

Finally, as it is well documented (Ohnuki-Tierney, 1973), the use of drums in the shamanic rituals of the Ainu could have also induced elementary entoptic visual phenomena as shamanic style repetitive drumming is well attested to be able to trigger such visual stimulations (Huels et al., 2021).





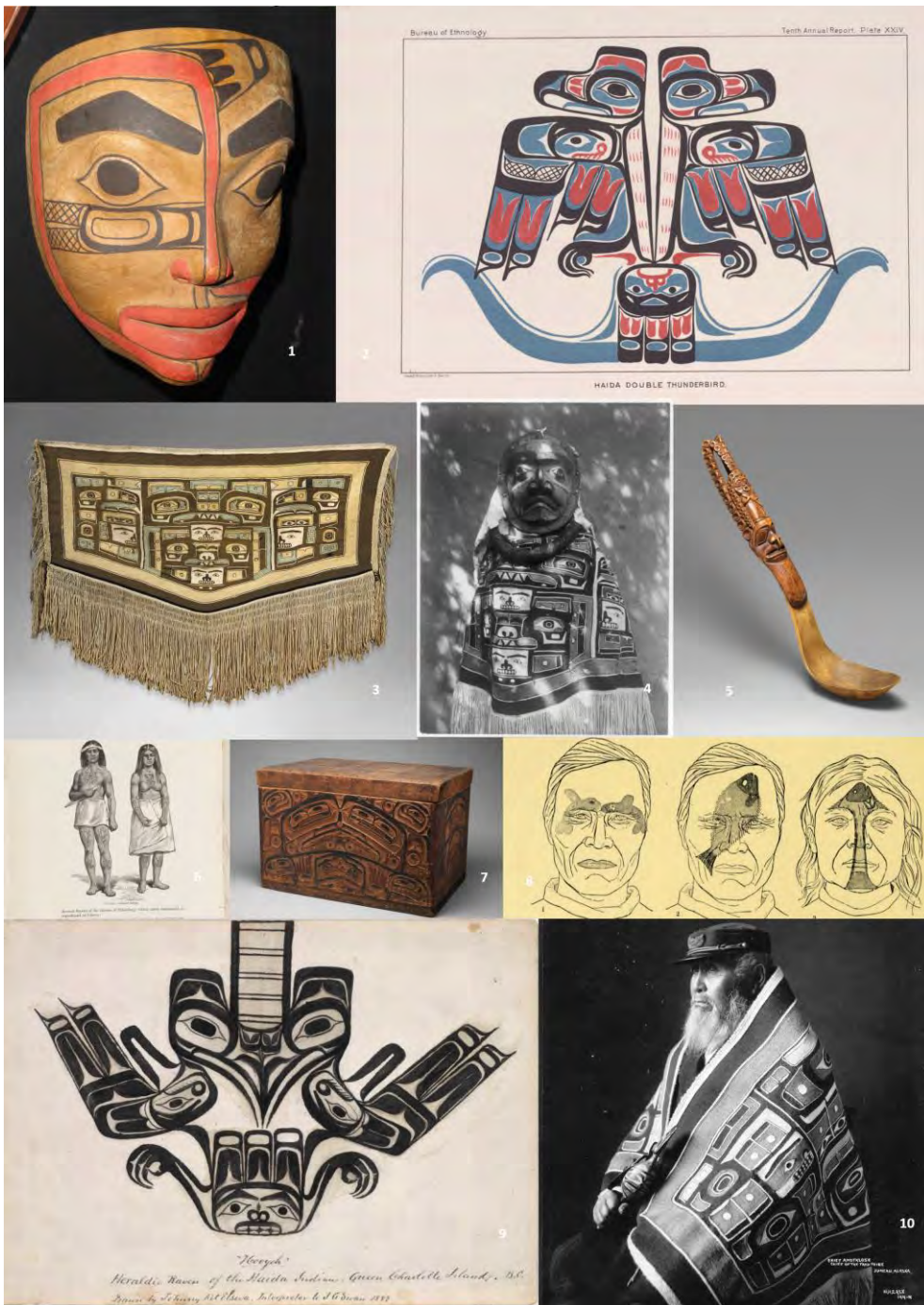


FIGURE 23 : VISUAL OVERVIEW , NORTHERN WEST COAST STYLES

### 3 HAIDA

#### 3.1 Preamble

Even if I focused on the Haida People for this part of the research, this case study extends to the commonly accepted researches on the Northern West Coast tribes of America<sup>30</sup>. I have chosen the Haida as a case study considering that they are largely mentioned in Levi-Strauss essay. Haida are however part of a wider geographic, ethnographic, and even pre-historic and historic group of populations including tribes like the Tlingit, Tsimshian, Nuuchahnulth (Nootka), Kwakiutl and the Salishan. The

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<sup>30</sup> 1) Tlingit mask VK 50, donated 1846 - Museum of Cultures (Helsinki)

2) Haida Double Thunderbird, Annual report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1880, Plate XXIV, page 400

3) Chilkat blanket attributed to Mary Ebbetts Hunt (Anisalaga), 1823-1919, British Columbia.

4) Woman wearing the same Chilkat blanket listed above, a hamatsa neckring and mask representing deceased relative who had been a shaman. Curtis, E. S., photographer. (ca. 1914) Retrieved from the Library of Congress, <https://www.loc.gov/item/2003652777/>.

5) Ladle, ca. 1860, Tlingit, Accession Number: 2011.154.184. Metropolitan Museum

6) Tattooed Haidas, Tenth Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1888-89 by J W Powell, Director (Washington, Government Printing Office, 1893).

7) Storage Chest, ca. 1880, Tlingit, Accession Number: 1979.206.421a, b . Metropolitan Museum

8) Haida facial paintings, details of Plate I in Boas, Franz. "Facial paintings of the Indians of northern British Columbia. Memoirs of the AMNH; v. 2, pt. 1; Publications of the Jesup North Pacific Expedition; (1898).

9) Hooyeh' Heraldic Raven of the Haida Indians. (1883). Call Number: WA MSS S-2368, Beinecke rare book & manuscript library, Yale university

10) Chief Anotklosh of the Taku (Northern Tlingit), 1913. acc. no.14,163 . Museum of History and Industry, Seattle

Northern West Coast context having been widely documented and studied by Franz Boas(1897; 1898), this case study focuses therefore on contemporary reconsiderations and points rarely mentioned in the academic literature that are relevant to the whole thesis.

### 3.2 General overview

The Haida people are an aboriginal people from the Northern West Coast of America, peopling the Haida Gwaii archipelago (The Queen Charlotte Islands) in Northern British Columbia (Canada). Haida have lived in the area since at least 12,500 BP (Fedje and Mathewes, 2011).



FIGURE 24 : 'HAIDA PORTRAIT MASK.', (BAFLOUR, 1907)

The first European encounter is considered to have occurred in 1774 with Spanish explorer Juan Perez, however some studies suggest that the earliest encounter occurred as early as 1741 (White, 2006). Regarding their traditional culture and lifestyle, they have been dubbed by anthropologist Diamond Jenness as the '*Indian Vikings of the North West Coast*' for being '*Warlike*', their mastery of the sea travel and their habit to make slaves from captured opponents (Jenness, 1934).

### 3.2.1 Proven genetic lineage

Due to their location at the near western 'southern' border of the Bering Strait passage, nowadays commonly considered as the point of convergence of tribes migrating from North East Asia and Siberia to the America during the ice age and possibly later (Stone, 2019), Haida people and their Tlingit neighbours present some genetic particularities. Being insular, it also appears that the Haida might have been isolated from any mixing with other neighbouring populations for a long period (thus explaining their genetic difference with the Tlingit, who however undoubtedly share a lot of similarities regarding cultural traits and representation styles.:

Our data indicate that the Haida are genetically distinctive from Tlingit populations. They have mostly mtDNA A2 founder haplotypes (#1) (...)

They also possess a haplotype (#9) that is not seen in the Tlingit or other Northwest Coast populations, aside from the geographically adjacent Bella Coola (Ward et al., 1993), and also have a Q1a3a\* haplotype distinct from those seen in the Tlingit. In addition, the Haida from Hydaburg are genetically closest to Haida from Queen Charlotte Island in Canada. This is not a surprising finding because the Haida only began expanding into the Prince of Wales Island during the past few centuries, displacing the Tongass Tlingit groups living there.

(...) Furthermore, based on the current genetic evidence, the Haida appear not to be closely related to adjacent Tlingit populations, with the pattern of genetic diversity in this population reflecting some degree of isolation from neighboring tribes.

(Schurr et al. , 2012)

Other research results imply that Haida might have acquired a genetic diversity as well from their ancestors most certainly coming from Siberia, due to their isolation. And as stressed, that: *Chukchi, Eskimos, Aleut and Haida, though quite divergent from one another, represent a detached population cluster isolated by sufficient time to be relatively distinct over the average genetic background of Siberia.* (Starikovskaya et al. , 2005)

Further research should be conducted in order to strictly prove a possible genetic lineage between Ainu/Jōmon and Haida/ Northern West Coast people. Diffusionism of certain practices and beliefs, like shamanism is most probable, but not strictly proven at this point. Despite the undeniable similarities between the two cultures. As stressed by Hunger in her Thesis on the 'Ainu motif of protection' :

The similarities between Ainu culture and the cultures of the Pacific Northwest of North America provide another mystery. There is not yet conclusive evidence of Ainu crossing over the Bering Strait, as with Asian peoples who later became known as Native Americans, but the parallels deserve examination (Fitzhugh 116-118). The geography, natural resources, and shamanic practices possibly create similar styles in both Ainu and Haida artifacts. The use of bears, salmon, snakes, and protective designs is found throughout almost all of the art.

(Hunger, 2017)

### 3.3 Culture

Clan structure of the Haida people is considered as 'symmetrical' due to the fact that they are divided into two social groups, the Raven and the Eagles, and as we saw this political structure led Levi-Strauss to draw a parallel in his essay between this political and social organisation and the 'split representation style' and its symmetrical features. Even though I argue this political division in two clans doesn't necessarily induce a connection with their alleged symmetrical artistic style, this socio-political system is however clearly proven by ethnographic researches:

Ethnographic information indicates that the Haida are divided into two moieties also called Raven and Eagle, with each having numerous lineages (Swanton, 1905; Blackman, 1990). Haida villages on the Prince of Wales Island historically contained representatives of several different lineages, and most contained members of both moieties. Based on oral histories, Swanton (1904, 1905) also speculated that the Eagle moiety might have come from a different tribe.

(Schurr et al. , 2012)

It should be noted that this division in two clans is also confirmed by genetic studies .  
Stressing once again the importance of inter-disciplinary studies.

Due to their unique geographic location providing a large abundance of food and supplies, the Haida developed along millennia a unique culture and cosmogony that was definitely influenced by this geographic and socio-economic situation. They were sedentary hunter-gatherers and the abundance of food and supplies was probably a key factor permitting the development of their artistic style and profusion of artefacts and buildings. The accessibility of food provided certainly the possibility to afford more time for 'leisure', including shamanistic practices as well as artistic activities at large (Storytelling, carving, etc...).

The First Peoples of the Pacific Northwest were unique as hunters/gatherers who nevertheless settled in permanent villages, living in houses of substantial construction, enjoying an abundance of food and leisure time, and developing a complex social order and culture. The Haida domesticated no animals except dogs and cultivated no crops except 'Indian tobacco' (Turner & Taylor, 1972). This economy was made possible by the region's abundance of seafood: salmon, halibut, eulachon, sea lion, whale, and 'beach food' such as clams, mussels, geoducks, and crabs. The east coast of Haida Gwaii has unusually high tidal amplitudes averaging between 5 and 7 m, which create a large and plenteous intertidal zone (Slaymaker, 2016, p. 299). This copious littoral profoundly shaped the Haida psyche, as they viewed their human realm as an interstitial space between sea and forest, earth and sky, and animals and gods. They built their houses on the beachfront, conscious they lived in a borderland, in a liminal space between land and sea."

(Hedman, 2018)

They lived in a kind of 'symbiosis' with Nature in a manner very similar to the lifestyle of the Ainu people (Watanabe, 1973), even though Haida were definitely more 'warlike' than the Ainu and their symbiosis with Nature involved the geographic and environmental specificities of British Columbia which however shows some similarities with the pacific coasts of northern Japan.

One of the many remarkable cultural particularities of the Haida people is their oral history mnemonics techniques that allowed them to transmit histories dating as far as 'many thousand years ago' despite their lack of a written language. They name those histories k'aaygang.nga (long, long ago ancient stories) (Fedje and Mathewes, 2011: 121).

(...)the Xaaydas accurately remember historical events that occurred many thousands of years ago. The Xaaydas preserve the Tllsda Gaagwii Gina Aahl fuu Gan Xaayda (Haida Ancient Past) so well in their oral histories that western scientists trained in different knowledge production systems are able to recognize the authenticity of some of these narratives.

( Fedje and Mathewes, 2011: 123)

Regarding their practice of crafts and arts (sculpture, carving, etc...), the undeniable aesthetic qualities of their production led Levi-Strauss to declare:

Certainly, the time is not far distant when the collections of the Northwest Coast will move from anthropological museums to take their place in art



museums among the arts of Egypt, Persia, and the Middle Ages. For this art is not unequal to these great ones. (...) The sculptor of Alaska and British Columbia is not only the sorcerer who confers upon the supernatural a visible form but also the inspired creator, the interpreter who translates into eternal chefs d'oeuvre the fugitive emotions of man.

(Levi-Strauss, 1943)

### 3.4 Haida and Northern West Coast Styles

Based on my own observations of the Haida people art and in comparison with other 'styles' from the split representation groups, I would argue that Haida 'style' is more an 'artistic style' than any identifiable types of patterns unlike the Ainu or Māori patterns. But as I will demonstrate, this style seems to feature 'hypnotic' qualities very similar to the style of the Ainu people, however for other aesthetic reasons.

Regarding the general shape of the Haida art and its history, Bruce Hedman provides a remarkable summarization:

*The characteristic formlines, ovoids, and split U's of Haida art (Holm, 1965) have their roots in an artistic tradition which radiocarbon dating has shown to be over 3000 years old (MacDonald, 1981, p. 225). George MacDonald (1983) wrote, 'It appears that by A.D. 1000 all of the major elements of northwest coast art were in place' (p. 103). Their favorite medium was the abundant western red cedar, the building material for their houses, totem poles, and 60-foot sea-going war canoes. Haida poles were larger and more elaborate than the totems of the mainland tribes (Malin, 1986, p. 65, 66), and characteristically allotted half the segment to the head and ears of the creature depicted. Wood is not a permanent medium in the Marine west coast*

*climate, and few surviving examples are older than two centuries. Wilson Duff (1975) traced this centuries-long artistic evolution through studying their prehistoric stone art.*

(Hedman, 2018)

Despite the undeniable presence of *'The characteristic formlines, ovoids, and split U's of Haida art'*, that in my opinion don't really form a pattern, I would add that it could be even claimed, and therefore partially contradicting Levi-Strauss, that they are indeed, *stricto sensu*, the only tribe (including other relative tribes from the Northern West Coast, like the Tlingit) presenting the true 'split representation' features, in the Boasian sense of splitting of the body but not in the sense of strict symmetry. Their style is a mix of figurative and geometric representation, with the clear representation of multiple eyes or even multiple faces like on many traditional Tlingit chilkat blanket.

As mentioned, their artistic style presents however some undeniable similarities with the styles of the Ainu, Shang, Māori, etc... Mostly regarding the curvilinearity, 'horror vacui' style, typical thickness of the lines, as well as general contrast of the artwork as a whole and the slightly hypnotic feature induced by some specificities of this style that we will analyse further in this chapter. Whereas Shang art tends to present much

more a symmetric representation than true split representation, with spirals being



FIGURE 25 : CHILKAT BLANKET. NATIVE AMERICAN, TLINGIT PEOPLE, KETCHIKAN, ALASKA, 19TH CENTURY. BIRMINGHAM MUSEUM OF ART GOAT WOOL, CEDAR BARK. 35 1/4 × 65 3/4 INCHES. MUSEUM PURCHASE, 1956.48.48.

used as a kind of ‘filling’ motif, Haida art and specifically their semi-figurative representation of animals, encompass indeed notions of ‘dislocation of bodies and faces’, splitting, and as Levi-Strauss stressed it quoting the work of Franz Boas

Split representation in Northwest Coast art has been described by Franz Boas as follows: "The animal is imagined cut in two from head to tail . . . there is a deep depression between the eyes, extending down the nose. This shows that the head itself must not have been considered a front view, but as consisting of two profiles which adjoin at mouth and nose, while they are not in contact with each other on a level with the eyes and forehead . . . either the animals

are represented as split in two so that the profiles are joined in the middle, or a front view of the head is shown with two adjoining profiles of the body.

(Levi-Strauss, 1945)

Other specificities of the Haida styles should be commented in relation with this research. Specificities that have been barely or even never commented by Levi-Strauss.

First, that the juxtaposition on various artefacts including, blankets, boxes, masks or totem pole, of different geometric shapes, and animals and human figures, is related much more to the animists and shamanist beliefs of the Northern West Coast tribes, a point which is nowadays widely acknowledged and documented (Carlson, 2009), than to the '*rank differences, nobility privileges, and degrees of prestige*'(Levi-Strauss, 1945) that Levi-Strauss was so keen to mention in his essay.

But also, and this needs to be highlighted, that their artistic style is tightly interrelated with the tradition of storytelling within the Haida tribes; meaning that many artefacts contain in fact a narrative expressed through the juxtaposition of those various elements in a specific manner that however doesn't present the general aspect of a narrative to the western eyes.

For the Haida, story-telling was as much an artistic expression as carving, and often the two shaped each other. To explore the archetypal images within Haida art, we need to look at both the myths and carvings which expressed the motifs.

(Hedman, 2018)

Any splitting being in this sense in many cases a pictorial trick used to include different figures in the same motif. (It has been widely discussed by Franz Boas and others if the technique by itself derived or not from 3-dimensional carving, but it is not the subject of my study).

Second, that Haida and Tlingit art present a use of image composition as a kind of quite developed technique; and having been first trained in fine arts I consider that I should comment more on this point that seems to have been rarely inquired or commented within studies focusing on the SRQ.

I will take the example of this Tlingit Chilkat blanket (Figure 24) that Haida are said to be very fond of for my demonstration. As defined by the Cambridge Dictionary, 'image composition' is understood as 'the way that people or things are arranged in a painting or photograph'. One of the basis of any artistic training rely indeed in learning how to 'compose', meaning to dispose various elements with the mastered and intentional use of contrast, colours, shapes and other graphic technique, so that to some extend the artist controls the way in which the eyes of the viewer circulate on his composition.

I would argue, basing my study on my previous training in arts and my study of the Haida style, that the use of multiple 'Eyes' and black dots, of various size and shape, as

well as specific thickness of the lines and general use of contrasts, works in a very specific way, that as I will suggest it later is in relation with the specificities of the functioning of the human brain and the human (and even animal) visual system .

On this Chilkat blanket (Fig. 24), It seems that the travel of the eyes of the viewer works as this: 1) On the first sight the eye of the viewer is attracted by the central part of the composition, with the two larger eyes circled by a thick black line, therefore amplifying the focus of the viewer. 2) Then almost instantly we recognize underneath a stylized human face , with the recognizable eyebrows and mouth. 3) If we focus on that face, the two peripheral larger eyes on the upper part enter our peripheral field of vision. 4) The eyes being unable to focus on those both points separated by a distance larger to the average distance between two eyes, in respect to their proportion, our attention is then directed to the three faces in the middle upper part. And this happens: if the viewer wants to focus on the middle upper part faces, his eyes are irremediably attracted by the two larger central eyes we started with. At this point, 5) the eyes tend to balance this tendency and the viewer ends up focussing on the contrast created by the thick black border of the blanket and its graphic relation to the central eyes. Or to graphically illustrate my demonstration:

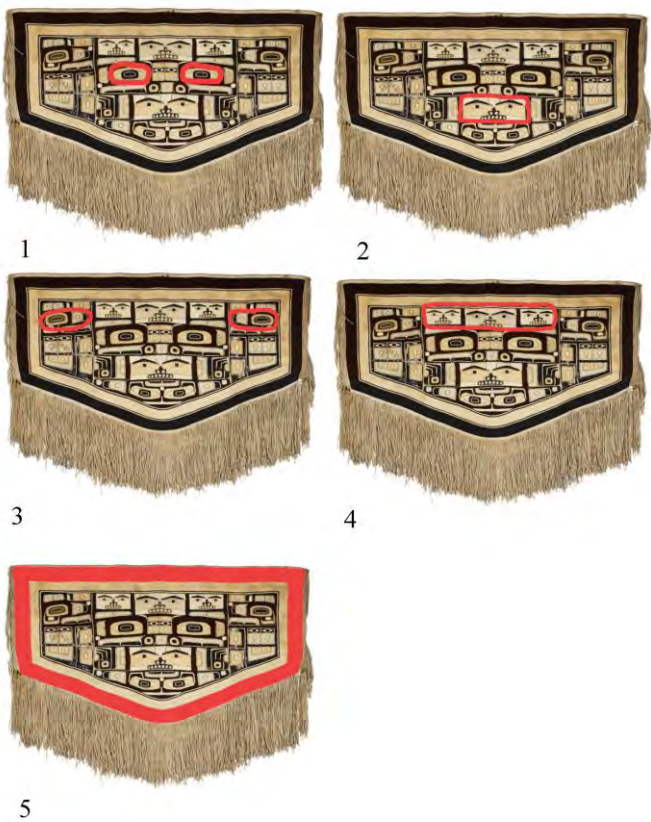


FIGURE 26 : PROPOSED EYES CIRCULATION ON A CHILKAT BLANKET

I would suggest that this 'circulation' is typical of the Northern West coast art, and that it is indeed related to questions of 'narrative', circulation, and to some extent to a certain type of loop ultimately procuring a kind of slightly 'hypnotic' feature that undeniably resemble the features of the spiral shape that was so much in use on the other side of the Bering strait for millennia. I would make the postulate that this

slightly hypnotic featured could have raised from, or been influenced by the consumption of specific plants during rituals, but might be also related to some specificities of the human brain that I will expose in the next sections.



### 3.4.1 A note on Franz Boas study of the facial paintings styles of the Haida

I need to mention that according to Boas (1898), following his production of a taxonomy of Haida facial paintings in the framework of the Jesup north pacific expedition :

The decorations differ according to the rank and wealth of the wearer. The full and rather realistic representations of animals are considered of greater value, and as indicating higher rank, than conventional representations which consist of symbols of the animals.

(Boas, 1898:14)

I argue that this mention of higher rank for the most figurative design is however in contradiction with Levi-Strauss comparativists theories, as he suggests through his essays that it is precisely the patterns following the 'Split representation' technique that are supposed to express a higher rank<sup>31</sup> ( See also: Levi-Strauss, 1955: 219). This shows in my opinion the complexity of the relationship of figurative vs symbolical representation within a Northern West Coast context, as well as the inaccuracy of Levi-Strauss theories on the subject.

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<sup>31</sup> 'The parallelism which we established is thus confirmed, rather than invalidated, by these examples. The mutual independence of the plastic and graphic components corresponds to the more flexible interplay between the social and supernatural orders, in the same way that split representation expresses the strict conformity of the actor to his role and of social rank to myths, ritual, and pedigrees.' (Levi-Strauss, 1963:264)



Facial Paintings of the Indians of Northern British Columbia.

FIGURE 27: HAIDA FACIAL PAINTINGS, PLATE I , (BOAS, 1898 )

### 3.4.2 Origin of the Patterns

Various researchers including Georges Mc Donald consider that there is a continuity between prehistoric art of the Northern West Coast, if not in the general 'style', at least in the themes explored and the connections between art and craft practices in the Northern West Coast context and Shamanism:

Stylistic features of the art are discernable, such as the emphasis on skeletal structure as related to regeneration and access to food species, on sense organs as expressing communication between man and his food supply, via the shamans' spirit power in terms of axis of spirit power. Broader cosmological and cosmogenic concepts can be seen in the rock art of the tribal and linguistic areas.

(MacDonald, 1983)

I have few doubts that those concepts are featured in traditional West Coast Art, and that indeed this art was more than simple 'decoration', or as even Levi-Strauss stressed it, exploring the meaning and function of Haida's sculpted art:

A vase, a box, a wall, are not independent, pre-existing objects which are subsequently decorated. They acquire their definitive existence only through the integration of the decoration with the utilitarian function. Thus, the chests of Northwest Coast art are not merely containers embellished with a painted or carved animal. They are the animal itself, keeping an active watch over the ceremonial ornaments which have been entrusted to its care. Structure modifies decoration, but decoration is the final cause of structure, which must also adapt itself to the requirements of the former. The final product is a whole: utensil-ornament, object-animal, box-that-speaks.

(Levi-Strauss , 1945)

And I would agree to some extent to Levi-Strauss's views on the possible relationship between masks cultures and the split representation group's artistic styles (or at least in my case mostly with the Northern West Coast style). But where Levi-Strauss allegedly identified a structural cause, I would propose an explanation connected to the religious beliefs of the people of the Northern West coast, and to some particularities of the functioning of the human eyes and brain. As Deregowski mentioned:

Levi-Strauss suggests that "Split Representation can be explored as a function of a sociological theory of splitting of the personality". He maintains that this is a trait common to those "mask cultures" in which "a chain of privileges, emblems and degrees of prestige" is validated by means of masks.

(Deregowski, 1970: 25)

I would make the postulate that in many cases the splitting of the animal is related to another symbolical function that has few to no relations to 'a chain of privileges, emblems and degrees of prestige'. As we saw, the religious life of the people of the Northern West Coast was 'ruled' by shamanism and animism. Like most of the tribes peopling the North and South parts of America, Haida believed that:

Animals were classified as special types of people, more intelligent than humans and with the ability to transform themselves into human form. Animals were thought to live on land, in the sea, and in the sky in a social order that mirrored that of the Haida.

(Levinson, 1996 )

I would therefore argue that the splitting of the animal serve(d) the (intentional or unconscious) purpose of the 'humanization' of the animal represented. I.e. that the distance between the two eyes of the animal obtained through splitting tend to 'humanize' the face of the animal represented.

It seems to me that the human brain tends indeed to identify the two split parts as a coherent whole, and the image obtained as a 'humanized animal' figure. The specificities of the human perception of a human face having been studied by various neuroscientists, including Rousselet et al, who proposed that :

Among objects, the status of human faces might be very special. Growing evidence suggests that the processing of faces relies on a specific "module" distinct from the neuronal network underlying the visual processing of other objects [6]. Faces would be processed faster than any other object and brain activation linked to face categorization has been reported as early as 50–80 ms after stimulus onset [4,7], although brain activation specific to human faces is usually reported later, in the 120–200 ms latency range [1,5]. Moreover, because visual processing is more disrupted for faces than for other objects when presented upside down, face configuration might play an essential role in rapid face recognition

(Rousselet et al. , 2004)

Dziurawiec and Deregowski (2002) provide some similar data in the fields of psychology and ethology in their paper 'The eyes have it: a perceptual investigation of eyespots'.

I would argue that indeed the splitting of the animal tends in most cases to humanize its perception from an observer point of view, due in most part to its eyes distance and general features of the mentally reconstructed face resulting from the representational technique employed. I will demonstrate why the 'Splited Bear' representations taken from the work of Boas and quoted by Levi-Strauss in his essay are not the most useful example to demonstrate this particularity, that to my knowledge was never raised by Levi-Strauss nor Boas, but numerous and more clear examples are featured in Boas's essay (Boas, 1897).

Bears share with most predators, including humans, the feature of forward-facing eyes. Whereas prey animals tend to have their eyes situated laterally on their skulls (Cartmill, 1992). Even though some predators don't follow this rules and other theories attempt to explain this feature amongst humans (Changizi et al. , 2008). For purposes of comparison I feature on the next figure the portrait of the author (a male human being), the face of a grizzly bear, and the two splited bears representations quoted by Levi-Strauss(1944) and taken from Boas. Next to a front facing photograph of an actual raven, a *'Tattooing representing a Raven'* from the Haida tribe, *"Hooyeh"* heraldic Raven of the Haida Indians, Queen Charlotte Islands, B.C.Ink drawing by Johnny Kit Elswa, interpreter to J.G. Swan' and two *"painting(s) from a house front with design representing a killer-whale"* (Tribe, Kwakiutl) that are quoted by Boas in his essay.



Fig. 43. Painting representing a bear. Tribe, Haida.



Fig. 44.

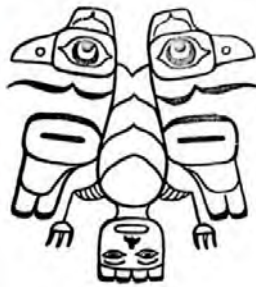


Fig. 45.



Fig. 47. Painting from a house facade, design representing a killer-whale. Tribe, Kwakwaka.



Fig. 48.

FIGURE 28 : NORTHERN WEST COAST STYLE AND 'HUMANIZATION' VISUAL TECHNIQUE

I would argue that if it is less clear in the case of the bear because the similarities of its face with a human face makes the effects of the representational technique less evident, the 'humanizing' effects are clear for the representations of animals presenting lateralized eyes characteristics like killer-whales and raven. In the same way, this style makes it easier to make a 'Raven mask' as soon as the generally accepted representational style permits to include the two eyes of the wearer of an animal mask in the wider frame of a representation of an animal face. This being said, if I find this alternative theory quite satisfactory regarding the connection between the shamanist and animists beliefs of the Haida and their view of animals as 'people'(Levinson, 1996 ), and their figurative representational style; the question of the anteriority of the mask or of the two dimensional representation seems hard to establish. (I.e., if the 'humanizing' style was first developed for masks then applied to two dimensional representations, or the opposite, or even if the two techniques evolved in parallel).



It should be highlighted that my views tend to contradict largely the postulates made by Leonhard Adam in his paper quoted by Levi-Strauss in his essay on the SRQ. Indeed, Adam(1936) suggested that in Northern West Coast art there is

(...) a custom to decorate certain parts of the body of represented animals or human beings with a human face. This occurs frequently in the centre of the body or, for instance, it occupies the surface of a beaver's tail. The origin of this design remains unclear, while human faces or animal heads appearing sometimes inside an eye ornament (joint) may generally be explained by principle N. 8.

(Adam, 1936)

His principle N. 8 being:

The principle of illogical transformation of details into new representations which were originally not provided for (e.g.. two toes of a paw becoming a bird's beak whereby the eye ornament, which is, properly, no eye, but simply indicates a joint, becomes an eye in the proper sense of this term).

(Adam, 1936)

Far from a '*principle of illogical transformation of details into new representations which were originally not provided for*', I maintain that this technique is 'logical' and relevant to the corpus of anthropological and ethnographic studies on the Northern West Coast tribes and their customs of shamanism and beliefs in animism, and as we will see in the next sections, the abundance of eyes could be potentially explained by some other specificities of Northern West Coast shamanism.

### 3.4.3 Estimated date of the Patterns

It is considered that the Style of the Northern West Coast was established around 3000

AD :

(...)Around 5,000 years ago, the coastal art and aesthetic styles associated with the Northwest Coast began to appear (Davis, 1990; Ackerman, 1992). By 3,000 years ago, the cultures of the Northwest Coast were largely the same as those observed at the time of contact (Davis, 1990; Ames and Maschner, 1999). The indigenous populations living in the region today are the direct cultural, and possibly biological, descendants of these prehistoric Northwest Coast groups (Davis, 1990; Ames and Maschner, 1999).

(Schurr et al., 2012)

It seems quite reasonable to consider that the estimated dates marks the extension of 'leisure' activities at large, that also involved the development of shamanic activities, including probably the ritualistic use of plants by a larger part of the population than only the shaman individuals.

### 3.5 Shamanism and ethnobotanic records

As mentioned, many clues tend to connect shamanic practices in the Northern West coast tribes with the use of *Ledum* (*Rhododendron*) species. First, the consumption of various *Ledum* species by the Haida is acknowledged. And its use for shamanic practices is recorded for many ‘neighbouring’ tribes from Japan and the Siberian Area as we saw. Its traditional use amongst Haida people and about 20 other tribes from the Northern West Coast is confirmed by multiple sources, and notably in many books and articles by ethnobotanist and emeritus Professor Nancy J. Turner. According to her and other scholars, ‘(...) *The Haida preferred a dark coloured, strong-tasting tea, and often left a pot of it boiling on the stove for several days, adding more water as the liquid was depleted through use and evaporation*’ (Turner, 1995: 80). Scientific studies of this way of preparing Labrador tea clearly indicates that it leads to larger doses of Ledol, therefore augmenting the intoxicant properties of the beverage:

(...)Formerly, native communities made this beverage by steaming the leaves in a shallow pit for 15–20 min to achieve a rich orange colour, or by boiling them in a stove for several days, until a dark-brown coloured brew was obtained. However, it was established that prolonged cooking leads to large doses of ledol. It is even recommended not to boil the water with the leaves immersed in it, but rather to brew the tea for a short time in an open dish or to dip the leaves in cold water and leave it in the sun. Drinking a cup of tisane once a day seems to be the maximum dosage without side effects.

(Dampc and Luczkiewicz, 2015)

Even if this way of making Labrador tea is supposed to increase its toxicity, and therefore, its potentials mind altering properties, Turner however notes that :

(...) Labrador Tea itself, while not harmful as a tea, is said by some to produce drowsiness or slight dizziness; but, to my knowledge, aboriginal people have never noted such an effect. Interior peoples also drink tea made from *Ledum glandulosum*, also known as Trapper's tea, without any harmful effects; some say it is a good relaxant

(Turner, 1995: 80)

It seems that there are controversies regarding the use of *Ledum* as an herbal tea prior to contacts with the westerners (Kuhnlein and Turner, 1991). I would first argue that this is discussable, considering the ways in which indigenous knowledge was usually considered by early commentators. But even if the taking as an herbal tea is in fact recent, which seems difficult to prove, eating berries and chewing and smoking leaves would have been an alternative option for its taking, and smoking pipes dating back to prehistory have been found in the area (MacDonald, 1983). Moreover, what led to my postulate of a highly possible connection between the Northern West Coast artistic style and the ritualistic taking of plants from the *Ledum* species, or Grayanotoxin containing plants from the area, is one of the symptom from Ericaceae intoxication that seems to match strikingly some features of this artistic Style. It is indeed proven

that intoxication to grayanotoxin containing plants (Like *Kalmia angustifolia*) can happen, and more possibly in the Northern West Coast context<sup>32</sup> :

misidentification of plant species may cause intoxication. The toxic sheep laurel (*Kalmia angustifolia*) resembles *R. tomentosum* in appearance [48]. *R. tomentosum* and *R. groenlandicum*, named Northern and Bog Labrador Tea, are used for preparing herbal teas for their medicinal qualities according to Native Americans. The Labrador Tea itself is said to be mildly toxic and should be drunk in small quantities only

(Jansen et al. , 2012)



FIGURE 29 : A TLUWULAHU MASK: 'KWAKIUTL MAN, HEAD-AND-SHOULDERS PORTRAIT, FACING FRONT, WEARING A MASK DEPICTING A LOON ON TOP OF A MAN'S HEAD TO FACILITATE THE LOON CHANGING INTO THE FORM OF A MAN. ' EDWARD CURTIS, 1914, LIBRARY OF CONGRESS

Moreover, It is widely documented that Grayanotoxin intoxication can trigger a 'Double vision', or Diplopia (Jansen et al., 2012), amongst other symptoms that

tend to match some external manifestations of Siberian shamanism. Regarding

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<sup>32</sup> See also (Ott, 1998:261)

Diplopia, which can take many forms, I argue some of its manifestation tend to be reminiscent of the style of the Northern West Coast when the subject of the intoxication looks at people :



**FIGURE 30 : THE AUTHOR AS SEEN BY SOMEONE SUFFERING FROM EITHER LATERAL (1) OR VERTICAL (2) DIPLOPIA**

I would argue that a style presenting multiple eyes and multiple faces within tribes whose shamanistic rituals, (and even daily life habits) might certainly have included the taking of plants triggering Diplopia, and this probably for millennia, should be the subject of further inquiries on the subject. This detail providing a potential supplementary confirmation of the nowadays commonly accepted viewpoints of

Carlson (2009) and others on the direct connection between the practice of shamanism by the Northern West Coast tribes and their artistic style that seems more accurate to me than the theories developed by Levi-Strauss on the subject.

It should be noted that a part of plant use in the Northern West Coast context seems to have been poorly documented in early ethnographic records, including in the field work of Franz Boas on which Levi-Strauss based a large part of his own research. Thus, showing once again the relevance of a reconsideration of the accepted theories on the artistic styles of the SRQ that to my knowledge have never included a study of the potential impact of psychoactive plants consumed as daily food or ritualistically as entheogens. As stressed by Norton :

This lack of interest on the part of ethnographers, historians, and other observers has meant the loss of considerable knowledge gained by untold generations of people regarding the properties of particular plants used by local groups for food and the methods of preparation and preservation of those foods. Loss of this information impedes our discovery of the relative importance of vegetal material in the dietary and also of local adaptive strategies which evolved to maintain viable populations in these non agricultural economies. Most ethnographers have discounted plant food as insignificant in a region so bountiful in fish, sea mammals, and shellfish. ”

(Norton, 1981)

Finally, in the wider frame of this research that include a study of the shamanic use of plants by indigenous people in connection with artistic practices including pattern making, carving and tattooing, I would strongly suggest that another plant from the

area should be the subject of a more in depth research in connection with the study of the art of the Northern West Coast tribes and the SRQ .

### 3.5.1 The Devil's Club (*Oplopanax horridus*); A potential Northern West Coast entheogen

It seems to me that the robust ethnographic evidences of the quite extended use by indigenous people from British Columbia of Devil's Club (*Oplopanax horridus*), an Araliaceae, presents some striking similarities with the use of Tutu Tree by the Māori people that I will present later in this dissertation (7.6).

As Lantz et al, state :

Devil's club (*Oplopanax horridus* (Sm.) Torr. & A. Gray ex. Miq., Araliaceae) is probably the most important spiritual and medicinal plant to most indigenous peoples who live within its range. Different parts of this plant are used by over 38 linguistic groups for over 34 categories of physical ailment, as well as many spiritual applications

(Lantz et al. , 2004)

Regarding the Haida and Tlingit, the use is recorded as a medicine, as well as an important part of shamanic rituals, and was even apparently used as an ingredient for facial painting



In addition to ethnographic accounts of medicinal uses, there are also numerous sources that describe spiritual applications of devil's club. These include purification and cleansing; protection against supernatural entities, epidemics and evil influences; acquisition of luck; to combat witchcraft; as ceremonial and protective face paint; and in rituals by shamans and others to attain supernatural powers (Table 2). Two of the most widespread spiritual uses are bathing with a devil's club inner bark solution for personal protection and purification, and its use, particularly the spiny or despined aerial stems, as an amulet for protection against a variety of external influences (Table 2). External and internal cleansing involving the use of devil's club "was, and is, of paramount importance" to many of the cultural groups throughout devil's club's range.<sup>4</sup> The inner stem bark of devil's club has also often been used in solution to wash down fishing boats, fishnets, and to purify a house after an illness or death, and, as charcoal, to prepare protective face paint for ceremonial dancers

(Lantz et al. , 2004)

Records show that the consumption of Devil's club was conducted in order to attain 'visions' (Boelscher, 2011). It seems however that the Plant properties have been relatively poorly studied (Lantz et al., 2004).

I would first suggest that in my opinion the use of the plant as charcoal for face painting indicate the possibility of an anterior use as tattooing 'ink' and strongly suggests a connection between the plant and the artistic style. I would therefore postulate that there might be some connections between the hallucinogenic properties of the plants and the artistic style of the Northern West Coast.



**FIGURE 31 : DEVIL'S CLUB OR DEVIL'S WALKING STICK (OPLOPANAX HORRIDUS)**

Regarding its 'visions providing' properties, further inquiry should be conducted, but a lot of clues seem to indicate a ritualistic use of a plant in connection with patterns making (facial paints in this case) that have been widely documented for other tribes. I must add that to my

knowledge, even though there are in my opinion serious clues, the visions of any types of geometric patterns or diplopia during the ritualistic use of Devil's Club have never been documented amongst the Haida or neighbouring tribes, but as stressed the plant properties seems to have been poorly studied on that matter (Gottesfeld and Anderson, 1988; Lantz et al., 2004). In a case study of its ritualistic use, Marianne Boelscher indicate :

The most frequently used medicine to obtain riches was tc'iihlanjaaw or devil's club (lat. *Oplopanax horridum*). Devil's club is one of the most widely and consistently used medicines among native peoples of Northwestern North America, not only employed for obtaining supernatural help to gain wealth

and prestige, but also taken for a variety of ailments such as arthritis, cancer, sore throat, diabetes and influenza." (...)

"In order to be effective, devil's club must be taken ritually, observing the following stages: (1) Seclusion: The individual must go to a remote place alone. (2) Preparation of the plant: The person must cut forty (four times ten!) branches of devil's club from forty different plants, take off the spines and peel off the skin. The skin is then slowly chewed, the sticks themselves placed in the ground in a circle around the person eating them (see Curtis 1916: 139). (3) Inspiration: After eating the forty pieces of skin, the person would see the "fairy" or "Property-woman" (Swanton 1905a), Skil Jaadee, whose sight would bring him good luck." (...)

"The devil's club quest lasted for three or four days, sometimes ten days. During this time, sexual intercourse was taboo, and the person was not allowed to eat or drink. Devil's club causes severe diarrhea. As one informant noted, "you got no time to pull your pants up. It cleans your inside." The person taking devil's club also suffers from severe dehydration, which, along with starvation is likely responsible for hallucinations, "seeing things," which is interpreted as a source of inspiration and bringing "good luck.

(Boelscher, 2011)

It should be noted that many particularities of this ritualistic use, like purgation, fasting and the vision of the 'Property woman' seems on a preliminary approach to present some striking similarities with the Ayahuasca practices in the Amazonian context. The use of berries and charcoal from the plant to make facial paints and potentially tattoos seems also to be in accordance with the practices of the Māori people with Tutu tree and to some extent to the Shipibo-Conibos in the Amazonian context, even though in the case of the Shipibo-Conibo the patterns are painted with another plant than the

one used to attain visions. (they appear however to be considered as plants of the same 'family' by the Shipibo).

### 3.5.2 Discussion

In correlation with the currently accepted statement that the Northern West Coast artistic style is related to the animist beliefs and the shamanic practices of the tribes (Descola, 2006 ; Carlson, 2009), I would make the postulate that the properties of the plants used during the shamanic rituals might have had an influence on the final shapes of the Northern West Coast style. A possible influence that was neglected by Levi-Strauss, and a use of plants that seems to have been quite ignored by early ethnographers, including Franz Boas.

Even though group structure might have had an impact, a statement by Levi-Strauss currently challenged by contemporary studies that suggest the influence of religious practices like shamanism and animism as the main source of inspiration for this artistic style, the influence of plants containing grayanotoxins and ledol, as well as other sesquiterpene containing plants like the Devil's club which use was ritualized to attain visions within the West Coast context, seems backed up by many clues, including the use of the ashes of the plants and mixed berries for face painting. Further inquiries might or not prove the accuracy of my postulates that seems to be also in line with the

numerous records of proven connections between the artistic styles of various tribes worldwide and their consumption of psychoactive substances as entheogens.

### 3.6 Relevance of Levi-Strauss's theories on Northern West Coast Art in the lights of new discoveries

I consider that Levi-Strauss's theories on the art of the Northern West coast in relation to the SRQ are not compatible with recent research results on the subject coming from various disciplines. It must be also highlighted that those contemporary research results tend to refute largely the theories of Leonhard Adam regarding the Northern West Coast art that Levi-Strauss quotes in his essay in support of his own theories. I think the following comments by Carlson summarize this in detail. In my opinion it highlights as well the influence that Levi-Strauss's essay had on the direction of research in anthropology and archaeology regarding indigenous artistic styles on the generation of researchers that followed him, that tend to be nowadays refuted by an accumulation of proven facts.

With some notable exceptions the tendency among scholars has been to emphasize the relationship between the art and socio-political institutions

such as kinship and secular power structures even though the underlying ideology and many of motifs are clearly religious in nature. We now know from recent archaeological discoveries that the Northwest Coast art tradition goes back in time at least 4,000 years and that even at this early date employed many of the same motifs still in use today. These long enduring motifs are best understood as ideograms communicating significant components of the belief system particularly spirit power, transformation, and regeneration. Most motifs relate directly or indirectly to the belief in spirit power that was the guiding ideology throughout the Northwest Coast and was integrated into all aspects of everyday life. Spirits were more helpers than protectors and were usually either animals or supernatural beings that empowered both lay individuals and shamans.

(Carlson, 2009)

Moreover, I consider in accordance with contemporary studies, and contrary to Levi-Strauss's assertions -that as I will demonstrate are largely influenced by Leonhard Adam's comments on the Art of the Northern West Coast (Adam, 1936)- that the art of the Haida people shouldn't be studied as (art from) *'the eighteenth and nineteenth centuries for Alaska'* as suggested by Levi-Strauss, nor as Leonhard Adam suggested that *'(...) Compared with China the N.W American decorative art represents a more recent stage of development'*

In any case, we may say that, what we call the typical North-West decorative style is of comparatively recent origin. It is impossible to suggest an absolute date here, though it is perhaps not incautious to express the opinion that only a development of some centuries may be taken into consideration. Under such circumstances we cannot expect to discover a historical connection with ancient China but will have to suspect a similar mentality to be the psychological background of corresponding artistic ideas.

(Adam, 1936)

Adam and Levi-Strauss apparently followed an intellectual path similar to Boas and Karlgren, as they grounded their research on the presupposed anteriority of figurative representation to abstract motifs and patterns. (This being for example clearly shown in Adam's paper, particularly when describing a Chinese Taotie in comparison with Northern West Coast Art. See: Adam, 1936: 9)

As I need to highlight, it appears that this clearly inaccurate statement of a later phase of development for the art of the Northern West Coast compared to the one of China, as well as his inaccurate postulates on the anteriority of figurative representation, led Adam to claim that (We) '*will have to suspect a similar mentality to be the psychological background of corresponding artistic ideas.*' (Adam, 1936:11). I think this point makes a clear demonstration of the roots of Levi-Strauss's theory on the SRQ. As a formerly trained sociologist, he built a theory based on kinship and 'secular power structures' to explain the similarities between art from China and the Northern West Coast, probably following the suggestion by Adam that '*similar mentality*' were the '*psychological background of corresponding artistic ideas*'.

Levi-Strauss embarked in such intellectual enterprise without taking into consideration the undeniable influences of shamanism and animism amongst those tribes, a religious approach that implies influences that can only be experienced and therefore studied in

an holistic way encompassing, as I suggest, the use of plants including entheogenic plants and preparations, use of specific plants as charcoal for facial painting and tattooing, symbiosis with nature and the animals and perspectives on artistic production related to the order of the sacred.

### 3.7 Conclusion

As we saw, I consider that the research results obtained by cross-checking Levi-Strauss's theories on the split representation phenomenon in the art of the Northern West Coast and anterior research he based on his own theories, like the work of Leonhard Adam, with contemporary researches on the subject in disciplines as diverse as genetic anthropology, ethnographic studies of shamanism and recent and past archaeological findings, tend to refute Levi-Strauss theories on the art of the Northern West Coast, but also have implications regarding the theories he developed on the wider phenomenon of the SRQ, including his particular views on the art of the Shang dynasty and the one of the Kadiweu people from Brazil that I discuss later in this essay. As we can see throughout this dissertation, the theories about indigenous art developed by Levi-Strauss in his essay have influenced researchers in the fields of art theory and art history, as well as ethnography and allied sciences since 1943. However, robust proofs tends to currently challenge the scientific validity of his theories on the



subject, theories that were also based on the work of previous researchers that tend to be largely discredited by contemporary researches.

In this case of the Art of the Northern West Coast, those inaccuracies include the proper date of the development of the artistic style compared to China. The alleged importance of the influence of the social divide into two moieties on the artistic style that excluded the importance of the practice of shamanism and animism amongst those tribes. And finally the lack of study of the possible influences of the ritualistic taking of potentially entheogenic substances by those tribes on their artistic style that has been strictly confirmed elsewhere on the planet at the turn of the 21<sup>st</sup> century like in the case of the Shipibo-Conibos and their use of Ayahuasca.

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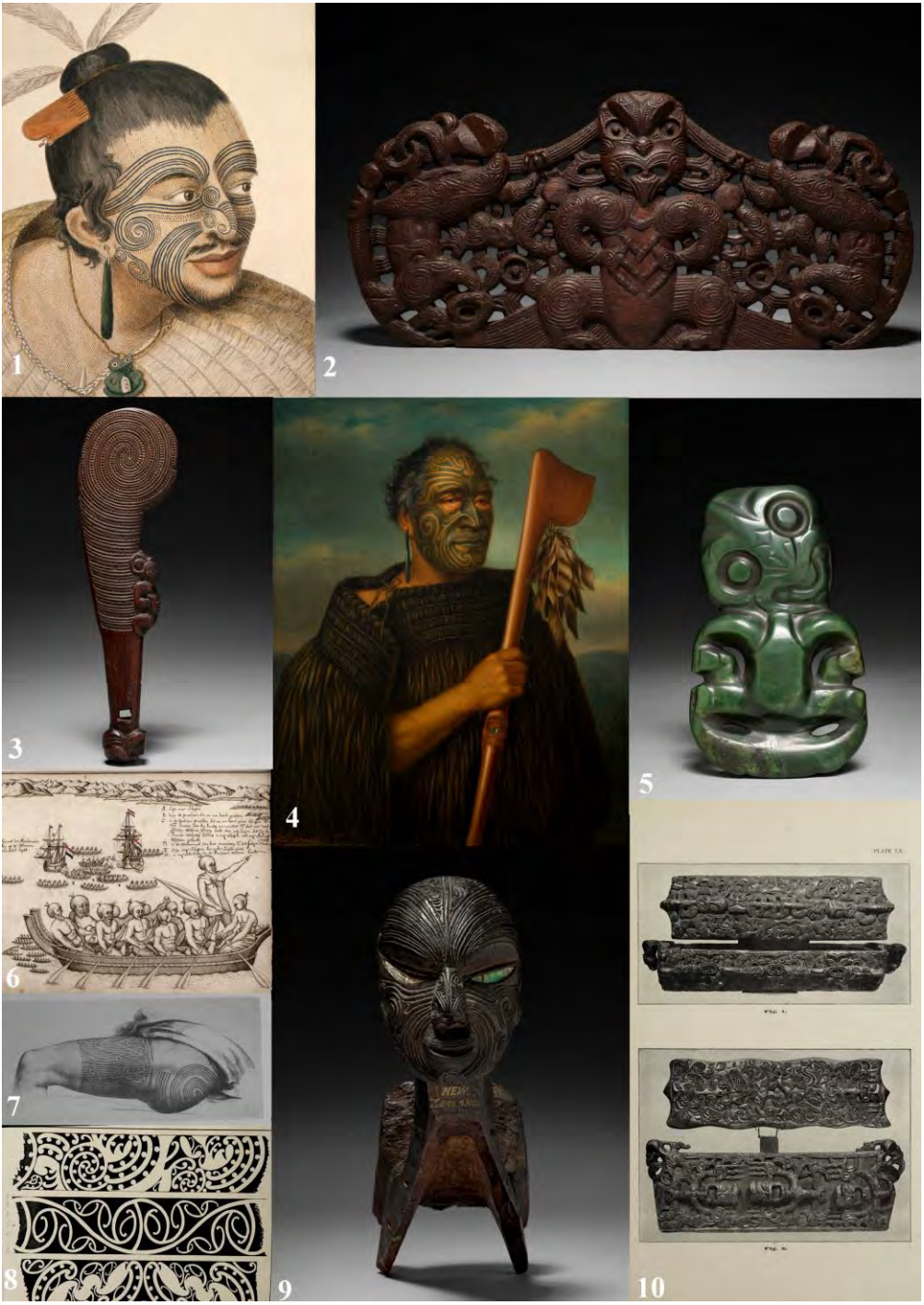


FIGURE 32 : VISUAL OVERVIEW, MĀORI STYLE

## 4 MĀORI

### 4.1 General overview

The Māori<sup>33</sup> are an indigenous people of New Zealand. It is now considered that the first Māori arrived in New Zealand from other parts of Polynesia around the year 1280 AD, even though earlier indigenous settlements might have probably happened. The exact settlement patterns and dates of historical indigenous peopling of New Zealand are however subject to multiple controversies and this fact tend to complexify the study of the possible origin of their artistic styles. According to the New Zealand Government official website Te Ara :

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<sup>33</sup> 1) Parkinson, Sydney, 1745-1771 :The head of a chief of New Zealand, the face curiously tataow'd, or marked according to their manner. S. Parkinson del. T. Chambers sc. London, 1784. Plate XVI.  
2) Lintel (Pare), early 1800s. Polynesia, New Zealand, Maori people, early 19th Century. The Cleveland Museum of Art, The Mary Spedding Milliken Memorial Collection, Gift of William Mathewson Milliken 1962.350  
3) Short Club (Wahaika), mid 1800s. Polynesia, New Zealand, Maori people, mid-19th Century. Wood; overall: 35.6 cm (14 in.). The Cleveland Museum of Art, 1964.455  
4) Gottfried Lindauer, portrait of Maori Chief Tamati Waka Nene, 1890, oil on canvas, (Auckland Art Gallery)  
5) Pendant (Hei-tiki), 1800s. Polynesia, New Zealand, Maori people, 19th century. Nephrite (greenstone); overall: 16.9 x 10.2 cm (6 5/8 x 4 in.). The Cleveland Museum of Art, 1969.107  
6) Gilsemans, Isaac :A view of the Murderers' Bay, as you are at anchor here in 15 fathom [1642]. Depiction of the First known encounter between Māori and Europeans 18 December 1642.  
7) Tight Tattoo, from "Moko or Maori Tattooing with Illustration" by Horatio Gordon Robley , 1896 CE.  
8) Maori rafter patterns photographed from the book "Maori art. Art workmanship of the Maori race ..." by Augustus Hamilton (P q572.9931 HAM 1901 (1972)) "Godber Collection, Alexander Turnbull Library"  
9) Fishing Canoe Prow, 1800s, Polynesia, New Zealand, Maori people, 19th century, The Cleveland Museum of Art  
10) Carved Boxes, from "MAORI ART" by Hamilton, Augustus, a work issued in 5 parts (1896-1901) The New Zealand Institute.

While oral traditions provide no exact date for arrival or settlement, they do provide an interesting strand of knowledge to compare with other types of evidence. Whether it is coincidence or not, the timing of settlement identified in oral traditions (1325–1400, assuming 25 years per generation) broadly agrees with the findings of radiocarbon dating, which indicates permanent Polynesian settlement was established around 1300.

(Irwin and Walrond, 2008)

As stressed, some scholars provide slightly alternate viewpoints (Davidson, 1983).

Language research as well as Mitochondrial DNA analysis tend to prove in any case and quite unequivocally that, like all Polynesians Natives, the Māori are the descendant of Taiwanese indigenous people, that were isolated from mainland China for 10,000 to 20,000 years. According to Te Ara: The Encyclopedia of New Zealand ' *It is now believed that Māori arrived at different times, from several points in East Polynesia, in the late 13th century* ' (Howe, 2005). A widely acknowledged theory based on archaeological research and DNA analysis suggesting that Māori were in fact the result of a second wave of settlement, as it seems that the two Islands were previously inhabited by the 'Moa Hunters', the Moa being a type of very large birds :

Some of the tools, hooks, and ornaments of the early Polynesian culture have been preserved intact by Mother Earth and the moa remains associated with them have conclusively proved that they predate the various stages of intermixture which resulted in what we now know as Māori culture.

(Hiroa, 1949)

The First and Second settlers brought therefore with them a part of the Polynesian culture, but also developed a new culture and artistic style that evolved through contact with a new environment, including new plants and animal species, as well as mineral and wood resources that were unique to the New Zealand context, and 'various stages of intermixture' with new waves of settlers. (Selwyn, 2008)

The Māori's first encounter with western people happened on the 18th December 1642, when the Dutch Sea Captain and explorer Abel Janszoon Tasman and the rest of his expeditionary fleet, on service for the Dutch East India Company, anchored their two ships on the North of the Southern Island of what is now New Zealand. They however didn't managed to land on the shore, and four of his sailors were killed by Māori during this brief encounter. This event provides us the first depiction of Māori by western observers (Tasman et al., 1898).



**FIGURE 33 : GILSEMANS, ISAAC : A VIEW OF THE MURDERERS' BAY, AS YOU ARE AT ANCHOR HERE IN 15 FATHOM [1642]. REF: PUBL-0086-021. ALEXANDER TURNBULL LIBRARY, WELLINGTON, NEW ZEALAND. /RECORDS/23220299**

It is only 127 years later that the second encounter happened, when the British explorer Captain James Cook , aboard HMS Endeavour, finally landed at Poverty Bay on Oct 8th 1769. After a first violent encounter that concluded with the death of some Māori, Cook managed to establish friendly relations with Māori tribes on the Island. Providing later, and through an exploration of the Islands, the first insights about Māori Life and artistic style (Cook, 1821).



#### 4.1.1 Proven Genetic Lineage

A study of the origins of the Māori people using mtDNA analysis, demonstrates the connection between Māori people and indigenous Taiwanese (Trejaut, 2005). As summarized by Chambers et al., ‘archaeological hypothesis’ and ‘molecular studies’ tend to support solidly this ‘Out of Taiwan’ hypothesis:

The most recent chapter in this history dates starting from around 4,500 ybp (see Chambers, 2006) and forms part of the greater ‘Austronesian Diaspora’ (Simanjuntak et al., 2006). The common Austronesian ancestors of Malays and all Polynesians (i.e. including Māori) are hill tribe aboriginal people of Taiwan (Amis, Atayal, Paiwan etc.) who migrated southwards via the Batanes Islands and Philippines etc. according to the ‘Out of Taiwan’ archaeological hypothesis (Bellwood and Dizon, 2005). Recent molecular studies (Delfin et al., 2011, Gunnarsdóttir et al., 2011 and Tabbada et al. 2010) document the passage of maternal and paternal genetic markers across this ‘populated viaduct’ and gives confidence to those who hold this view. A fully detailed current account of the evidence supporting this pathway and its associated chronology is presented by Bellwood et al. (2011). The onward migration process was dubbed ‘The Express Train to Polynesia’ by Diamond (1988), but is perhaps better captured by the ‘Slow Boat Model’ (see Kayser et al., 2000) and later elaborations such as the ‘Slow Boat from Asia Model’ (Kayser et al., 2006 and 2008).”

(Chambers et al., 2013)

If those recent genetic research, that were unknown by Levi-Strauss at the time he wrote his essay, prove a genetic lineage of the Māori people going back to Taiwanese indigenous people, more strikingly for our research, a study of HLA genes (Tokunaga,



2001) seems to connect directly the Māori people to the Amur region, Siberia and the Northern West Coast.

A24-Cw8-B48 was commonly observed in Taiwan indigenous populations, Māori in New Zealand, Orochon in Northeast China, Inuit, and Tlingit.

(Tokunaga et al. , 2001)

This pool of population from ‘Taiwan indigenous populations, Māori in New Zealand, Orochon in Northeast China, Inuit, and Tlingit’ sounds indeed quite familiar in the field of researches on the SRQ. And could make us seriously consider this as a proof of the possible relevance of the diffusionist theories that Levi-Strauss mentioned briefly as a possible ‘historical contact or independent development from a common civilization’ (Levi-Strauss, 1943), before dismissing this possibility in favour of his structural anthropology approach.

#### 4.1.2 Polynesian dispersal model map



**FIGURE 34 : GEOFF IRWIN AND CARL WALROND, 'WHEN WAS NEW ZEALAND FIRST SETTLED? - THE DATE DEBATE', TE ARA - THE ENCYCLOPEDIA OF NEW ZEALAND <sup>34</sup>**

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<sup>34</sup> <http://www.TeAra.govt.nz/en/map/3614/pacific-migrations> (accessed 25 October 2020)

### 4.1.3 Possible implications of this genetic proximity on the Split Representation Question

I want to stress that I don't consider this genetic lineage as providing per se any definitive explanation of the apparent similitude of the 'decorative' patterns from our taxon . And the case of the Māori people seems quite explicit on that matter. Indeed, it appears that the artistic styles of the other parts of Polynesia that were peopled long before New Zealand presents apparently only very loose connections with the split representation styles, and more over with the spiral shape that is so typical of Māori art. As it was mentioned by various researchers, the exception being the case of the Marquesas that I will comment later in this dissertation.

Spirals appear in the Marquesas also, where they are insect-legs and antennae (pl. 6, fig. 8) or a rendering of human ears (pl. 6, figs. 6-7); (Linton, 1923, pl. 64).

Even if the Māori spiral were not demonstrably a local development, those who would derive it from Borneo and Melanesia encounter considerable geographical difficulties in bringing it to New Zealand in that on neither of the two possible routes by which it might have come does it occur. Spirals or any other form of curvilinear art are absent from southern Melanesia and from eastern Polynesia, excepting the Marquesas, a marginal locality.

(Archev, 1936)

Diffusionism seems therefore hard to prove, at least in terms of the use of spirals, but there are few doubts about the common habits of tattooing amongst Polynesian

tribes, as well as the practice of string figure that is shared by many tribes from the split representation group and beyond, including Māori and probably all Polynesian tribes, Caduveo, Arctic tribes, etc... (Vandendriessche, 2015).

Regarding the string figure practice, the Author himself had the privilege to observe its Polynesian traditional use during a cultural festival in Hawaii in 2019. The similarities with the picture that probably Dina Levi-Strauss or Levi-Strauss himself took of a



Kadiweu string figure in 1936 are striking. .

FIGURE 35 : RIGHT: KADIWEU WOMAN (STRING FIGURE), PROBABLY 1936, CLAUDE LEVI-STRAUSS FUND NAF 28150 (245) - LEFT : STRING FIGURE, HAWAII, 2019, PERSONAL COLLECTION, BENJAMIN POTHIER

#### 4.1.4 Limitations to the dissemination theory: The case of Polynesia

If we start on the basis of a 'common Civilization' for the group from the split representation, It would mean therefore that an event would have triggered in New Zealand a 're-discovery' of an anterior curvilinear symmetrical style quite similar to the one originating from 'Somewhere in North-East Asia', as the style is definitely not so much featured throughout Polynesia (Archey, 1936).

A clear example being that the tattooing style of the Samoan, or the one in traditional use in the Marquesas Islands, including facial tattoo, present only very loose, if not any, connection with the SRQ or the art of the Māori, despite the proven fact that their political and social order presented as well a hierarchical structure, and that their tattoos could be also considered as 'emblems of nobility and symbols of rank in the social hierarchy'. Notwithstanding the solid proofs that the Māori originate from the same group of population that peopled the Samoa and Marquesas islands before settling in nowadays New Zealand.

Another alternate (and in my opinion very unlikely) diffusionist theory would be that a curvilinear style originating from 'somewhere in North-east Asia' had survived throughout the Polynesian settlements only as temporary face painting, tattooing or maybe sand drawing like the one that are traditionally in fashion in Vanuatu

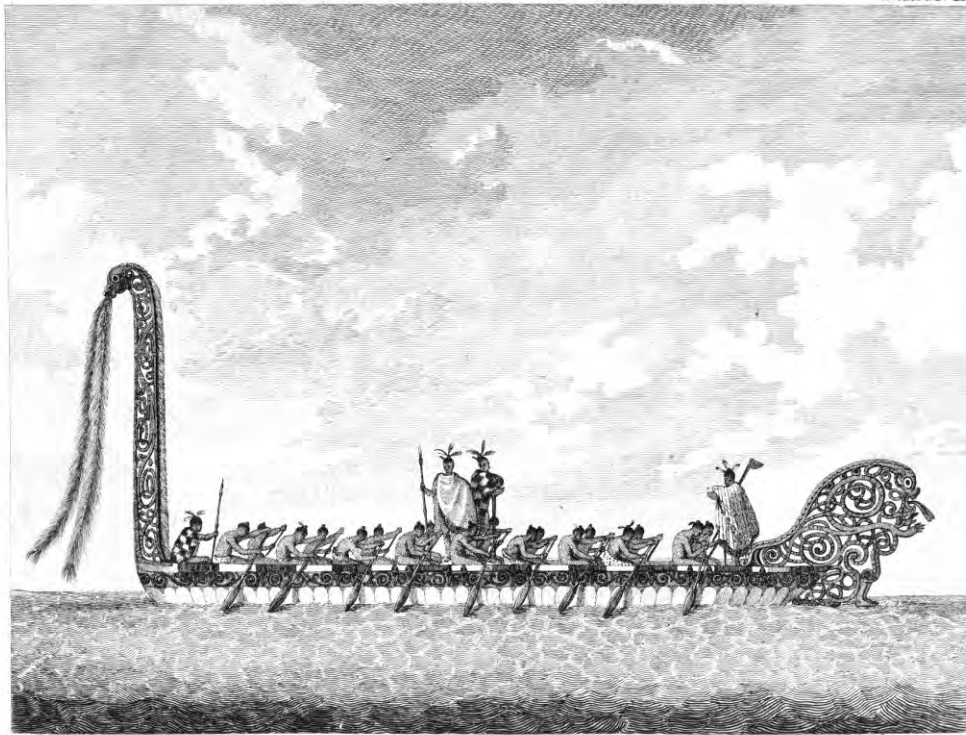
(explaining therefore the lack of archaeological proofs of any curvilinear style in the known carving tradition of Polynesia apart from New Zealand), and that this style was finally maintained only in New Zealand for tattooing and adopted as well in carving. As we will see further, this unsatisfying theory would be however only backed up, to my knowledge, by only one loose yet puzzling and rarely mentioned testimony of a supposedly existing ancient curvilinear tattooing style in the Marquesas Islands that I describe in section 4.4.

## 4.2 Culture

Māori were sedentary and skilled hunters, fishermen and gatherers who also cultivated the land, including vegetables they brought from Polynesia, like the sweet potato. The current academic consensus about Māori material culture history is to divide New Zealand indigenous history into ‘two main periods of Polynesian settlement’. One being the Moa Hunter period, or the ‘Archaic Period’ (McLintock, 1966). The second main period of Polynesian settlement being known as the ‘Classic period’:

The last great phase resulting in the introduction of new culture elements were the adventurous voyages southward of groups of Polynesians from the central Pacific, in or about A.D. 1350.

( McIntock, 1966)



*A War Canoe, of New Zealand.*

**FIGURE 36 : A WAR CANOE OF NEW ZEALAND, BY SIDNEY PARKINSON , (PARKINSON, 1773)**

For this study I will mainly focus on the Classic period, considering that the curvilinear style associated with the SRQ is proven to have appeared during this period, and that an evolution from the archaic (Moa Hunter) period style is very unlikely (Mead, 1975) as many clues including archaeological findings tend to prove that the Classic [A] Māori style was developed in New Zealand by that second main wave of settlers .

#### 4.2.1 Religion and belief system

I would argue that Māori perspective toward decorative patterns and art and craft production at large can be easily compared to at least the Ainu and the Haida people, who also shared with the Māori a quite similar 'life style'. I.e. sedentary tribes living in symbiosis with Nature, within an environment providing to some extent an abundance of food and material resources, a context therefore favourable for the development of 'leisure activities' beyond survival, and including the development of complex arts, crafts and shamanism practices (Māori, like Ainu and more particularly Haida people, built houses that they decorated through carving). Māori were animists and most testimonies tend to prove that their religious belief was a type of shamanism. Shamans were called Tohunga:

Tohunga really means expert, the man of skill, as in the terms "tohunga ta moko" (the tattooing expert), or "tohunga whakairo" (the carving expert). Everything which demanded skill or expert workmanship had to be carefully taught and the deities presiding over them had to be propitiated and their favour solicited by the requisite incantations and ritual. The most usual significance of the word tohunga, however, was the priest who mediated between the gods and the people. In all the various activities of life as the planting and digging up of crops, fishing, building and opening important houses, making canoes, baptising children and the various war ceremonies, the tohunga was an absolute necessity.

(Hiroa, 1910: 14)



I argue therefore arts and crafts of the Māori should be understood as being part of that holistic view of the Universe understood through shamanism and animism, and not as a purely decorative practice.

Māori did not separate Art from other aspects of culture; art was central to all activities and all objects. The word taonga, or taonga tuku iho described precious objects that could be admired as art, but as they had mauri – life force- and wairua –spirit- of their own, they also functioned on another level, one associated with mana, tapu and whakapapa. While the use of objects was often utilitarian, they were enhanced with visual iconography to show reverence and dedication to more powerful beings, and rituals contributed to the process of spiritual activation. The addition of carved figures enhanced the mana or power of artworks, and when divine intervention was sought, feathers and other objects were bound to the object and karakia were recited.

(Paama-Pengelly, 2010: 11)

Amongst all arts and crafts, carving and tattooing were of great importance for Māori people, acquiring a kind of ‘religious status’ that could be considered as quite similar to the perspective of the Ainu and Haida people toward artistic production.

Carving was a sacred, honoured and cherished profession. Tohunga whakairo (master carvers) were men of distinction and fame. The Māori people shared the Polynesian belief that the artist was a vehicle through whom the gods created and communicated. The carvers were seen as carrying on a much-respected and highly-valued art form – a godly art form. This view is still prevalent in Māori society today.

(Cooper, 1989: 46)

I would therefore firmly state that it is only by taking into accounts this whole context toward craft and art production that the Māori pattern should be studied regarding the SRQ. My viewpoints are indeed divergent if not in strict opposition with the views of Levi-Strauss on the matter, that I already mentioned in the previous case studies.

#### 4.2.2 Medicine and Pharmacopeia

As we will see, the history of traditional Māori medicine and their use of plants is full of controversies. Due in part to its interrelation with shamanism practices. Reliable information about Pre-Western contact Māori medicinal knowledge are scarce, for different reasons:

Not only were the Māori traditional shamanism practices called Tohunga banned in 1907 through the “Tohunga Suppression Act 1907” voted by the New Zealand Parliament and aiming at replacing traditional knowledge, viewed as charlatanism, by modern science.

New Zealand.



ANALYSIS.

Title.  
Preamble.  
1. Short Title.

2. Penalty on person practising as a tohunga.  
3. Regulations.  
4. Repeal.

1907, No. 13.

Title.

AN ACT to suppress Tohungas.

[24th September, 1907.]

Preamble.

WHEREAS designing persons, commonly known as tohungas, practise on the superstition and credulity of the Maori people by pretending to possess supernatural powers in the treatment and cure of disease, the foretelling of future events, and otherwise, and thereby induce the Maoris to neglect their proper occupations and gather into meetings where their substance is consumed and their minds are unsettled, to the injury of themselves and to the evil example of the Maori people generally:

BE IT THEREFORE ENACTED by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:—

Short Title.

1. This Act may be cited as the Tohunga Suppression Act, 1907.

Penalty on person practising as a tohunga.

2. (1.) Every person who gathers Maoris around him by practising on their superstition or credulity, or who misleads or attempts to mislead any Maori by professing or pretending to possess supernatural powers in the treatment or cure of any disease, or in the foretelling of future events, or otherwise, is liable on summary conviction before a Magistrate to a fine not exceeding twenty-five pounds or to imprisonment for a period not exceeding six months in the case of a first offence, or to imprisonment for a period not exceeding twelve months in the case of a second or any subsequent offence against this Act.

(2.) No prosecution for an offence against this Act shall be commenced without the consent of the Native Minister first had and obtained.

FIGURE 37 : TOHUNGA SUPPRESSION ACT 1907 <sup>35</sup>

<sup>35</sup> [http://www.nzlii.org/nz/legis/hist\\_act/tsa19077ev1907n13353/](http://www.nzlii.org/nz/legis/hist_act/tsa19077ev1907n13353/)

But even commentators of Māori maternal descent like Te Rangi Hīroa, also known as Sir Peter Henry Buck, claimed in 1910 in 'Medicine amongst the Māoris in ancient and modern times: a thesis for the degree of Doctor of Medicine (N.Z.)' that Māori traditional knowledge was mainly superstition, stating that :

The whole system of Māori medicine rested upon the exorcism of disease demons. "The medicine for the ailments of the Māori", as many a Māori has told me, significantly pointing to his protruded tongue, "was this". In other words it was the incantations backed up by the power of the tohungas, that cured. It follows of necessity that the value of drugs was but little explored. I heartily concur with Elsdon Best in saying that in ancient times the Māoris had very few drugs. From ancient Māori lore we have very little to learn in the way of new drugs to add to the Pharmacopeia. The New Zealand flora may enrich our materia medica but we will not get the information from Māori lore

(Hīroa, 1910: 67)

It seems that the views of those early western commentators were mainly based on the however accurate assumption that apparently 'pre-western contact' and 'immediate-western contact' Māori considered the causes for a large number of diseases to be 'supra-natural', relying on a type of 'witchcraft' to cure these diseases. I would of course reasonably suggest that those practices would be catalogued as 'shamanism practices' nowadays, and if some were indeed probably related to superstitions (A point of course highly debatable) many treatments included as well the use of plants. Some of those being validated by contemporary ethnobotanic studies for their relevance in treating diseases.

It must be highlighted that those aforementioned views led to the western assumption that Māori had more or less no medical knowledge :

These beliefs as to the cause of disease and sickness most effectually prevented any researches in medicinal treatment, and so we found the Māori utterly ignorant of medical science, relying entirely upon superstitious practices and magic formulae in cases of sickness.

(Best, 1924: 206)

A point that I consider as highly discussable, taking into consideration the numerous records of skilful use and deep knowledge of plants resources by indigenous people worldwide, as much as the sparse commentaries made by early western commentator regarding some specific use of plants and animal resources by the Māori that tend to contradict the comment made by Sir Peter Henry Buck “ *I heartily concur with Elsdon Best in saying that in ancient times the Māoris had very few drugs*” (Hiroa, 1910) .

### 4.2.3 Rongoa

Indeed, it appears that Māori relied also, to some extent, and prior to westerner's contacts, to a plant-based medicine that is part of Rongoā, the traditional medicine of the Māori people, for several identified diseases and wounds types.

Māori used a range of traditional methods to deal with illness. Plants such as kawakawa, harakeke (flax), kōwhai and mānuka were all important for healing, and so was a belief in the spiritual causes of illness. Today rongoā – Māori medicine – is seeing a resurgence of interest.

(...) More than 200 plants were used medicinally by Māori. Harakeke (flax), kawakawa, rātā and koromiko had many recorded uses.

(Jones, 2007)

Contemporary studies of traditional Māori techniques and their use of plants predating the encounter with westerners seems to show some pharmacological relevance in diseases treatments. One example in direct connection with our studies being the traditional and quite unequivocally pre-western encounters use of *Cordyceps robertsii* mushrooms in the tattooing ink preparation in some parts of the Islands.

Current studies tend to prove that the *Cordyceps* present some anti-inflammatory and possible antibiotic properties that would have facilitated the tattooing process. (Tauwhare and Mitchell, 2008).

Other numerous traditional and undoubtedly pre-western-encounters use of plants containing proven active chemicals include the Manuka, the Kawakawa and the Tutu, and I provide further insights on that matter in this essay. It seems however not surprising that Māori medicine was only viewed as 'charlatanism' by earlier western observers, following a pattern of events that unfortunately occurred in most cases of western contacts with indigenous people worldwide.

Finally it should be highlighted that the Māori shown an expert knowledge of the flora and fauna, and just in relation to food consumption they developed detoxification techniques and consumed around 36 different varieties of plants, including '*difficult-to-process and sometimes poisonous foodstuffs*' (Leach, 1984), a fact that led me to at least slightly reconsider the views expressed by Elsdon Best and Sir Peter Henry Buck.

#### 4.2.4 Tattooing

First of all it must be understood that the customs and habits of Māori tribes peopling the two islands were more diverse geographically (and 'ultra-locally') than most commentators seem to acknowledge it including Levi-Strauss, be it in terms of artistic style or the techniques employed. A point easily observable in the practice of carving and tattooing and mentioned by many researchers and explorers since the early times (Mead, 1928).

Tattooing ( Tā moko ) ink was commonly made using a mix of trees and bushes ashes, with plant or animal oil and in some parts of the Islands with the ashes of *Cordyceps robertsii*, a medicinal mushroom known by the Māori as Awheto that they also used to consume as food (Fuller et al., 2005). But many early testimonies tend to prove that there wasn't only one recipe used for the preparation of the ink on the two Islands. In fact, there was some local or 'ultra-local' variations, in terms of the genus of the plants and trees used for the preparation of the tattooing ink. And the tattooing artistic styles were much more diverse than what is generally estimated by the unspecialised public, with an apparently clear divergence between the northern and southern styles.



Secondly, the hammering technique was used traditionally for Tattooing, except for the facial tattoos that were literally 'cut' on the face. In any cases tattoos were therefore generally permanent ones, even though, and as it is rarely mentioned, the young warriors who weren't already tattooed made sometimes temporary tattoos on their faces using the juice of the tutu berries. The spirals, whorls and curvilinear motifs that were tattooed were also carved, for example on human figures on wood, and in fact many carved patterns represent tattoos on carved faces. Considering that a 'Cutting' technique was used in facial Tattooing, it is not surprising to find a kind of similarities between the two techniques. It should be highlighted that it was also the case for the Ainu people, for whom the tattooed individual was in fact in a way considered as 'cut' or 'carved' (Krutak, 2014).

Thirdly, amongst many existing early testimonies on the subject, that show as I stressed some 'ultra-Local' divergences, I think the account of the 19th century Austrian explorer Karl Ritter von Scherzer regarding the Māori practice of tattooing is worth being mentioned. This early account of the practice amongst the Māori provides also some interestingly quite divergent views regarding the possible connections between tattoo and hierarchical ranks amongst the Māori that were so widely discussed by Levi-Strauss. As we can see, and as early as 1861, a western commentator clearly stipulated that :

Accordingly these markings serve neither to indicate variety of tribe, nor difference of rank. A slave, if he possess the means, may have his face tattooed with the same ornaments as his master. However it appears, as we were informed by Colonel Browne, that on the occasion of the chiefs ratifying the treaty with the English, they superscribed the various documents with the lines upon their faces, like so much heraldic blazonry, instead of writing their names.”

(Scherzer, 1861)

A puzzling and early remark on the subject, considering that to my knowledge the current academic consensus on the question, including of course the views of Levi-Strauss, tends to suggest on the contrary that the type of tattoo worn by an individual was related to his rank in Māori society. Moreover, it appeared through my inquiry on the subject in early records that this point was also highlighted by Yate as early as 1835:

the tattoo is not a special mark of chieftainship, as has been stated by almost all [sic] writers on New Zealand; for many chiefs, of the first rank, are without a single line; others, even to old age, are only partially covered; and many a slave has had the greatest pain taken, to give this ornamental operation the greatest effect upon his plebeian face. Nor do the peculiar marks on the faces of different people denote their rank, or the tribe to which they belong; it all depends upon the taste of the artist, or upon the direction of the person operated upon.

(Yate, 1835)

But also by Polack in 1840 :

Persons at all ages and of all ranks who possess means or influence to obtain it, get tattooed, chiefs, freedmen, hereditary bondsmen, and slaves. Though often a distinctive insignia for a tribe, yet it is no sign of rank, as warriors are captured at all ages, marked or otherwise, and no apparent difference exists in the society of a kainga Māori or native village. Some adult chiefs may be seen without a single line on the face, whereas some young persons have punctured their bodies absolutely black with the quantity of circles and figures lavishly bestowed on themselves.

(Polack, 1840)

and later summarized in this way by Margaret Mead in 1928 when she wrote that :

Tattooing was more definitely associated with war than with rank. Slaves taken in childhood were not tattooed and there were particular patterns which a slave could not wear. But many chiefs were not tattooed at all and priests had only a small blotch over one eye. New tattoo marks were sometimes assumed by all the warriors of the tribe before going to war.

(Mead, 1928)

It should be understood that those comments by Yate, Polack, Scherzer, Mead and other (see also Roth, 1901) are particularly critical regarding this present study, as Levi-Strauss built up one of his hypothesis on the SRQ by arguing on the existence of an alleged connection between the '*chain of privileges, emblems, and degrees of prestige*' in a society, the artistic style of its members, and their validation inside the society by the

means of Masks, or facial tattoo in the case of the Māori. (Levi-Strauss, 1945; Bois, 2015)

As Levi-Strauss writes it near the end of his essay :

Not all mask cultures employ split representation. We do not find it (at least in as developed a form) in the art of the Pueblo of the American Southwest nor in that of New Guinea.<sup>29</sup> In both these cultures, however, masks play a considerable role. Masks also represent ancestors, and by wearing the mask the actor incarnates the ancestor. What, therefore, is the difference? The difference is that, in contrast to the civilizations we have been considering here, there is no chain of privileges, emblems, and degrees of prestige which, by means of masks, validate social hierarchy through the primacy of genealogies. The supernatural does not have as its chief function the creation of castes and classes. The world of masks constitutes a pantheon rather than an ancestry. Thus, the actor incarnates the god only on the intermittent occasions of feasts and ceremonies. He does not acquire from the god, by a continuous process of creation at each moment of social life, his titles, his rank, his position in the status hierarchy. The parallelism which we established is thus confirmed, rather than invalidated, by these examples.

(Levi-Strauss, 1945)

And I will comment this point further in the discussion at the end of this case study of the Māori and their art. Finally, regarding pre-and-immediate-western-contact Māori, I would suggest that Scherzer's testimony should be balanced by the intake of Elsdon Best regarding tattooing, for he definitely remarks that various first-hand and early accounts on the subject don't match on some specific details :

Many brief accounts of Māori tattooing have been published, and these do not agree as to the method employed. Some say that the instrument was dipped into prepared pigment for each insertion; others that the pigment was rubbed into the cut, or that a wisp of tow saturated in the pigment was drawn across the incision when made. (...)

The art of tattooing is said in native myth to have been introduced by one Mataora, previous to which man was adorned with painted patterns only. Mataora is said to have visited Rarohenga, the subterranean spirit-world, and to have acquired there the art of ta moko, which he brought back to this world. Some see in this myth a perverted remembrance of a voyage made by some old-time Polynesian ancestor to a land where tattooing was practised.

We are told that, originally, the only designs tattooed on women were a cross on each cheek, and one on the forehead. As a matter of fact, we do not find these Māori tattoo designs in Polynesia.

(Best,1924)

Beyond the very interesting account that *'The art of tattooing is said in native myth to have been introduced by one Mataora, previous to which man was adorned with painted patterns only.'* that draw another light on the Painted / Tattooed question regarding the cultures we are studying, I would suggest that the 'larger picture' beyond the traditional Māori tattooing case study that we can deduct from those various testimonies is of multiple tribes from the same Polynesian genetic pool, peopling the Northern and Southern Islands, sharing some general cultural similarities, but presenting ultra-local specificities, due most probably to the variations of vegetation and geology as well as cultural and technical evolutions and discoveries amongst groups, with most probably technological and cultural exchanges in between groups.

Thus explaining Elsdon Best remark that : *'Many brief accounts of Māori tattooing have been published, and these do not agree as to the method employed.'* Even though of course the possibility of incorrect accounts cannot be dismissed.

### 4.3 Māori Patterns

The very distinctive Spiral that is found in Māori Art is called Koru. The act of Carving a pattern is called " Whakairo" .

'Whakairo' as a noun means 'a design' , and as a verb 'to ornament with a pattern' , and it can be used in the contexts of carving, ta moko, raranga and painting arts. Whakairo rakau more precisely describes woodcarving , but the term whakairo tends to be used to signify carving in general, although wood was not the only medium sculpted.

( Paama-Pengelly , 2010:112)

#### 4.3.1 Description of the patterns

The Classic Māori style [A], that Levi-Strauss and other scholar include in the split representation group, was made famous worldwide through the diffusion of images of the 'Moko' their traditional facial tattooing style. The style consists on an emphasis on a curvilinear and 'horror vacui' style with the use of spirals, generally assembled in a

symmetrical way (But some more 'organic' types of composition using spirals and whorls can in fact be found on various artefacts, including boxes and totem poles ).



**FIGURE 38 : CARVED BOXES OR CHESTS, (HAMILTON, 1896:423 )**

#### 4.3.2 General view of the pattern

The classic type [A] Māori pattern that is most relevant for our study was carved on artefacts, houses and tattooed on the face and on the body. The lines are generally thinner (proportionally to the work) than on the Haida or Ainu style, on large pieces of work like totems, houses, and facial tattoos. Thicker lines are found on boxes and stone works. Whorls and spirals are also used in a way 'to fill the void' in between

larger decorative or figurative patterns on the works, in a manner that seems quite similar to Shang art techniques in an initial approach. And as Levi-Strauss indicates:

The comparison of Māori with Guaicuru art is based on other convergences. In no other region of the world has facial and corporal decoration attained such high levels of development and refinement. Māori tattooings are well known. I reproduce four of them, which may be fruitfully compared with the photographs of Caduveo faces.

The analogies between them are striking: complexity of design, involving hatching, meanders, and spirals (the spirals are often replaced in Caduveo art by frets, which suggest Andean influences); the same tendency to fill the entire surface of the face; and the same localization of the design around the lips in the simpler types. (...)

(Levi-Strauss, 1945)

As we saw Levi-Strauss however makes in his essay the statement that Māori tattoo were *'emblems of nobility and symbols of rank in the social hierarchy'*. A point apparently confirmed by contemporary research on the subject, even though we might be tempted to reconsider the question in regards to the earlier accounts of Yate (1835), Scherzer (1861), Polack (1840) and Mead (1928).



### 4.3.3 Discussion

Many points should be discussed regarding Levi-Strauss views on the Māori designs.

First, as I stressed and contrary to popular belief, the curvilinear style of the Māori that is so famous worldwide is only 'symptomatic' of the tribes of the Northern island. An important 'detail' that to my knowledge was never mentioned by Levi-Strauss.

According to Margaret Mead :

The designs used by the southern tribes appear to have been simple series of parallel lines, arranged in groups of three or four, alternately vertical and horizontal. The only curvilinear element was an S-like figure in the middle of the forehead. The designs used by the northern tribes were all curvilinear and elaborately stylized in respect to the sex of the wearer and the part of the body to be decorated. Great emphasis was placed on the conformance of the design to the shape of the chin, the cheek (Fig. 22), etc. The thigh pattern (Fig. 23) and the scroll used on each buttock were invariable; but the smaller units used on the face permitted great individuality of arrangement, although all of these were based on a few curvilinear motifs.

(Mead, 1928: 37)

And as the Southern tribes had apparently a similar socio-political structure I don't see how Levi-Strauss's theories could explain those divergences in styles between the North and the South. One popular explanation for that specific curvilinear artistic style is to consider that the spirals used in the designs are inspired by ferns whorls. Silver fern (*Cyathea dealbata*) being endemic to New Zealand. According to the Encyclopedia of New Zealand, a governmental website:

The koru, which is often used in Māori art as a symbol of creation, is based on the shape of an unfurling fern frond. Its circular shape conveys the idea of perpetual movement, and its inward coil suggests a return to the point of origin. The koru therefore symbolises the way in which life both changes and stays the same<sup>36</sup>

This being mentioned, the use of whorl and spirals is almost abstract in Māori art, and I doubt that it was used primarily to intentionally and figuratively represent ferns. Regarding the possible influence of the shape of the Ferns, Elsdon Best stressed that:

Mr. John White speaks of men having a large design of a fern-leaf tattooed on the back; but corroboration seems to be lacking. The Māori did not, so far as we know, copy such natural objects in his artistic work

(Best, 1924: 222)

Hall mentioned that '*Various suggestions have been offered for an explanation of the origin of the Māori spiral.*' (Hall, 1920), and by linking it to the manaia figure, a mythological monster, he connects it with a symbol of protection. Later on in 1933, Archey mentioned the puzzling case of the origins of the double spiral in Māori Art :

That most characteristic Māori carving-pattern, the double or interlocking spiral, has been the subject of perhaps as much discussion as the manaia. It

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<sup>36</sup> <https://teara.govt.nz/en/photograph/2422/the-koru>

has been supposed to represent the unfolding frond of the tree-fern, and the Māori use of the word pitau for “fern frond,” “perforated spiral carving,” and a canoe figure-head ornamented with spiral carving” (Williams, 1917, p. 330), indicates the native view.

But here again we are probably dealing with a later explanation supplied long after the true origin of the design had been forgotten. Or it may be that the old wood-carving tohunga really knew more about the meaning of his patterns than he disclosed to the Pakeha or even to members of his own race.

(Archev, 1933)

Finally, following my postulates linking indigenous decorative patterns and the taking of entheogenic substances for shamanistic purposes, I provide later in this study an alternate theory as ‘opposed’ to the theory of Levi-Strauss or the popular apparent connection between the spirals on the ‘decorative patterns’ and the silver fern whorls. As we will see my postulate provides also in a way a slightly alternate theory to Sir Sidney Moko Mead brilliant essay ‘The Origins of Māori Art : Polynesian or Chinese’ that I keep in high esteem even if I propose an alternate theory.

#### 4.3.4 A note on the first historical western representation of a Māori tattoo

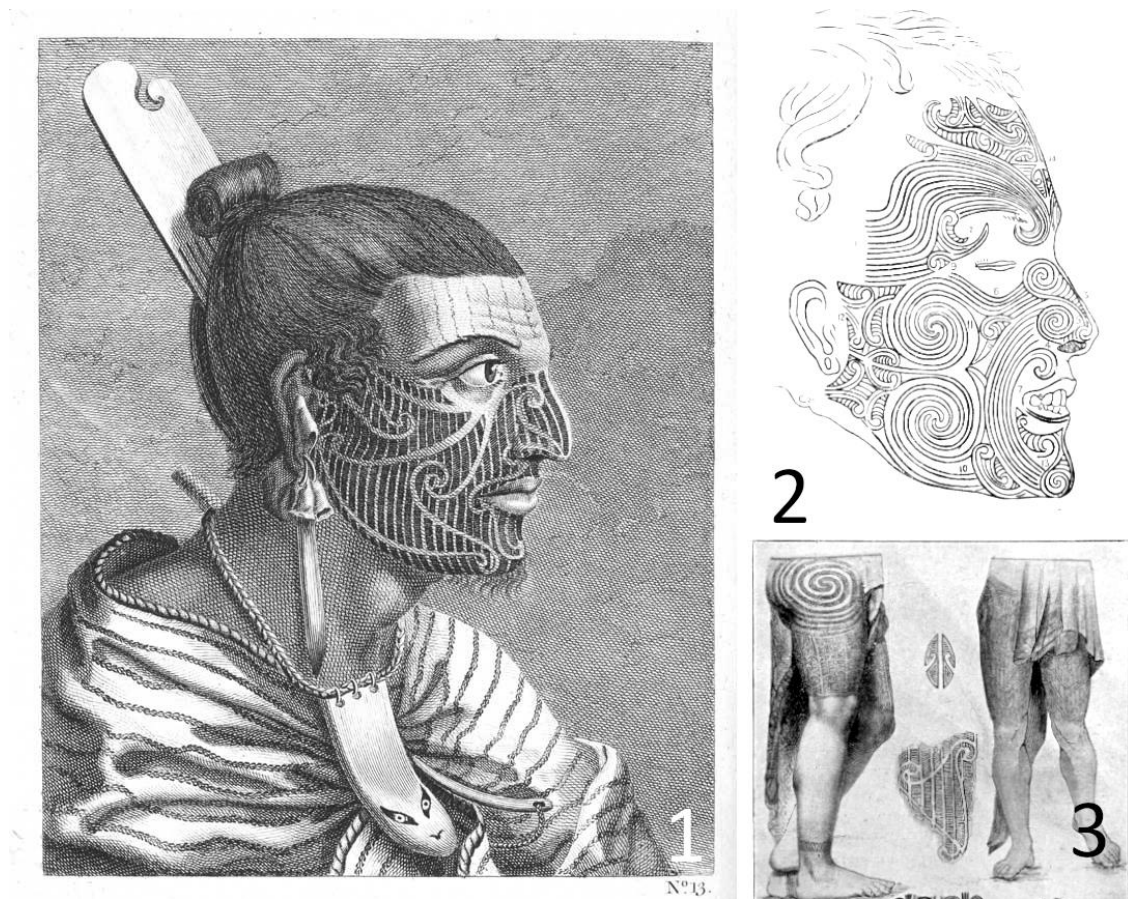


FIGURE 39: 1) THE HEAD OF A NEW ZEALANDER, 1773, ENGRAVING FROM A WASH DRAWING MADE BY SYDNEY PARKINSON, 1773 / 2&3) : COMMON FACIAL TATTOO AND LEG PATTERNS REPORTED BY HAMILTON, 1901

This presentation of the overview of the Māori Patterns (Classic style [A]) wouldn't be complete without mentioning a puzzling fact that raised my attention. It seems that on the Journal of James Cook's first voyage to New Zealand (Around 1770) edited by John

Hawkesworth (Byron, 1775), the depiction of a Māori Moko by Sidney Parkinson is either inaccurate, or it does indicate an earlier evolution of the most well-known curvilinear style. The Moko depicted that I reproduce here<sup>37</sup> seems to present a style that was apparently much more developed on the legs than on the face in the whole Island as reported later by Hamilton (1901). This being said, if the necklace pendant is supposed to represent a Pounamu Tiki , then we can deduce that the drawing was made by memory after the encounter, and therefore mistakes can be expected. (some commentators tend however to describe it as a whale tooth pendant). It seems that the demonstration of Sir Sidney Moko Mead (Mead, 1975:197) regarding his theory of an evolution of the styles from style [B] to style [A], that I comment in this essay, relies in a part from the observation of the Major Robley, quoting the drawing made during cook's first voyage as well as some observations by Colenso '*Possibly in the Hawkes Bay region, in the 1850's*' (Robley, 1896). Deducing an evidence of an 'overlapping sequence in tattooing', that I would consider as being subject to caution, with however all the respect due to the huge work of Sir Sidney Moko Mead and his undeniable expertise on the subject.

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<sup>37</sup> 'The head of a New Zealander by Sydney Parkinson', URL: <https://nzhistory.govt.nz/media/photo/head-new-zealander-sidney-parkinson>, (Ministry for Culture and Heritage), updated 17-May-2017

In any cases, being those two sighting testimonies accurate or not, I just want to highlight at this point in my demonstration that the two apparent early sightings of that possibly anterior style [B] were located:

- for Cook's expedition first sighting in the middle east part of the Northern island (I.e. at Poverty Bay)
- for Colenso's possible sighting in lower middle east part of the Northern island (I.e. "Possibly in the Hawkes Bay region"). And we will see further in my demonstration that the variations in the early and pre-western encounter graphic styles of the Māori seems to be connected to their geographic location for reasons yet to be determined.

Regarding this particular point, that might seem a bit mundane but is in fact of some importance in connection with the developments of S.M Mead's theory on the subject, I would like to quote the views of Elsdon Best, a New Zealand born ethnographer.

(...)Some unusual forms of tattoo occurred in the South Island, but, unfortunately, intelligent and interested observers were lacking in that district, and so no ethnographical data were there collected. Colenso was of the opinion that the curious face designs illustrated by Parkinson represented a southern practice. He himself had seen a few persons so tattooed, but does not tell us in what district he saw them.

(Best, 1934)

Finally, the most striking study regarding this topic is in my opinion the work of Lady

Fox 'A new look at Māori carved burial chests'. As she indicates in 1980 that:

Carved wooden chests to contain the bones of the dead are peculiar to New Zealand and constitute a fine artistic achievement of the Māori people; they are little known or appreciated outside their country of origin. They include some macabre and disturbing imagery, consisting of a variety of divine or heroic figures both male and female, which are decoratively patterned in either incised or relief style.

(...)The distribution of the carved chests (FIGS. 1,2) is concentrated in the north of the North Island, in a zone between Whangarei and Whangaroa harbours mainly in the territory of the Ngapuhi tribe. (...)

Despite the local variations, the chests conform to five main types of images (FIG. 4) which will now be examined. The decoration or patterning is either incised, Type 1, or carved in low relief, Type 2. The two styles rarely co-exist, although some motifs like the spiral are common to both (...)

On Type 1, she remarks a strong similarity with the type of patterns drawn by Parkinson as well as the aforementioned apparent lack of an 'overlapping sequence' between type 1 and type 2 :

(...) the decorative patterning is incised all over the flat surface of the body (PL. IIIb) and extends even over the face (PL. IIIc). This perhaps is a reflexion of the Bay of Islands' style of facial tattoo drawn by Parkinson on Cook's visit in 1769 (Beaglehole, 1962, Vol. 2, Pl. 7). Stripes and scrolls with hooked, coiled or spiral terminals are the principal motifs, which are filled in with rows of nicking executed with two strokes of a small stone chisel. The geometric design is related to a median line and is symmetrical in intent, with minor inequalities. One figure has contrasting patterns of stripes and scrolls on either side of the centre body line (PL. IIIc). The general effect is of a figure that is tightly wrapped (PL.IIIb) .

Type 2 is also cylindrical with the body decorated all over with incised patterns, mostly scrolls and spirals, as in an example near Kohukohu, Hokianga (FIG. 4) .

(Fox, 1980)

This study and the catalogue that Lady Fox produced later for the Bulletin of the Auckland Institute and Museum on the topics, lead ultimately Peter Gathercole to write in Antiquity Journal :

As a result, it is now clear that burial chests had a distribution confined largely to North Auckland, which on other grounds is more and more seen as the homeland of the Māori Culture, with its genesis between AD 1400- 1500.

( Gathercole, 1984)

#### 4.3.5 First traces of Māori Patterns

It is particularly interesting to consider that the first examples of geometric patterns and drawings found in new Zealand, and generally attributed to the Moa hunters (earliest settlers) were very simple and mostly similar to the entoptic Palaeolithic carving found else were on Earth. It seems that they lacked the more detailed aesthetic complexity that can be found in the wider Polynesian context. It should be also mentioned that the art of the South island's Māori tribes, including facial tattoos presented the same lack of spiral and whorls, as stated by Margaret Mead and other



scholars (Mead, 1928). In this sense, most studies of the Māori art seem to have been a study of a possible evolution from this early style to the well-known classical type [A] Māori style. In a paper published in 1916 , H. D. Skinner stated :

The conclusion reached by the writer is that Māori art in its most characteristic forms is native to New Zealand. Some of the motifs are derived from Melanesia, notably the human figure with the two supporting bird-headed manaias, a design recurring with endless variations through the whole field of Māori carving. To the same region may be traced the love of scroll patterns in carving and decorative painting. From Polynesia were apparently derived the perfection of execution, the technical skill, and the tendency towards repetition and symmetrical balance which mark the Māori artist. The fusion of these two diverse elements produced a vigorous and fertile native art, derived from Melanesia and Polynesia but marked by new and distinctive characteristics of its own

(Skinner , 1916)

The Māori classic style [A] , included in the split representation group by Levi-Strauss, presents indeed its own specificities compared to the archaic style of the Moa Hunter. According to Davidson the state of research in archaeology has prevented researchers to provide any definitive statements regarding the prehistory of carving in the area.

at present the prehistory of carving is largely speculation. It is customary to think of the curvilinear carving styles as relatively late, arising from earlier rectilinear and more angular styles, and to pick out a few well-known unusual pieces as "Archaic" forerunners. Yet our knowledge even of the range of 18th century art is limited, and nothing is known of the East Polynesian art of the first millennium A.D. which was ancestral to Māori art. The earliest dated assemblage of carved wood, from Waitore in South Taranaki, shows that the double spiral motif was already in use by the 14th or 15th century (Cassels 1979). If new swamps with datable deposits containing wood carving could be

found, and if new and reliable techniques could be developed for dating existing carvings in museums, the results might be surprising.

(Davidson, J., 1983)

#### 4.3.6 Dating of the Patterns

There are therefore some controversies regarding the dating of the earliest Māori artefacts. But it should be mentioned that tattoo chisels as old as 900 – 1100 AD were ‘Probably already present’ according to Green (1963). And the style that Levi-Strauss and other include in the split representation group is in fact the latest development in what Green (1963) and S.M Mead (1975) consider as ‘evolutionary stages’. We will see later in this part that I tend to provide an alternative theory to the one developed by S.M. Mead regarding the ‘evolutionary stages’, but considered at least as ‘historical phases’ those different styles, that are definitely backed up by archaeological findings, provide a consistent taxonomy for this study. In this sense I would suggest that the Moa-Hunter style might not be regarded as the ‘archaic phase’ of the classic Māori style [A], but only the dominant ‘older style’ found on the island through archaeological research.

#### 4.3.7 Discussion

As stated, the generally accepted theories regarding the evolution of early Māori Art (or Mōa hunters) toward the classic [A] style, is of an evolution through techniques, creativity and certain societal conditions including the increase of population and access to new creative technologies (Like proper tools for carving based on the 'Pounamu' stones technology in New-Zealand) and a new environment. This is more or less the theory brilliantly developed by S. M. Mead in 'The origins of Māori Art: Polynesian or Chinese' published in Oceania Journal in 1975:

(...) 'The orthodox theory at present is that New Zealand culture is wholly Polynesian, that the Archaic phase is ancestral to the Classic Māori phase of that culture and that the unique features of the latter phase are due to developments within New Zealand partly stimulated by the new climatic and geographical conditions into which the culture of the tropical islands was carried" Since Goldson made that statement in 1959 nothing has come out of the archaeological record to refute it."

(Mead, 1975: 189)

Despite what Levi-Strauss pretends, arguing that the split representation style is connected to the social structures of 'Masks Cultures', it should be noted again that tribes peopling Samoa and the Marquesas islands, that settled in the area before the Māori, and are in fact de facto of the same origin and tend to show very similar social structure, if they employ various aesthetic traits that are commonly found in Māori art,

like the use of symmetrical features (even though much less in facial tattoo -like in the art of the Marquesas- than the Māori), still used to produce an art I would hardly include in the split representation taxon, that also shows very few use of spirals that are however one of the main particularities of the art of the Māori. And I don't see in which ways Levi-Strauss ever managed to explain those differences through his methods. Not to mention that the connection between Māori facial tattoos and rank seems to be clearly subject to caution, even though Levi-Strauss made this allegation one of the central pivots of his overall demonstration.

Style aren't created ex-nihilo, I would suggest, and even back in the Palaeolithic or in the 14<sup>th</sup> century. And what surprisingly occur is that Levi-Strauss seems to totally neglect any sense of genealogy when studying the art of the Māori, and to some extent the other arts of the SRT (Bois, 2015). But I would pinpoint that this sense of genealogy is missing for his study of the Māori. Yet there are solid proofs of the influence of the 'Polynesian Style'. His views appear therefore to be mainly 'built up theories' once tested against the facts, from the lack of a convincing and definitive demonstration of the alleged connections between facial tattoos and rank, to his incomplete study of the Māori style that totally dismiss the existence of a southern style. How could I therefore agree with Levi-Strauss when he claims on page 261 of his essay that:

The comparison between Māori and Guaicuru art already provided us with the answer to the latter question. We saw, indeed, that the relationship had to be functional when the plastic component consisted of the face or human body and the graphic component of the facial or corporal decoration (painting or tattooing), which is applied to them. Decoration is actually created for the face; but in another sense the face is predestined to be decorated, since it is only by means of decoration that the face receives its social dignity and mystical significance. Decoration is conceived for the face, but the face itself exists only through decoration. In the final analysis, the dualism is that of the actor and his role, and the concept of mask gives us the key to its interpretation. All the cultures considered here are, in fact, mask cultures, whether the masking is achieved predominantly by tattooing (as is the case for the Guaicuru and Māori) or whether the stress is placed literally on the mask, as the Northwest Coast has done in a fashion unsurpassed elsewhere.

(Levi-Strauss, 1945)

As many testimonies clearly state that in Māori Culture in no ways a face decoration was a prerequisite for that face to 'Receive its social dignity and mystical significance' . It seems therefore that we need to look somewhere else than to Levi-Strauss's theories in order to find an explanation for those similarities in style from cultures and civilizations seemingly separated in terms of space and time. If I agree with Sir Moko Mead that the curvilinear style would have been rapidly adopted amongst a society, once discovered, invented or developed through various means, by the first artists keen to create in that specific manner. Or to quote Mead:

Given a climate which is sympathetic to innovation all that is needed is one gifted artist to introduce a curvilinear emphasis

(Mead, 1975: 202)

As an extensive use of spirals, a hypnotic type of design, must have had a strong impact on viewers at any early stages of its development amongst tribes from the split representation taxon. I would argue however that the question of the supposed interrelation between the complexity of an artistic style and the complexity of a society that he suggests (Mead, 1975) is of another order. Most common features of Polynesian art apart from the Māori Classic style [A], is of a use of geometric shapes with very close connections to the entoptics forms (zig zags, dots and lines) apart from the art of the Marquesas, which present not surprisingly some close affinity with the Samoan style and almost looks like an ‘alphabet’, with very iconic features that present in a way much more ‘complexity’ than Māori Design. Some commentators also indicate the presence of spirals in the art of the Marquesas, for examples on the antennas of insects represented, that show a rather developed level of abstractness, but it seems quite improbable that this feature had been connected in one way or another to the development of the Māori style.

#### 4.4 [Puzzling facial painting case in the Marquesas](#)

Regarding a possible diffusionist origin of a curvilinear style from within the Polynesian context, intellectual honesty dictates me to provide comments about this puzzling case of a facial tattoo presenting spirals depicted in the Marquesas Islands that I mentioned. The date of this testimony and its description should be however clearly

noted. Published in 'Tattooing in the Marquesas' by Willow dean Chatterton Handy, the pattern (marked as Fig 7) is apparently: '*An old pattern for warriors of all the islands (after a description by an informant of Fatu Hiva)*'. It should be also noted that this book was published in 1922 and at that time the diffusion of Māori tattoo style might have influenced the informant. This is to my knowledge the only example of a supposedly pre-western contact fully curvilinear facial style recorded in a Polynesian context apart from the Māori of New Zealand. Whether or not this testimony should be taken more seriously as a proof of an existing tradition in ancient time in a wider Polynesian context is I am afraid beyond the range of this research, and I definitely doubt that there is any way to infirm or confirm this testimony nowadays. But I found it mandatory to mention it as I haven't seen it ever mentioned in any research on the SRQ.

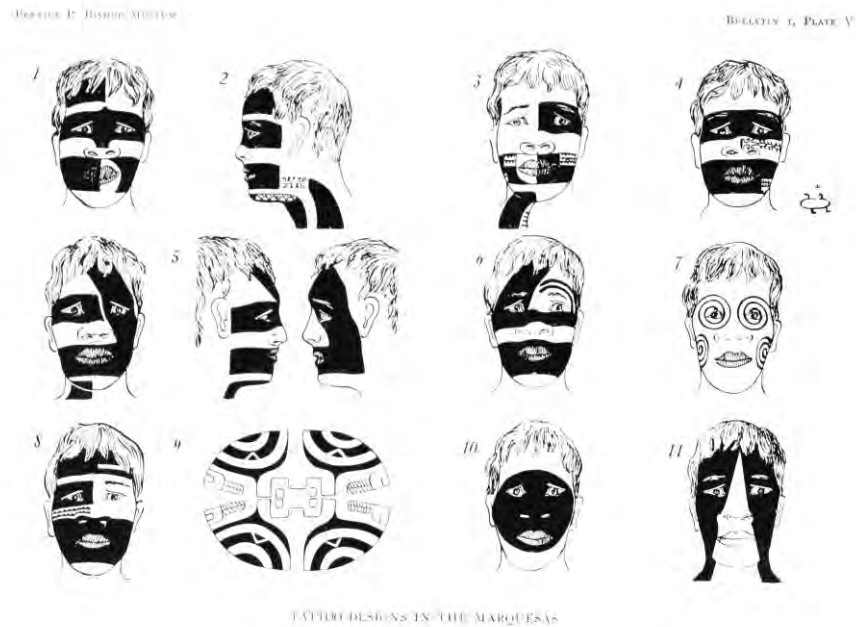


FIGURE 40 : TATTOOING IN THE MARQUESAS BY WILLOWDEAN CHATTERSON HANDY BERNICE P. BISHOP MUSEUM BULLETIN I WITH 38 PLATES BAYARD DOMINICK EXPEDITION PUBLICATION NUMBER 3 HONOLULU, HAWAII PUBLISHED BY THE MUSEUM 1922

#### 4.5 Shamanism and ethnobotanic records

The global framework of this research led me to conduct a survey of the possibly remaining proofs of the use of an entheogen by the Māori prior to contacts with westerners, that could have influenced the shape of their artistic style. As I already mentioned this study was not only made difficult by the understandable reluctance of



the Māori to discuss about such topics (and many others) with the westerners, as well as by the vote of the Tohunga Suppression Act 1907.

If as Tupper (2011) states '*For tens of thousands (if not hundreds of thousands) of years, virtually all societies have availed themselves of at least some of the psychoactive flora and fungi in their surroundings* 34'. As he mentions it in the footnotes, the case of the Māori seems quite puzzling, considering the presence of a variety of potentially entheogenic plants in New Zealand.

34 (footnotes) " Andrew Weil's (1972) cross-cultural research on psychoactive substances suggests that the Inuit are the only human culture that did not have a tradition (prior to European contact) of altering consciousness with psychoactive substances of some kind, likely simply because they did not have any psychoactive flora in their environment suitable for such purposes. However, Durrant & Thakker (2003) also report that the indigenous Māori peoples of New Zealand did not use any psychoactive substances prior to European colonialism."

(Tupper, 2011)

And indeed, the current consensus seems to be that '*There are no known uses of entheogens by the Māori of New Zealand aside from a variant species of kava*'. Taking in consideration the whole pre-historical context that I presented, I argue the lack of historical record of the use of any entheogens by the Māori at the time of contact with the westerners shouldn't totally dismiss the possibility of an existing tradition amongst the Māori, as we know that 'absence of evidence is not evidence of absence'. This led

me to conduct a survey of the possibly entheogenic plants native to New Zealand, in order to identify a potential avenue for research.

#### 4.6 The Case of *Coriaria Arborea*

I would argue indeed that there might be a serious string of clues that would potentially suggest a connection between the specific classic style [A] of the Māori people and their use of at least one specific plant species : the Tutu tree (*Coriaria arborea*) and other Coriariaceae.

Despite the early comments that Māori had an undeveloped medicine (7.2.2), a point that we should at least consider as subject to caution as I have demonstrated that the earliest testimonies tend to vary on that issue (Cooper et al., 1991), I consider that their use of Tutu Tree (*Coriaria arborea*) for instance, is symptomatic of the skilful Indigenous people's knowledge of plants worldwide.

*Coriaria arborea*, a plant from the Coriariaceae family, is only present in New Zealand, regarding its Polynesian distribution. As I will demonstrate, many clues would tend to

indicate not only that prior 'intoxication' or inadvertent consumption of 'poisonous



**FIGURE 41 : PUHOU, CORIARIA ARBOREA LINDS.,** COLLECTED [UNKNOWN NEW ZEALAND LOCATION], NEW ZEALAND. GIFT OF ASUREQUALITY LIMITED, 2012. CC BY 4.0. TE PAPA (SP099539)

parts of the plants could have led to ASC experiences and hypothetically to the vision of form constants. But also more strikingly for our study, that the multiple use of the plant by the Māori, not to mention its poisonous and hallucinogenic properties, might indicate a possible conscious or involuntary use as a kind of entheogen in the context of Māori shamanism.

First, many reliable testimonies indicate that many early Māori including children died victim of Tutu intoxications in the early days of Māori settlement in the northern island of New Zealand. This event was of such importance that the story was transmitted until today .

Tutu carries the dubious distinction of being this country's most toxic plant, historically responsible for many deaths of adults and inquisitive children, perhaps attracted by its shiny black berries.

Considering its ruthless reputation for any error in preparation, it's a wonder our tupuna risked their lives to find so many uses for this taonga plant.<sup>38</sup>

As we can see on this official website run by Māori people, the Tutu tree is even defined as a 'paradox', as being a poison yet a medicine.

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<sup>38</sup> [http://ngaitahu.iwi.nz/our\\_stories/he-aitaka-a-tane-the-tutu-paradox/](http://ngaitahu.iwi.nz/our_stories/he-aitaka-a-tane-the-tutu-paradox/)

Secondly, the geographic distribution of the Tutu tree, matches the location of the arrival of the second waves of settlers that seems to coincide with the rise of the curvilinear styles.

Thirdly, many sources tend to indicate that the Māori had a reasonably precise knowledge of the plant properties despite its highly poisonous characteristics. They identified that only a small part of the tree was edible, and that the seeds were highly poisonous ( Historical records even mention that four French sailors died after making a cake with the berries without removing the seeds in the 1830's (Fitchett, 1908) , and the death of a circus elephant is also mentioned (Ford, 1910)). Their knowledge of the plant was in fact in accordance with the generally skilful use of plants and animals by indigenous people worldwide that I document in this present study (Sutton, 1986; Le, 1984). As Alfred Saunders, a British historian who decided to settle in New Zealand in 1841 describes his first encounter with Tutu berries :

But we soon gave the Māoris another and more real cause for uneasiness by our eagerness to taste their nice-looking tutu berries. They knocked them out of our hands as we lifted them to our lips. They took a handful of the seeds, and turned up their eyes with an expression of horror. They squeezed out some juice through a suspicious looking cloth, and offered us a drink, which was really delicious, at the same time holding the seeds in one hand and fencing us off with the other, which we understood to mean that we must not eat or touch the seeds. We thought that their actions were most likely based on some superstitious reason. We little knew, as we left them, how much real anxiety we had given them, or that we owed our lives to their extreme vigilance.

(Saunders, 1927: 33-34 )

It is particularly interesting to notice that he describes further in the text an episode of inadvertent self-intoxication to tutu berries, even though the account is quite sparse, and it seems that he suffered from amnesia. This however tend to confirm that tutu intoxication wasn't always lethal amongst adult Māori, and that surviving adults would have been the surviving subjects of the hallucinogenic properties of the plant:

On our first Saturday afternoon in Nelson, we found that our cook had made us a splendid pudding from tutu berries. When I came in the other three had had their dinner, and all were praising the cook and his pudding. I was intensely hungry, but I said to our Quaker cook, "I thought these berries were poison, Isaac," to which he replied, "Oh, but thee must know, Alfred, there are many things that are poison raw that are not poison boiled." "Oh, that's it, is it?" said I, and my share of the really delicious pudding soon disappeared. After dinner, we lounged about and held a consultation as to how we should spend our first Sunday in Nelson, and finally settled that we would put on our best clothes and visit some of our shipmates. Soon after this deliberate conclusion, Cyrus Goulter began to conduct himself in a most improper manner, and Sylvanus Cotterell cried out, "Run, Isaac, to the river for some water--here's Goulter down in a fit." Isaac seized the bucket and ran towards the river, but he tumbled over and began to imitate Goulter so exactly that we were all reminded of the tutu pudding. I suppose I came next, but I am not a competent witness for anything that occurred during the next twenty-four hours. It was getting late on Sunday evening when I lifted myself from the ground and, resting on my elbow, dreamily surveyed the confused condition of our teetotal cottage. Three prostrate, heavily-breathing, dirty looking drunkards appeared to be lying near me. Everything had been knocked about, but tutu pudding was in evidence everywhere, and I was so much bruised, so weary and exhausted, that I lay down again to try to remember what it was all about. It was very evident and very fortunate that we had not put on our best clothes for that Sunday's work, and it was highly probable that none of us would ever eat any more tutu pudding. No one had come near us, and we did not feel quite up to making calls even on the next day; but when we did relate what little we knew of our novel experience, we were told that one of our neighbours, who had eaten only a single bunch of tutu berries, was lying dead from its effect.

(Saunders, 1927: 35-36 )

The Māori also developed various medical uses for different parts of the plant. The Manaaki Whenua – Landcare Research website<sup>39</sup>, a Government owned research centre, provides a taxonomy of records of traditional medicinal use of the plants. It includes cures for epilepsy, dysentery, bruises, cuts and wounds, and even temporary madness. Even though it must be understood that some traditional use of the plant parts might have been developed by early western settlers, there are few doubts that Māori had developed themselves ways to use some parts of the plant for medical purpose before the encounter with westerners.

On one hand they developed medicinal techniques using for example the leaves of the plants to cure bruise and joint dislocation : “*Various preparations of tutu leaves and shoots were used to dress wounds and bruises, set broken bones or sprained ankles and to make an antiseptic lotion to treat cuts and sores*”<sup>40</sup>. But as we saw they also developed a filtration technique to make a supposedly safe sweet beverage without the harmful seeds, even though many testimonies tend to indicate that the ‘preparation was tricky’ (meaning that inadvertent intoxications might have occurred). Consumption as food in large quantities is documented (Colenso, 1865; Taylor,1848).

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<sup>39</sup> <https://www.landcareresearch.co.nz/about/about-landcare>

<sup>40</sup> [http://ngaitahu.iwi.nz/our\\_stories/he-aitaka-a-tane-the-tutu-paradox/](http://ngaitahu.iwi.nz/our_stories/he-aitaka-a-tane-the-tutu-paradox/)

Finally, the most compelling clues in my opinion come from the work of Robert L Thorne, a Māori composer, performer, musicologist and anthropologist who describes in his Master thesis in social anthropology his attempts at remaking traditional kōauau , a type of Māori flute, through his study of collections gathered in history museums (Thorne, 2012). Several points rise from his study that I consider as highly puzzling regarding my own research. I first notice that according to Thorne, even though Tutu tree was used sometimes in the South to make kōauau, *“This research concludes that the predominant material utilised in the South Island that remains today in museums was large sea-bird bones”* (Thorne, 2012:26) and that *‘The occurrence of kōauau made from pith woods in museum collections is apparent, again especially tutu.’* (Thorne, 2012: 39)

Moreover, he describes in which ways he got himself intoxicated to Tutin, the active principle of Tutu, while working green tutu in order to carve a kōauau flute. Reporting *‘altered powers of perception’, ‘sensitivity to light’, dizziness, sense of nausea and headache, after “gouging the hard, thick, juicy pith from a piece of cut tutu branch.”* (Thorne, 2012:41)

Thorne documents that the plant was also *‘Implicated in the magic and mythology of creation’* in Māori cosmogony and concludes his study by stating that it is precisely



because *Coriaria arborea* contains psychoactive compounds that it was used as a flute making material '(...) consequently being one important component in a shamanic process that involved states of consciousness, music, and the use of a flute.' (Thorne, 2012: 65). And I can only state that this present study seems to corroborate his postulates.

#### 4.6.1 Tutu Tree , Tattooing and Patterns

As I will demonstrate, various anthropological and historical records tend to provide a puzzling string of connections between the classic [A] style of the Māori and the plant itself. According to testimonies, on some part of the island the young warriors who weren't tattooed yet, would draw the pattern on their faces using the brown juice of the berries in preparation for wars and other ritualistic activities, while the warriors themselves used the juice or even the ashes of the Tutu Tree mixed with shark or plants oil in order to make tattoo ink.

Māori used the soot from burning tutu wood mixed with oils from weka, shark or tree oils to manufacture an indelible ink for tattooing, and also extracted a red or black dye from the bark.<sup>41</sup>

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<sup>41</sup> [http://ngaitahu.iwi.nz/our\\_stories/he-aitaka-a-tane-the-tutu-paradox/](http://ngaitahu.iwi.nz/our_stories/he-aitaka-a-tane-the-tutu-paradox/)

According to Robert Venell, Project Collection Manager for Natural Sciences at Auckland Museum :

Red and black dyes were extracted from the bark, and soot from burning Tutu wood was mixed with oils to make ink for tattooing. The juice from the berries stains skin brown and young Māori warriors who had not yet been tattooed would paint their faces with tutu juice before battle.<sup>42</sup>

This was confirmed to me by Robert Venell in an email exchange: *In addition to the statement by Bell (1890) there is also an account from White (1883, Māori Pharmacopia) regarding the young warriors using the juice as a tattoo pigment.* (Personal communication, 01/12/2018).

Regarding my postulate of a possible connection between the classic [A] style of the Māori and the use of Tutu plants, it should be noted that most testimonies connecting its use with tattooing seems to originate from the North of the Northern Island ( Near Whangarei, juice used for tattooing pigment (Bell 1890) for example ), in an area close to the Kataia Swamp where artefacts were found through archaeological researches that M.S. Mead includes in the developmental phase, suggesting therefore the creation of the curvilinear style in the Northern part of the Island) but most

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( Article posted by “Te Rūnanga o Ngāi Tahu (Te Rūnanga), the tribal council” : Te Rūnanga o Ngāi Tahu (Te Rūnanga), the tribal council, was established by the Te Rūnanga o Ngāi Tahu Act 1996 to be the tribal servant, protecting and advancing the collective interests of the iwi.)

<sup>42</sup> <https://meaningoftrees.com/2014/04/07/tutu-coriaria-arborea/>

importantly in the area covered by Lady fox in her study of ‘decorated burial chests’ that seems to confirm this hypothesis of an origin of the classic [A] style to be located on the North of the Northern Island. And as we saw Thorne seems to confirm the same preponderance of the Northern Island in the use of Tutu for the making of kōauau flutes.

This theory would be supported in my opinion by two points:

- First, as stressed, according to the sources, it seems that tutu tree was used to make the tattooing ink only in the north of the northern island, and coincidentally it is the area where the curvilinear style was developed and where it was used. Mead, whereas grounding his alternate theory of the evolution of the style from a pure aesthetic development, also considers the North as the birthplace of the curvilinear style.
- Second, as I will demonstrate, it seems that the striking similitude between Tutin intoxication symptoms and some specificities of Māori rituals and artefacts should be considered.

This theory has apparently never been proposed by previous researchers, but the overall research direction of this thesis, the string of clues as well as the fact that the switch from the archaic to the classic Māori phase seems to have never been absolutely and convincingly explained, led me to develop my postulates in the framework of this study and conduct an inquiry of those plausible correlations. And to quote Levi-Strauss:

The rejection of facts because they appear to be unintelligible is surely more sterile from the viewpoint of scientific progress than the formulation of hypotheses. Even if these should prove to be unacceptable, they will elicit, precisely because of their inadequacy, the criticism and research that will one day enable us to progress beyond them.

(Levi-Strauss, 1945)

#### 4.6.2 Tutu Poisoning Symptoms and Māori Shamanism and Culture

Tutin intoxication symptoms are generally described as follows:

Symptoms of tutu poisoning described in case reports from the turn of the twentieth century include vomiting, giddiness, delirium, great excitement, convulsions and coma, ending in death. For those who survived, long-term ill health and severe memory impairment has been described.

(Belcher and Morton, 2013)

It should be mentioned that even if the issues were not always lethal, most testimonies report cases of 'a delirium with muddled thinking, hallucinations and a major seizure' (Chancellor, 2013), and that as we saw fatality only happened apparently in the cases of strong intoxications, as some early western observers like Alfred Saunders or Polack (as mentioned by Best, 1942) survived to an intoxication to provide some sparse accounts about its symptoms and effects. It should be also noted that of course contemporary cases of Tutu intoxications are extremely rare, thus complicating the recollection of accurate information on its effects -and the possible presence of the visualization of form constant- that would provide a definitive proof of the connection between the consumption of some parts of the plants and the artistic styles.

An early survey of its effects published in 'The British and foreign medico-chirurgical review' in 1865, is however particularly enlightening, as I would suggest that at the time sporadic intoxications were more common amongst early western settlers :

In action the Toot plant or poison is, like its congener, *C. myrtifolia*, apparently referrible to that section of Narcotico-irritants, or Narcotico-acrids, whose action is exhibited mainly on the brain and spinal cord; or, using the terms of another and newer, and more philosophical, classification of poisons, to the Cerebrospinal section of Neurotic poisons.

1 The term narcotico-irritant is not strictly correct or applicable, in so far as there are rarely, if ever, symptoms of irritant action ; the poison apparently being a pure Neurotic, affecting 'primarily and chiefly the brain, and secondarily the spinal cord. In man the symptoms of Toot-poisoning may be shortly stated as, generally, giddiness, stupor, coma, with or without delirium

or convulsions; but the details differ in different individuals. Sometimes there are symptoms like those of brain fever ; occasionally the delirium resembles that of alcoholic intoxication, or delirium tremens; at other times it rather approximates that of acute mania, being marked by great muscular excitement, the patient requiring restraint of the most powerful kind-in some instances, the assistance of several strong men for several hours. One of the characteristics of the convalescent stage is loss of memory, with or without a vertiginous condition

(Lindsay, 1865:153)

I would pinpoint as well the striking fact that later in the text the author makes a parallel with Ledol and Grayanotoxins intoxications through Rhododendron consumption that I document throughout this thesis and particularly in the case study of Ainu and ancient Chinese artistic styles in relation with shamanism :

Instructive parallel cases are those of poisoning in the human subject by eating the flesh of hares, which have browsed on Rhododendron chrysanthemum ; or of young pheasants, which have fed on the shoots and buds of Kalmia latifolia ; the honey of bees, which have sipped it from certain species of Azalea, Kalmia, and Rhododendron ; as well as the ever-quoted and over-quoted instance, from Xenophon's narrative, of the Ten Thousand Greeks, in their "Retreat," who died in consequence of eating honey collected from the Azalea pontica-the Aegolelhron of the ancients; the symptoms in all these cases being those of narcotico-irritant poisoning-vomiting, purging, and giddiness.

(Lindsay, 1865:153.)

In the framework of this thesis I want to underline the striking similarities between the external and internal manifestations of an intoxication to the Tutu or 'Toot Plant' - *Coriaria arborea*- with the depiction of a Māori shaman in trance mentioned by

Andersen (1948) that I quoted previously, that happens to originate from Stephenson

Percy Smith's 1899 article "The Tohunga-Maori: a sketch":

When the priest was urua, or possessed by the god, he must have been a terrible object to look on, according to the many accounts I have heard. He was like a furious raging madman, his body and limbs convulsed, his eyes protruding, foaming at the mouth, giving utterance to strange tongues; sometimes rolling on the ground, at others rushing hither and thither with furious grimaces and frantic cries. These fits gradually died away, and were succeeded by a long period of utter prostration.

(Smith, 1899: 267)

Many symptoms find a resonances as well with the external features of the Haka traditional 'Dance' of the Māori, like hyper breathing, dislocated jaws, mimic of vomiting and collapse with the tongue outside, convulsive movement of the arms and legs, etc... while at the same time, the Hei Tiki a famous traditional Māori artefact with an apparently 'Unidentified origins', might present as well some similar features (dislocated jaws, tongue out, head tilted on one side, and in some representation the hands on the abdomen, which could be matched with some other symptoms of Tutin intoxication).

This being said, distorted faces, cramped jaws and protruding tongue are indeed widely represented in Māori Arts and craft, but as we saw they are also a clear symptom of Tutu poisoning:

If a person accidentally swallowed tutu seeds, the poison distorted their face and cramped their jaw. A stick or rag was placed between their teeth to

prevent them biting their tongue until they started frothing at the mouth and vomited up the seeds.<sup>43</sup>

Thirdly, as mentioned several times, the sculpted representation of faces presenting specific anatomical details, traits and gestures that would suggest a solid possibility of the representation of an apparent intoxication to a toxic plant well identified in the cultural context into which those artefacts were produced has some precedents in other ancient cultures worldwide. It is indeed quite widely accepted for example that Andean Chavín sculptures represent sometimes faces under the influences of various drugs:

Iconography and artifacts from Chavín de Huántar attest to the importance of psychoactive substances consumed nasally as snuff, and consequently hallucinogens other than San Pedro cactus must have been utilized. This article presents iconographic evidence from a Chavín de Huántar sculpture demonstrating the religious significance of *Anadenanthera* sp. (*vilca*), a plant containing the vision-producing bufotenine. *Anadenanthera colubrina* var. *Cebil* is found east of the Peruvian Andes and consequently it is the most likely source of the psychoactive snuff ingested in the rituals at Chavín de Huántar and related ceremonial centres.

(Burger, 2011)

I would therefore make the hypothesis that there could be a close connection between the development of various use of some parts of Tutu tree in Māori context, possible

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<sup>43</sup> [http://ngaitahu.iwi.nz/our\\_stories/he-aitaka-a-tane-the-tutu-paradox/](http://ngaitahu.iwi.nz/our_stories/he-aitaka-a-tane-the-tutu-paradox/)



sporadic inadvertent consumption of Tutin through contaminated Tutu juice, or even a voluntary taking for shamanic purpose including through the making and use of kōauau flutes (Thorne, 2012), and the development of the classical Māori style [A]. Of course, my hypothesis is not a proof that the ingestion of any parts of the Tutu plants would trigger the vision of form constants, as to my knowledge no data are currently available to confirm nor infirm this hypothesis, even though the triggering of tonic-clonic seizure (Kasper et al, 2010) through Tutin intoxication could by itself procure such types of visions of whirling lights.

## 4.7 Conclusion

Despite the existing controversies regarding the historical settlement patterns of the Māori in New Zealand and the evolution of their artistic styles, it seems that many researches tend to designate the North of the Northern island as the cradle of the Māori artistic style [A].

This style being the only one studied by Levi-Strauss in his essay on the SRQ. Anthropological studies and ethnographic records tend to document a use of various parts of a plant species, the Coriariaceae, in contexts related to pattern making (use of juice and soot from the burnt parts for temporary facial painting and permanent tattooing, for example) and shamanic practices related to the making of kōauau flutes from the same material in the same geographic area. By taking into consideration the widely reported hallucinogenic and intoxicating properties of this plant, and its many known usages by the Māori prior to the encounters with westerners for medicinal and other purposes, as well as the striking similitude between the symptoms of its intoxication on the human system and the external manifestations of the shamanic trance of the Māori shaman, the Tohunga, and the multiple depiction of protruding tongues and dislocated jaws in the Māori iconography and ritualistic dances that resemble a 'Tutu intoxication'; and in the lights of the acknowledged precedents of recorded ritualistic use of various entheogens and their influence on the general shape and designs of artistic styles amongst human groups worldwide through out pre-

history and history, I make the postulate that there is a sufficiently convincing string of clues potentially indicating a connection between the use of 'Tree Tutu' (*Coriaria arborea*) by the Māori and the rise of their classic artistic style [A]. This postulate tends to be reinforced by the recorded divergences in style between the Southern and Northern Island, considering that the use of Tutu in tattooing context as well as for the making of kōauau flutes seems to have been predominantly recorded in the North.

Even though I tend to consider this string of clues as solid, and as I will explain it in the next paragraphs, I want to put the emphasis on the fact that this should be considered only as a preliminary study as the amount of time and resources to strictly prove this theory clearly exceeds the framework of this PhD Thesis.

Finally, I consider that in any cases the present case study shows solid proofs of flaws in Levi-Strauss's essay regarding his approach of the Māori and their artistic style. Some of those flaws having been already highlighted by Alfred Gell. As demonstrated, Levi-Strauss made the slightly wrong assertions that Māori Tattooing represented "*emblems of nobility and symbols of rank in the social hierarchy*", when earliest testimonies tend to at least mitigate if not contradict this affirmation.

Moreover, Levi-Strauss's theory does not provide any explanations for the divergences in style between the South and the North of the islands and does not provide any perspective in terms of the possible genealogy of the Māori style in the wider Polynesian context. Not to mention the total lack of study of Māori pharmacopeia and other parameters that seems necessary to take into consideration in the lights of the advancements of anthropology and art history researches at the beginning of the 21<sup>st</sup> Century.

I would argue that it is therefore this lack of systematism and the absence of an holistic approach to the question of the art of the Māori, that ultimately brought Levi-Strauss and other researchers that followed, like Hanson (Gell, 1998), to fail at grasping the specificities of this artistic tradition, that we could put in perspective once again, and to some extent, with the art of the Shipibo people. These are sacred designs that were produced be it through carving or tattooing in a religious manner, from the making of the tattooing ink to the woodworking processes. This art had a genealogy, as the first Māori didn't appeared ex-nihilo in New-Zealand and did not landed on the Island without any previous artistic traditions. It had more purposes and meanings for them than a simple decoration or fashion, and it cannot be 'deciphered' by some simple superficial studies of their socio-political structures. What Levi-Strauss attempted to do in a 23 pages essay, is a task that paradoxically I do not claim to be able to achieve

completely within the framework of this sole thesis, even for this specific case for which I consider the string of clues regarding the potential influence of the Coriariaceae species on the art of the Māori people as quite solid.

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Figure 11: a) bronze wine vessel (Zuyi jiao), ~1000 BC, Shang dynasty, H: 23.9 cm, W: 18.6 cm, D: 10.9 cm [38]; b) Eastern Zhou bronze lei, 700 BC [39]; c) bronze lei, late Shang period, ~1300-1050 BC, H: 43.5 cm, D: 18.6 cm [40]; d) bronze cooking vessel (Fuxin ding), 1100 BC, Shang dynasty [38]; e) a pottery jiao vessel, ~2000-1500 BC [11]; f) Yangshao funerary jar (~2500 BC) earthenware with painted spiral décor, H: 37.15 cm x W: 40 cm. [41] g) white pottery lei jar, excavated from Anyang, Freer Gallery of Art, (1200 BC) [38]; h) pottery ding, cooking vessel of Xia dynasty, 20.5 cm high, rim 20 cm diameter, unearthed at Erlitou [42].

FIGURE 42 : VISUAL OVERVIEW, SHANG DYNASTY AND NEOLITHIC CHINA STYLES

## 5 SHANG DYNASTY

### 5.1 Preamble

This thesis is not the place to discuss in depth a subject as wide as the pre-and proto history of China, but I will highlight and comment some points in relation to this case study when needed. For this chapter I will mainly expose the possible cultural origins and artistic specificities of the art of the Shang dynasty (2nd Millennium BC)<sup>44</sup> with a focus on the Taotie, a 'gluttonous' mythical figure which representation on a large number of Shang art artefacts presents on a preliminary approach some characteristics of the split representation style, as mentioned by Levi-Strauss in his essays. As we will see, the history of the Taotie and its relation to Shang arts and culture extends its roots far back into the pre-history and proto history of China and the Central, Eastern and Northern parts of Asia at large.

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<sup>44</sup> 1) Jar with Spiral Designs, 3300-2650 BC, Northwest China, Majiayao culture, The Cleveland Museum of Art  
2) Pots, Yangshao culture, neolithic China, c. 2600-2300 BC, ceramic - Östasiatiska museet, Stockholm  
3) Goblet (jia), Bronze, Late Shang dynasty, 13th century B.C. Ref Number 1926.1599, the Art Institute of Chicago  
4) Evolution of Shang dynasty ritual bronze vessels from Neolithic ceramic, from "Bavarian, B, and Reiner, L. "Ceramic's Influence on Chinese Bronze Development." California State University, Northridge (2007).  
5) Tripod Cauldron of Ran (Ran ding) with a Taotie Mask, Late Shang dynasty, 13th–11th century B.C., the Art Institute of Chicago



For further readings and information about the pre and proto-history of China and the evolution of its culture, I would suggest to the curious reader to consult “ Science and civilisation in China” a compelling series of book initiated by Joseph Needham PhD, a British sinologist and historian (Needham et al. , 1954)

More information about the historical and prehistorical peopling of China can be found on the brilliant paper by Black et al. (Black et al., 2006), and of course in the impressive body of work on genetic and human dispersal by Cavalli-Sforza et al. *The history and geography of human genes*. Finally, in depth studies of the Taotie can be found in the work of Kesner and Sarah Allan amongst other researchers (Allan, 1991) (Kesner, 1992).

## 5.2 General overview

According to multiple sources, the Shang dynasty was a proto-historical Bronze Culture (1700-1100BC), that ruled the North East of China, in the Yellow river valley up to the Eastern Coast.

A dynasty which ruled China during part of the 2nd millennium BC, probably the 16th–11th centuries. The period encompassed the invention of Chinese ideographic script and the discovery and development of bronze casting.<sup>45</sup>

Regarding the ancient peopling of China, it is estimated that modern humans migrating from Africa '*settled in either southern East Asia and/or Central Asia before moving into China and Siberia (...)* In addition, studies have highlighted the influence of the post-Neolithic migrations of ancient precursor populations on current genetic diversity in East Asia.' (Black et al., 2006). It is estimated that the Shang dynasty's population was around 13,5 million people.

The core of the dynasty was located in the northern part of modern-day Henan province, in a triangular area between the cities of Anyang, Luoyang, and Zhengzhou, the latter two of which are on the Yellow River. In addition to uncovering the remains of several Shang cities, archaeologists have found huge tombs of many Shang kings and their families. Even though the dynasty was centered in this area, its culture reached places much farther away.

(Brown and Lai, 2006)

### 5.2.1 Proven Genetic Lineage

Since the OoA event various group of population have settled or crossed the territory of nowadays China, coming mostly either from the South East Asia or from the North

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<sup>45</sup>The Oxford Dictionary

(Siberia and of course Mongolia) and Central Asia. Recent researches provide however a lot of clues in order to draw strong hypothesis regarding human dispersal in the area since the prehistory (Shi, et al. ,2013).

Molecular genetic studies indicate that modern humans (*Homo sapiens*), having migrated from Africa (60,000–100,000 years b.p.), settled in either southern East Asia and/or Central Asia before moving into China and Siberia (Nei and Roychoudhury 1993; Cavalli-Sforza et al. 1994; Cavalli-Sforza 1998; Chu et al. 1998; Su et al. 1999; Ding et al. 2000). More complex scenarios also have been proposed that involve multiple migrations from both Southeast and Central Asia during different historical periods (Karafet et al. 2001). In addition, studies have highlighted the influence of the post-Neolithic migrations of ancient precursor populations on current genetic diversity in East Asia (Su et al. 2000; Wen et al. 2004a, 2004b). As models of the origins and structure of Chinese genetic diversity increase in complexity, it is prudent to consider the potential effects of relatively recent historical and demographic events and cultural factors alongside molecular data when assessing the genetic impact of the human colonization of China.

(Black et al. , 2013)

A study by Zhao et al. (2015), provides further clues about the genetic specificities of the Shang and Zhou dynasty. If the increasing knowledge on ancient peopling of Asia and China through genetic research could potentially help to conduct a fine-tuned study of the evolution of artistic styles in ancient China in connection to populations movements, this dissertation is unfortunately not the place to conduct such an in depth study on such a large territory. I however selected relevant data in this overall approach to the question that I mention later in this case study.

I first note the probable Central Asian and South-East Asian 'entry doors' to China and Siberia for Palaeolithic population (Black et al. , 2013), that I would argue also suggest the probable encounter by those migrating populations of different species of potentially entheogenic plants in relation to shamanism that I will comment in the next sections.

### 5.3 Culture

The Shang Dynasty was a bronze age advanced society and most probably a theocracy. Historical records as well as archaeological findings tend to show however a clear cultural transmission dating back as far as the Yangshao Culture ((5000-3000 BC), and probably beyond.

During the Shang Dynasty (ca. 1600–1046 BC) in China, the animals used in sacrificial activities changed over time. Pigs, dogs, and cattle were used as sacrificial victims in the late Neolithic period, whereas horses and sheep were added in the Shang. Present evidence suggests that throughout the Shang, animal sacrifice was a varied and ever-changing practice. Gradually, animals whose control could be more easily restricted and humans became increasingly emphasized in sacrificial practices. Animal sacrifice in particular was an important aspect of the process by which elite power was constructed. This process was crucial to the evolution of the Shang state as the preeminent early Bronze Age polity in North China.

(Yuan and Flad, 2005)

Most researchers agree that the Shang Dynasty settled the bases of the Chinese civilization.

The Shang Dynasty marked the middle of China's Bronze Age and was a dynasty that made great contributions to Chinese civilization. Scholars do not fully agree on the dates and details of the earliest Chinese dynasties, but most accept that the Shang Dynasty is the first one to have left behind written records and solid archaeological evidence of its existence.

(Brown and Lai, 2006)

The society was warlike, highly hierarchical and ruled by 'Kings' who were also possibly shamans themselves. The practice of human sacrifices, probably mostly during rituals, is confirmed. Inventions dated back to the Shang dynasty include writing, the development of Bronze casting technologies and the use of wheeled chariots (Brown and Lai, 2006). Agriculture of millet, rice and soybeans is attested, as well as the production and consumption of diverse types of alcoholic beverages that apparently were also a part of divination rituals (McGovern et al. , 2006).

Rituals were an important part of the Shang Society, and some Chinese scholar even suggest that the word 'Shang' itself should be understood as the name of an ancestral ritual conducted by the Zi clan.

Over the course of several centuries, the original, literal meaning of shang as the graphic depiction of the telling ritual, gao 告, was generalized and extended to refer to the ancestral temple, the city where the temple was located, and finally to the Shang dynasty itself.

(Chang, 1995)

The Shang dynasty's writings on oracle bones related to the rituals are the oldest known form of Chinese writing, dating back to around 3000 years ago (Chang, 1995).

The artistic style of the Shang dynasty was most probably intrinsically connected to the religious beliefs of its society that included many rituals, human and animal sacrifices and offerings (Tao, 2007). It should be mentioned that there are still controversies about the existence or not of the Xia Dynasty, which is supposed to have pre-dated the Shang Culture (Brown and Lai, 2006).

## 5.4 Shang Patterns and the Taotie

Few things should be commented regarding the name of the Shang art patterns in relation to the wider framework of this dissertation. Regarding the Taotie, it must be clearly understood that it is a figurative theriomorphic image, i.e. a representation of a god as a beast. As far as I know, most commentators seem to agree with Sarah Allan's assertion that:

The term taotie first occurs in the textual tradition in the Zuo zhuan, with reference to one of the four evil creature of the world, a certain worthless son of the Jinyun clan, who lived in the time of the called Taotie, which, according to the commentators, means 'glutton'. The term is associated with the bronze motif, however, because of a passage in the Lushi chunqiu which states: "Zhou ding were decorated with taotie which have a head but no body. It devoured a man, but before it could swallow him, its own body was damaged." this text, written in the third century B.C, does not reflect Shang thought and there is no reason to suppose that the term taotie was known to the Shang. (...) Nevertheless, it does reflect an ancient association between the motif and eating and this is significant since the motif was used to decorate vessels used for offering food sacrifices to the spirit of the dead whose appetite, as I have discussed previously, was insatiable.

(Allan, 1991)



**FIGURE 43 : CLEAR TAOTIE DETAIL ON A 'DING' BRONZE TRIPOD VESSEL, (1250-1046 BC), CLEVELAND MUSEUM OF ARTS**

Shang art does not only feature the Taotie on many artefacts, but also shows an intensive use of spirals and whorls in order to 'fill the void' in between larger lines or more figurative representations, in an 'horror vacui' style that shows some similarities with the style of the Māori people at first sight. In any case the Taotie figure seems to always be featured in a kind of curvilinear style. In this sense, if the Taotie can be understood as an important feature of the Shang style, the style itself can't be reduce to the Taotie. Several researches tend to show that the figure of the Taotie might have stylistically emerged first as 'a pair of eyes' in a purely decorative geometric style, and I would argue that we could consider the Taotie figure and the Shang curvilinear style at large as being very tightly interrelated.



### 5.4.1 Meaning of the pattern

According to the few written documents, mostly oracles bones, that were found through archaeological researches, there is to my knowledge no proofs that the Shang art wasn't supposed to represent anything, unlike the patterns of the 'neighbouring' Ainu and the kind of 'Taboo' connected to its patterns meaning within the tribe<sup>46</sup>.

Like many patterns from the split representation groups, for which we don't have a clear transmission of their supposed meaning through history (contrary to the case of the Ainu people, for example), the task of understanding what the Taotie actually meant for peoples during the Shang dynasty is a delicate one. Amongst many researches on the subject, it seems to me that Ladislav Kesner's article '*The Taotie reconsidered*' provides a balanced perspective on this question. Quoting various researchers on the subject, he definitely comes to the conclusion that Taoties (In their mostly geometric proto-forms, to the 'Dragon like' late Shang art forms) were related to shamanic rituals

In Professor Wu Hong's apt formulation: "These varying images seem to testify to a painstaking effort to create metaphors for an intermediate state between

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<sup>46</sup> (Pothier, personal correspondence with Chisato O. Dubreuil 18/02 2014 ).

supernatural and reality - something that one could depict but could not portray."

(Kesner, 1991:50)

This being confirmed by Li Zehou, a renowned Chinese scholar of philosophy and history, in a footnote in his seminal book *'The path of beauty: A study of Chinese aesthetics'*

As it was with Homer's epic poems and African masks, so it was with the taotie, in whose hideous features was concentrated a deep-seated historic force. It is because of this irresistible historic force that the mystery and terror of the taotie became the beautiful—the exalted.

\*footnote by Li Zehou: 'Some scholars consider that the meaning of taotie is not 'eating people' but making a mysterious communication between people and Heaven (gods).'

(Zehou, 1994)

This interpretation of a shamanic connection with the meaning of the Taotie seems to be in accordance with archaeological researches confirmed by anthropology studies, in the wider area of the North of Asia. Shang dynasty's culture being highly hierarchical, it is however very unlikely that the Taotie carried the same exact meaning in each stratum of the society (Kesner, 1991). According to H.E Gang, The Taotie, a 'glutton dragon' was not only a symbol of rituals but also of human sacrifices:

The design of Taotie was the symbol of the ritual ceremony. The rise and decline of the design of Taotie joined the profound social background, the rise and decline of human sacrifices closely

(Gang, 2002)

An interpretation that I would personally view as very plausible, if we consider like many scholars that the 'Taotie pattern' emerged among the 'Pre-Shang' Liangzhu culture that also practised human sacrifices, as opposed to some 'more peaceful' neighbouring Neolithic societies (Kesner, 1991). Finally, Allan (2007) suggests as well, through her in depth study of a series of Tombs from the Erlitou culture, the close connection between the Bronze vessels and religious rituals (Allan, 2007: 485).

#### 5.4.2 Description of the pattern

The Bronze sculptures and artefacts from the Shang era typically present a decorative pattern showing an advanced artistic development. Smaller spirals are often used in a rather systematic way to 'fill the void' in between larger lines and other whirling patterns. General lines are thick and spirals are well defined. The figure of the Taotie is not only used as a 'mask' or face in larger sculpture or artefacts (drinking cups or beverage Jars for example), but it is also used as a design element, reproduced many times on the same sculpture. Archaeological researches show that in the late Shang art the Taotie was applied on sculptures in a kind of stamp-like technique on clay mold before the bronze casting process (Zhang, 2011; Bagley, 1988; Nickel, 2006).

This clearly indicates in my opinion that the Taotie figure switched from a type of decorative patterns style that can be tracked back to pre-Shang art, to an 'Iconic form' in the late Shang style (I should mention that Kesner apparently doesn't totally endorse this theory of the Taotie being an 'Iconic figure').

Regarding the specific research related to this thesis, it must be noticed that the Taotie 'Mask', is only one element of a larger style that includes a use of spirals to fill the voids. Large whirling lines are also present, drawn in a manner quite similar to Ainu or Māori design, even though the Shang style is very unique and identifiable.

#### 5.4.3 Estimated date and origin of the pattern

Even though the use of spirals and whorls can be tracked back in earlier Neolithic Chinese art, the Taotie figure is considered by some scholars (Kesler, 1991; Eno, 2010) to have been developed around the period of the Liangzhu culture, a jade Neolithic Culture (3400–2250 BC). The pre-history of China is still a complex question, regarding dispersal patterns as well as cultural influences and exchanges between various groups

of population from different origins and this dissertation is not the place to develop a too in-depth research on that matter.

Researches clearly show that the Taotie patterns as well as the Shang art style in general, didn't appeared ex-nihilo but were the result of an evolution of techniques, and of borrowing between techniques, mainly from Ceramics to Bronze, (Bavarian and Reiner, 2007). And, as I will demonstrate, the artistic style of the Shang dynasty is to some extent an evolution of older styles from the Hongshan, Yangshao, Erlitou and possibly Liangzhu, and other pre and proto-historical cultures. Of course, divergent theories exist within the academic community.

#### 5.4.4 Approximative Timeline of the Chinese civilization

### **Approximative Timeline of the Chinese civilization**

**Neolithic Period (8000-1700) BC**  
**Yangshao culture (5000-3000) BC**  
**Hongshan culture (4700-2500) BC**  
**Dawenkou culture (4300-2500) BC**  
**Liangzhu culture (3300-2200) BC**  
**Majiayao culture (3100-2700) BC**  
**Longshan culture (2600-2000) BC**  
**Qijia culture (2400 – 1900) BC**  
**Xia (2100-1600) BC**  
**Erlitou culture (1900-1600) BC**  
**Ba (2000-220) BC**  
**Bronze Age (1766-121) BC**  
**Shang (1700-1100) BC**  
**Zhengzhou phase (1600-1400) BC**  
**Erligang culture (1500-1300) BC**  
**Anyang phase (1300-1100) BC**  
**Yinxu culture (1200-1050) BC**  
**Zhou (1100-256) BC**  
**Western Zhou (1100-771) BC**  
**Eastern Zhou (770-256) BC**  
**Spring and Autumn period (770-476) BC**  
**Warring States Period (475-221) BC**  
**Qin (221-206) BC**  
**Han 206BC-200AD**  
**Tang (618-906) AD**

It must be understood of course that all those cultures didn't developed exactly in the same geographic area, even though they are considered as 'ancient Chinese cultures', as modern China encompasses nowadays a vast territory.

## 5.5 Discussion

As we saw, most researchers agree that the Shang bronze artefacts are directly influenced by older Neolithic Chinese cultures ceramics. Given the current state of knowledge, the systematic use of whorl and spiral can be traced back to the older Yangshao Culture and of course the strong possibility of cultural exchanges with the Neolithic Amur culture that I mentioned in the case study of the Ainu people. I have highlighted the possibility of some close similarities in the type of plants used in order to attain “trance-like” SSC within the Yangshao and Amur area Neolithic cultures that would have inspired those Neolithic craftsmen. I am of course much more in favour of this possibility, in accordance with the larger framework of this research.

In any cases, artefacts from the Yangshao Culture, the earliest Neolithic culture in China, provide us a robust proof of a long existing tradition of geometric decoration in China, with a clearly recognizable curvilinear style.

## 5.6 Shang shamanism and entheogenic drugs

An imposing number of Bronze drinking jars and vessels have been retrieved from archaeological excavations, that tend to suggest an extensive use of alcohol in the Shang society, probably during rituals, and therefore possibly for entheogenic purposes. (Underhill, 2002; McGovern et al., 2004). I would like to highlight three points related to this question:

First, even though there is a kind of consensus among researchers to consider that alcohol was used almost like an entheogen by ancient Chinese, in order to ‘facilitate communication with ancestors and spirits’, some uncertainties remains

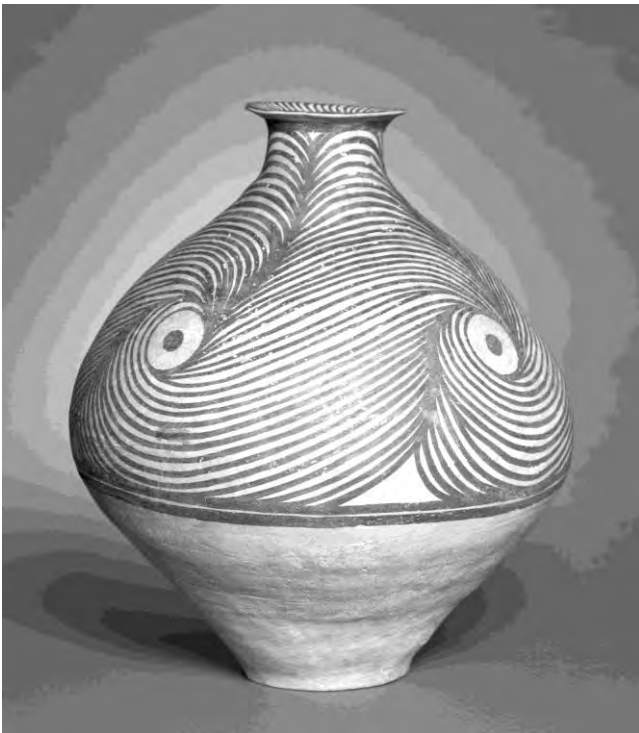
More than one scholar has proposed that alcohol was consumed to facilitate communication with ancestors and spirits. Chang (1983a: 55) suggests that shamans during the Xia, Shang and Zhou dynasties used alcohol to achieve an altered state, facilitating the perception of travel to another world. Paper (1995:32) proposes that during the early Bronze Age, people deliberately consumed alcohol when offering sacrifices to ancestors, to induce an altered state for communication with the ancestors. Others point out that people may have heated alcohol during sacrifices to entice the ancestors by producing pleasant vapors (Shangraw 1985) . Although the specific function of fermented beverages during rituals cannot be resolved at the moment, it is reasonable to expect that they could have played a role in funeral rites.”

(Underhill, 2002: 82)

Based on the larger geographic and chronological frame of research of my study and following Needham (1986) and Dannaway (2010), I would personally express some



doubts that alcohol itself was the only mind altering substance used during those rituals, or at least that it was alcohol itself that influenced the shapes and designs of the curvilinear patterns on the Shang Bronze vessels, that as we saw were clearly influenced by the curvilinear styles from the anterior Neolithic pottery in the area.



**FIGURE 44 : JAR WITH SPIRAL DESIGNS, 3300 - 2650 BC, POTTERY, CLEVELAND MUSEUM OF ART**

In my opinion many Chinese Neolithic potteries presents some clear similarities with form constants that potentially indicate a 'trance like' state hardly attainable through the consumption of only

alcohol. I would of course admit that my opinions on this point is debatable, but I would tend to firmly stand on my positions, based not only on this case study but also on the wider framework of this thesis.

Dannaway (2010) quoting Needham suggests that the confirmed use of hemp amongst many other psychoactive substances by taoists shamans could be dated far more earlier than 2000 years ago, a point that should be highlighted regarding the attested use by the Scythians of hemp, and by Siberian tribes of *Rhododendron tomentosum* and Juniper for shamanic purposes (Slepchenko, 2017). Moreover, a study of cranial trepanation in a male subject excavated from a burial site from the Neighbouring Karasuk Late Bronze culture, that predates the Scythians and present some affiliation and clear indications of most likely cultural exchanges with ancient Chinese cultures, suggest the ritualistic use of Cannabis and *Rhododendron tomentosum*, for shamanic as well as medicinal purpose in the wider Siberian-Asian Area:

Although plants serving this purpose are largely absent in Siberia, a few plants causing altered states of consciousness were applied in shamanic practices. For instance, the Nivkhi would burn wild rosemary (*Ledum Palustre* I, *Ledum hypoleucum*) sticks and leaves for their rituals (Otaina, 1994). Shamans of the Udeghes, Ulchs, Nanai and Orochi threw *Ledum* leaves on a hot griddle during shamanistic rituals (Brehman & Sam, 1970; Podmaskin, 1978). Smoke from the burning leaves facilitated shamanic trance and caused mild hallucinatory effect. Some people of Siberia used juniper (*Juniperus sibirica*) and thyme (*Thymus vulgaris*) in shamanic practices for the same purpose (Otaina, 1994). Cannabis (*Cannabis sativa*) is another plant that may have been used to alter consciousness and/or as a therapeutic agent (Chang, 1968). It is well known that the Scythians consumed cannabis (Herodotus, 2003; Pashkevich, 1999). Strong evidence suggests the consumption of cannabis in the Pazyryk culture in south Siberia (Rudenko, 1970). Wild marijuana still grows in eastern Siberia, and we can only speculate that the population who left the Anzhevka I burial ground consumed cannabis to enter altered states of consciousness and/or minimize pain.

(Slepchenko, 2017)

The potential use of Cannabis in ancient China and its possible influence on the art of the Shang Dynasty being finally as well stressed by Humphrey (2013). And I think the postulate should be at least considered (See the comparison below) <sup>47</sup>



FIGURE 45: 1) LEFT: LATTICE-TUNNEL FORM CONSTANT HALLUCINATION FROM MARIJUANA (SIEGEL, 1977) 2) RIGHT: YANGSHAO CULTURE, NEOLITHIC CHINA, C. 2600-2300 BC, CERAMIC - ÖSTASIATISKA MUSEET, STOCKHOLM

Second , if we agree with a diffusionist origin of the Taotie pattern and the Shang art style at large, I would argue that researches of an entheogenic origin of the Shang pattern should be focused first on the Neolithic Cultures that might have influenced the final Shang style. In the case of the Yangshao, Honshan and Liangzhu Cultures, I

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<sup>47</sup> To date the oldest archaeological record of the ritualistic use of Cannabis in China is however dated to 700 AD. (Russo, 2008)

would make the postulate that the use of Rhododendron species and potentially other grayanotoxin and thujones containing plants or amanita muscaria mushrooms that were and are still used in shamanic context in the Mongolian, Altai and Southern Siberian areas (Hasanov, 2016; Slepchenko, 2017) provides us some reasonable clues of a potential genus of entheogenic plants and mushrooms, in my opinion probably in conjunction with Cannabis, that I mentioned already for the Jōmon and Ainu people. The knowledge of the properties of some Rhododendron species being ‘a Genus very anciently known to Chinese Botanists’ according to Needham :

If one takes the case of Rhododendron (tu chüan shu 1)b , for example, no less than 700 species, or more than two-thirds of the total known, are native to the mountain range where India, Burma, Tibet and China meet – the Sino-Himalayan Node of Ward (17).

And in Footnote:

b) A genus very anciently known to Chinese botanists. The Pên Ching (p. below) knew two species, R. Sinense = molle = yang chih chu , containing andromedotoxin and giving the ‘stagers’ lethal for sheep, hence the name

(Needham, 1986: 34)

Shi et al. (2020), in their paper ‘Poisonous delicacy: Market-oriented surveys of the consumption of Rhododendron flowers in Yunnan, China’ mention that ‘*Over 60 poisonous Rhododendron species are endemic to China (Chen and Zheng, 1987). The consumption of leaves, flowers or secondary products like mad honey containing GTXs may lead to intoxication, and serve intoxication may be lethal (Jansen et al., 2012)*’ Rhododendron

species mentioned in the paper being 'Rhododendron decorum Franch' and 'Rhododendron pachypodum'(see as well the Rhododendrons distribution map, Fig. 18).

An endemic distribution that suggests in my opinion the high probability of numerous cases of 'Mad honey-type' intoxications since prehistory in the area that seems to be corroborated as well by contemporary studies of mad honey poisoning cases in China as 31 cases were reported between 2007 and 2012 (Zhang, 2017) .

Third, I would like to expose my postulate based on two points, the researches on ancient Chinese beverages and the proven fact that late shang art Taotie motif were stamped on the clay mold before Bronze casting.

Regarding the composition of pre-and proto-historical China fermented beverages, a chemical study conducted by Mc Govern et al. of the remaining content of Neolithic and Shang period Jars that were unearthed during archaeological researches, shows that:

Chemical analyses of ancient organics absorbed into pottery jars from the early Neolithic village of Jiahu in Henan province in China have revealed that a mixed fermented beverage of rice, honey, and fruit (hawthorn fruit and/or grape) was being produced as early as the seventh millennium before Christ (B.C.). This prehistoric drink paved the way for unique cereal beverages of the proto-historic second millennium B.C., remarkably preserved as liquids inside sealed bronze vessels of the Shang and Western Zhou Dynasties. These findings provide direct evidence for fermented beverages in ancient Chinese culture, which were of considerable social, religious, and medical significance,

and help elucidate their earliest descriptions in the Shang Dynasty oracle inscriptions”

(McGovern et al. , 2004)

What conclusions can we draw from the research of Mc Govern et al. ? I argue first, that alcoholic beverages produced in the Neolithic period in China were most probably made with wild honey. That under Shang dynasty there was a switch to a new technique of fermentation, that ‘ *The weng jars with fruit remains from the middle Shang site of Taixi (above) would then represent a continuation of a tradition reaching back into the Neolithic period.*’ and that:

For nearly 40 years, scholars have relied on the stylistic similarities of the bronze vessels and their earlier pottery counterparts to argue for the existence of a prehistoric fermented beverage, first attested textually in the proto-historic Shang Dynasty. The ancient chemical evidence now enables the later beverages to be traced back as far as 7000 B.C. and reveals how Chinese beverage-making developed over the millennia. Our results also illustrate how both religious ceremonies and activities of everyday life in which these vessels were used, and still important

(McGovern, et al., 2004)

Those data show that the quasi ‘industrialization’ of the production of alcoholic beverages under the Shang kings rules in a urban context, that apparently expelled honey from the recipe seems to follow the parallel adoption of a ‘stamp like’ technique used to emboss the Taotie motif on clay moulds for Bronze making (Zhang, 2011;

Bagley, 1988; Nickel, 2006) . This could suggest that the final Shang art style had gained a degree of complexity and abstraction in representing ‘shamanic’ motifs or visual ideas through a curvilinear style that had long stopped to be part of the existential experiences of the member of the society. I.e. that even if it is very likely in my opinion that Neolithic beverages had potentially contained from time to time grayanotoxins and mind altering substances contained in wild honey (due to the endemic presence of Rhododendrons in China – see Shi et al., 2020) that would have greatly influenced the ‘shamanic’ visions of the tribes who probably also consumed those plants by other means, the rice and millet alcohols of the Shang might have provided only inebriating properties, in a highly urbanized context.

Few points should be however added to my hypothesis. First, and according to a personal email discussion I had with Dr Patrick Mc Govern, the lack of Grayanotoxins or Ledol (and I would suggest as well cannabinoids) in the studied samples could be also explained by the fact that his team was only able to work on ‘few sites and periods with very limited sampling’

(...)As far as I know, ledol or a grayanotoxin are yet to be identified chemically in an ancient sample. We saw no sign of them in the samples that we have

tested thus far, but we have only looked at a few sites and periods with very limited sampling<sup>48</sup>

Second, I think most scholar will agree that the exact roles of Bronze vessels during rituals in the Shang dynasty is still hard to accurately assess. It seems that some vessels parts were used to 'heat' the beverages, and taking into consideration that there are still in contemporary China a tradition of adding flowers and plants to alcoholic beverages after it's fermentation (McGovern, et al., 2004), the eventuality that Grayanotoxin-containing plants <sup>49</sup>, that appear to be widely distributed in China (Needham, 1986; Shi et al., 2020), were added to the beverages before consumption should be at least taken into consideration. The still ongoing tradition of consumption as food of Rhododendron flowers in the Yunnan region (Shi et al., 2020) seems to also corroborate my assumptions.

Third, it should be highlighted that Mc Govern briefly mentions that the chemical study of the remains found in a Bronze vessel from a Shang Dynasty tomb, indicates the potential presence of plants and flowers, notably '*Artemisia argyi in the wormwood genus used to prepare saccharification mold*'. And even though, as I already mentioned in the

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<sup>48</sup> Mc Govern, personal communication, November 23, 2017

<sup>49</sup> See Appendix [C]



case study of the Ainu people, the hallucinogenic properties of the absinthe beverage is nowadays the subject of controversies (Patočka, and Plucar, 2003; Padosch and Lachenmeier and Kröner, 2006; Lachenmeier and Nathan-Maister, 2007), it should be definitely mentioned that *Artemisia argyi* is from the same genus as *Artemisia absinthium* used to make the inebriating and potentially hallucinogenic Absinthe beverage. (It should be also highlighted that *Artemisia argyi* is of some special importance in traditional Chinese medicine as it is used for moxibustion, a traditional practice affiliated to acupuncture).

Finally, and following Needham, considering the extent of traditional knowledge of hallucinogenic plants in Chinese Pharmacology, that probably dates back to the Neolithic and beyond, I would suggest that other plants might have been used for shamanic purpose by the pre-and proto-historical Chinese.

(...) for nowadays we are beginning to know much about neurotransmitters , hallucinogenic glucosides and the like, to realize moreover , that the active principles of Amanita and Rauwolfia gradually being elucidated were anciently within the esoteric knowledge of shamans and doubtless Taoists. Here then we may have the fragment of a chapter on psycho-tropic pharmacology and botany.

( Joseph Needham, 1986: 220)

I present therefore in Appendix [A] a study I conducted on the case of the *Caesalpinia sepiaria*, a plant mentioned in the earliest known Chinese Herbal as an hallucinogen (Li,

1977). Even though to date its potential use as an entheogen can be potentially proven by my study only back to the Warring States era. I must mention that this research was conducted in parallel to this thesis as it is indeed related to some extent with the Shang dynasty, but more clearly with a less ancient period of China's history.

#### 5.6.1 Preliminary Conclusions

A pluridisciplinary study of the artistic style of the Shang dynasty, mostly featured on Bronze vessels, using data coming from the fields of archaeology and allied sciences, tends to confirm a Neolithic Northern Asian origin of the curvilinear tendencies of this style, a Neolithic influence that also tends to indicate a possible Chinese Jade Neolithic cultures origins of the Taotie, a gluttonous dragon thieromorphic figure widely featured in Shang art. Following Loehr (1953), Bagley (2008) and to some extent Allan (1991) I suggest that the presence of the Taotie in Shang art could have emerged from the human physiological tendency to identify two points separated from a certain distance as 'eyes' in an abstract motif (Dziurawiec, S. and Deręgowski, 2002), through

artistic creativity and pareidolia, and been influenced by the importance of the shamanic masks in the Liangzhu and other jade culture.

Taking into consideration the widely accepted theory that the Shang curvilinear style is closely related to rituals and the practice of shamanism, I suggest that plants still used for shamanic purpose in the northern neighbouring areas of South Siberia and Altaï and their proven trance facilitating effects could explain the particular curvilinearity of this style. Chemical studies of preserved ancient beverages from the area that were discovered through archaeological research cannot however confirm nor infirm this postulate at this point. I strongly suggest that the very likely presence of honey in the most ancient beverages produced in the area indicates however the very likeliness of sporadic 'mad honey type' (Mayor, 1995) intoxications in the Neolithic era in a Chinese context, due notably to the confirmed endemic distribution of 60 poisonous species of *Rhododendrons* in China (Shi et al., 2020). An intoxication proven to potentially trigger geometric visions of whirling lights that could have influenced the curvilinear artistic style of the Shang and certainly the one of their ancestors.

In any case, and taking into consideration the widely confirmed knowledge of various entheogenic plants by Chinese populations since the Neolithic, and the general aspect

of the Shang art styles, I suggest firmly that it seems very unlikely that only alcoholic beverages were used to attain some particular mental states during the Shang rituals. Moreover, I postulate that the curvilinearity of the Shang art style potentially indicates the influence of entheogenic drugs yet to be clearly identified. I suppose that the use of *Caesalpinia sepiaria* as an entheogen could date back to the Chu state era or before (Appendix [A]), but that the consumption of Cannabis alone or most probably in conjunction with grayanotoxin containing plants from the Rhododendron family (Appendix [C]) and plants like Juniper seems very likely.

## 5.7 Levi-Strauss's approach to Shang art and the split representation

In my opinion, contemporary research results tend to most entirely contradict Levi-Strauss's viewpoints on Shang arts expressed in his essay. And I would add that this refutation extends to a large part to the theories he developed about the Kadiweu and other tribes from the split representation group. A comment that I will develop further in the case study of the Kadiweu people and their artistic style. Regarding Levi-Strauss's views on Shang art, it must be first mentioned again that at least the one's expressed in his essay on the SRQ, relied mostly on the work of Karlgren, a Swedish Sinologist and linguist.

Bernhard Karlgren (1889-1978), of Sweden, was an important pioneer in this effort, beginning in the 1930s to examine Chinese bronzes.

(Fong, 1980:25 )

Levi-Strauss supported Karlgren's convictions that the Taotie existed as a mask, before 'the mask's dissolution into decorative elements', following I suppose a presupposition that complex abstract patterns represent a higher form of art than figurative representation, an apparently wrong postulate that I consider to be implicitly expressed by Levi-Strauss throughout his essay :

the differences in quality between the specimens excavated can be explained, according to Creel, in terms of the fact that "the exquisite and the crude were produced side by side at Anyang, for people of various economic status or prestige." Comparative anthropological analysis, therefore, is in agreement with the conclusions of Sinologists. It also confirms the theories of Karlgren, who, unlike Leroi-Gourhan and others, states, on the basis of a statistical and chronological study of themes, that the representational mask existed before the mask's dissolution into decorative elements and therefore could not have grown out of the experimentation of the artist who discovers resemblances in the fortuitous arrangement of abstract theme. In another work Karlgren showed how the animal decorations of archaic objects became transformed in the later bronzes into flamboyant arabesques, and he related phenomena of stylistic evolution to the collapse of feudal society.

(Lévi-Strauss, 1945)

It must be highlighted that Karlgren's theories have been largely refuted and as early as 1937 by J. LeRoy Davidson :

A number of Scholars disagreed entirely with Karlgren's view, maintaining that abstract bronze decor designs had preceded, rather than followed, the well-developed zoomorphic motifs. To stylistic historians like Ludwig Bachhofer, Max loehr, and J. LeRoy Davidson, Karlgren's statistical analysis of decorative motif was meaningless, and his conclusions historically irrelevant. As Davidson pointed out in 1937, Karlgren's research had focused on the decorative motifs, which are the elements "most easily copied by later imitators".

(Fong, 1980)

Nowadays, Karlgren's theory and 'styles classification' are so well refuted that it led Miao Zhe, chief coordinator of The Art and Archaeology Museum Project, Zhejiang University, to describe Karlgren's classification system as 'the nonsensical "styles" he had invented':

In his attempt at ordering Shang bronzes, Karlgren consulted only a few features of surface decoration; he believed that he needed only to decide whether a vessel's motifs were 'realistic' or 'dissolved.' The shapes of the vessels, the flatness or sculptural effect of the decoration—all such features he excluded from consideration. (...)

In other words, his A and B styles, which he introduced as chronological groupings, ultimately showed no sign of any consistent difference in date. The only feature in which they differed was the feature he had employed to define them in the first place: A-group vessels have 'realistic' motifs in their main registers; B-group vessels have 'dissolved' motifs in their main registers. He never doubted that this difference made the A group earlier than the B group, yet he could not point to any other feature that corroborated his dating. Quite the contrary: he had to insist on the irrelevance of all features that gave conflicting indications of date, such as vessel shape, so that he could go on believing in the reality of the nonsensical 'styles' he had invented."

(Zhe and Haicheng, 2011)

The apparent similarities between the split representation technique used in the Northern West Coast and the supposed chronology of development of the Taotie figure presenting an alleged chain-type drawing style used by Leonhard Adam and Levi-Strauss himself having been quite entirely refuted by Max Loehr in 1953:

The forms of pre-Zhou bronze decoration were arranged in a developmental sequence of five styles, each growing out of the last, in a closely reasoned argument published by Max Loehr (1903—1988) in 1953.

(Allen and Richards, 1999)

Max Loehr managed to prove the 'genealogy' or chronological chain of development from a simple abstract pattern to a mix of figurative and abstract arabesques that occurred in the history of the curvilinear artistic style of Bronze age China.



**FIGURE 46 : MAX LOEHR FIVE STYLE SEQUENCE, WITH A CHRONOLOGICAL EVOLUTION FROM THE ABSTRACT TO THE FIGURATIVE AND INCREASED COMPLEXITY (MORENO, 2003)**

Levi-Strauss continues later on in his essay, claiming that :

However, our analysis would be inadequate if it permitted us only to define split representation as a trait common to mask cultures. From a purely formal



point of view there has never been any hesitation in considering the t'ao t'ieh of archaic Chinese bronzes as a mask." (Levi-Strauss, 1945).

Even though shaman's masks are depicted on Yangshao Neolithic potteries, proving the possible existence of wooden Shaman's masks during the Shang era and before, a point acknowledged by contemporary researchers like Allan, the flaws in Karlgren's study on which Levi-Strauss constructed his theories lead me once again to reconsider Levi-Strauss allegations. Indeed, as Sarah Allan, a Lecturer in Chinese at the School of Oriental and African Studies London University stresses, it seems that there is nowadays an intellectual consensus amongst the academic community to consider the Taotie as having emerged from abstract motifs on Bronze artefacts, following the work of Loehr (1953). As summarized by Allan :

(...) In the late Shang period, the taotie face is often marked off distinctly from the two adjoining bodies and these may be detached entirely, becoming separate dragons, as mentioned above. This gives it a mask-like appearance. Jordan Paper and, more recently, Elizabeth Childs-Johnson have argued that this is the representation of a shaman's mask. Masks may have been carved in wood in Shang times, but they are no longer extant. If masks were used for such a purpose by the Shang, then their function would also have been to mark the sacred, to signify the transformation of the dancer or shaman and to allow him communication with the spirit world, just as the motif on the ritual vessels transformed the offering and allowed it to be received . Although such a possibility cannot be discounted, the sequence of the development of the motif on the bronze is such that a mask could not have been the origin of its development: only in the later stages of its development is the face of the taotie clearly marked off from the body. Furthermore, the taotie often appears on war helmet (see figure 38a). Its function there may be to signify the supernatural power of the warrior or the power of death which he holds, but it could not imply shamanistic trance.

(Allan, 1991:145)

Levi-Strauss, grounding his theory on the false findings of Karlgren, and in order to elaborate his perspective on Shang art and the SRQ, suggested once again in accordance with his structural anthropology's grid of analysis a parallel between stylistic evolution and the political order of the societies in which those styles had emerged:

In another work Karlgren showed how the animal decorations of archaic objects became transformed in the later bronzes into flamboyant arabesques, and he related phenomena of stylistic evolution to the collapse of feudal society. We are tempted to perceive in the arabesques of Guaicuru art, which are so strongly suggestive of birds and flames, the final stage of a parallel transformation. The baroque and affected quality of the style would thus represent the formal survival of a decadent or terminated social order. It constitutes, on the esthetic level, its dying echo.

(Levi-Strauss, 1945)

As we saw this alleged chronological progression from the '*animal decorations of archaic objects*' to the '*flamboyant arabesques*' on Bronze artefacts and its supposed causal relationship to the evolution of the political order of the cultures within which those styles had flourished is nowadays robustly proven to be inaccurate. As archaeological dating proves to a large extent the accuracy of Loehr's model of five level of development from the abstract to the figurative.

It should be understood that this paragraph in Levi-Strauss essay is in fact a kind of a stumbling block of some of the theories he would develop later on during his career and of course within his essay on the SRQ. I want to stress that what he also suggests about the Guaicuru ( Mbaya-kadiweu) from Brazil, and that he seems to deduce from his study of Shang art, doesn't stand once tested against the facts, and I will comment this further in the next part of this dissertation dedicated to the case study of the Kadiweu people and their artistic styles.

## 5.8 Conclusions

I have demonstrated that Levi-Strauss's viewpoints on the art of the Shang dynasty were based on researches that are now considered as deeply flawed, and how those incorrect data were a stumbling block of his overall theories on the SRQ. In my opinion there are enough proofs nowadays to consider that the curvilinearity of Shang art is the direct result of an artistic evolution and continuity from the older Neolithic artistic tradition in China. Archaeological studies clearly show that what looks superficially like 'chain-type' drawings on late Shang Bronze, including the Taotie figure sometimes surrounded on each sides by the profiles of animals or dragons, had emerged over time from a more simpler 'decorative' abstract style (Fig. 45), probably due to a

phenomenon of pareidolia and artistic creativity. And that de facto the chronological evolution of the art of the Shang dynasty does not proceed in a fashion similar to the split representation technique of the northern west coast.

Basing my theory on robust ethnographic, ethnobotanical and archaeological data, I postulate that this older Neolithic artistic style could potentially have been influenced by the ritualistic taking of *Rhododendron tomentosum*, or grayanotoxin containing plants that are widely distributed and endemic in China (Shi et al., 2020), and sesquiterpene containing plants like the Juniper, even though the influence of Cannabis seems very likely in my opinion despite the current lack of sufficient corroborating data to strictly prove it at this point. Other potential entheogens for which their traditional use is however quite proven after the Bronze age seems to be as well potential candidates, including Amanita Muscaria mushroom and plants from the Caesalpiniaceae species that I document in an article reproduced in Appendix [A] .

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FIGURE 47 : VISUAL OVERVIEW, KADIWEU STYLE

## 6 KADIWEU

### 6.1 General overview

The Kadiweu<sup>50</sup>, also known as Caduveo, Guaicuru, Kadiveo, Kadivéu, Kadiweu, Kaduveo, Kaiwa, or Mbayá-Guaikurú, are the descendant of the Mbaya People, a larger and former nomadic and warlike tribe of the Gran Chaco Area (Oberg, 1949: 1). Like their ancestors they are a Guaycuruan speaking people. They will be mentioned in either of their names in this research, according to the words used in the research papers or historical documents that I will quote.

The Kadiweu settled to the area of Mato Grosso do Sul in the South West of Brazil around 1903. *'Kadiweu people belong to the Mbaya branch and did not live in Brazil. They*

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<sup>50</sup> 1) India Caduveo (Mbayá) Wife of Juacinho, 30-35 Years Old, with Face Paint, in Costume and Wearing Ornaments 1900. Attributed to Guido Boggiani (1861-1901) Photo Lot 97 DOE So America: Paraguay: Mbaya: NM 87691 04286700, National Anthropological Archives, Smithsonian Institution  
2) Kadiwéu Vessel, Probably from Guido Boggiani's Collection, late 19<sup>th</sup> Century AD. National Museum of Brazil  
3) Kadiweu pattern, from "Viaggi d'un artista nell'America Meridionale. I Caduvei, Mbayá o Guaycurú" Guido Boggiani, 1895. Page 78. The British Library.  
4) Lithograph by Pochet of a Guaycuru or Guaicuru man, with traditional body paint. From "Expedition dans les parties centrales de l'Amérique du Sud" by Francis de Castelnau (1812-1880), published in Paris in 1852.  
5) Caduveo vessel from "Viaggi d'un artista nell'America Meridionale. I Caduvei, Mbayá o Guaycurú" Guido Boggiani, 1895. The British Library. And 6) redraw from Boggiani in Bulletin / Smithsonian Institution, Bureau of American Ethnology, no. 143 v. 1 (1946),  
7) Portrait of Woman, Wife of Joacinho, 30-35 Years Old, with Face Paint, in Costume and Wearing Ornaments (Profile) 1900, Attributed to Guido Boggiani. Photo Lot 97 DOE So America: Paraguay: Mbaya: NM 87691 04286800, National Anthropological Archives, Smithsonian Institution  
8) "Charge de cavalerie Gouaycoursous", Jean-Baptiste Debret, 1834, 006245-1\_IMAGEM\_032 Biblioteca Brasileira Guita e José Mindlin



**FIGURE 48: GUAYCURU WOMEN, FROM CASTELNAU, FRANCIS DE. "EXPEDITION DANS LES PARTIES CENTRALES DE L'AMERIQUE DU SUD." (1850)**

*have come from the Chaco regions of Paraguay and Argentina. They were nomadic before becoming sedentary in Brazil.* (Backes, 2016). Few information are available about the origins of the Mbaya and other tribes from the Gran Chaco area. Even though contemporary genetic studies of the remaining tribes can provide some clues.

Little is known about the origin of the Gran Chaco tribes. The archeological data are scarce, and they mostly relate to sites of peripheral location, not to the core area. It is thought that the region has been inhabited for at least the



last 4,000 or 5,000 years, and before this the entire area was an enormous swamp. Therefore the Gran Chaco could be one of the last regions in the world to be colonized by humans. Culturally as well as ecologically, the Gran Chaco is a transitional zone between the tropical plains of the Amazon basin and the pampas of Argentina. Along its western border it was wide open to influences from the Andean cultures, and in the east it abutted a subtropical region inhabited by Tupí-Guaraní tribes.” “Because of the geographically intermediate position of the Gran Chaco within South America, the area historically served as a crossroads for people and their trade items. After the arrival of European colonists and their descendants, intense cattle-grazing converted any former natural pastures into woody vegetation (Mendoza 2003). Many peoples in the eastern Chaco adopted use of the horse, thus changing the degree and pattern of subsistence and intergroup relations”

(Demarchi and Ministro, 2008)

### 6.1.1 Proven genetic lineage

In terms of genetic lineage, there was no records of Caduveo individuals DNA samples either in the National Geographics Genographic database, nor in any other existing genetic database at the time I conducted my research (2017). Regarding their past, as Oberg mentions the Caduveo seems to have been reluctant to provide any information to foreign observers:

In contrast to the Terena, the Caduveo today say little about their past. This reticence may be due to their suspicion of the motives of white visitors or, more likely, due to their lack of knowledge. Many of the Caduveo are the descendants of former slaves captured from such tribes as the Guato, Bororo, Chiquito, and Chamacoco. Among such a heterogeneous population, the cultural tradition, no doubt, has also become a little mixed.

(Oberg, 1949: 52)

This, as well as the particularly unorthodox custom of infanticide within the tribe and the kidnapping of children from other tribes by Mbaya people tend to complexify further research on the subject. The Kadiweu being by essence a mixed population :

Sanchez Labrador also mentions the well-known Mbaya custom of infanticide: Guaycuru cruelty is exhibited in abortion and infanticide. . . . Spinsters practice this cruelty in a hidden manner, as if they were committing a sin. As soon as they feel the burden of their imprudence they seek to provoke an abortion by whatever means their inhumanity dictates. . . . The married people do not beat about the bush, but openly try to kill their children in their entrails, or they redouble their cruelty by killing the little creatures at birth. [Ibid., vol. 2, pp. 20-30.] He states that twins are killed at birth and that families have usually no more than one child. Even today the Caduveo remember this and say that they had to capture children from other tribes in order to keep up their numbers

(Oberg, 1949: 55)

However, current dispersal models suggest that South America was peopled by a rapid migration following a coastal path different from the waves that peopled North America. And a certain type of homogeneity amongst South American population is expected (Not *stricto sensu*, but compared to the native peopling of North America). I would therefore argue that whereas the number of diverse population that define the Kadiweu people gene pool, through adoption of captured children, might be high, current dispersal models tend to prove that the ancestors of all those tribes might have come from the same 'genetic pool'.

Recent data, based on genetic evidence and archaeological and environmental records, have proposed that humans entered the Americas from Beringia as

early as 15,000 years ago and that the dispersal occurred along the deglaciated Pacific coastline [4–6]. Mitochondrial DNA (mtDNA) data presented in the scientific literature over the past two decades indicate that the current native populations of North, Central, and South America harbor significant variation from their Asian counterparts and that they belong to four common “pan-American” haplogroups (A2, B2, C1, and D1), which are found all over the double continent, and five minor lineages (C4c, D2a, D3, D4h3, and X2a) [7–15].

(Perego, et al. 2009)

Contemporary archaeological researches provide some very interesting findings that were not available by Levi-Strauss in 1943: First settlers in South America might have come from ‘*Somewhere in North East Asia*’ (Erlandson and Bradje, 2015). Dental and cranial morphometric studies by physical anthropologists, as well as both ancient and modern DNA studies, suggest that the First American came from Northeast Asian population (see Fagundes et al. 2008; Kemp et al.2007; Rasmussen et al.2014)

Furthermore, Erlandson and Bradje's study tend to indicate a diffusion of stemmed points technologies similar to Jōmon artifacts (Japan) within the South American context in the late Pleistocene. That could potentially mark another diffusionist connection between the Kadiweu and Jōmon people, or at least ‘A northeast Asian population’, through the coastal migration hypothesis that seems to be backed up by many convincing clues. And this beyond the general similarities of their use of tattoos

and design that lead many researchers including Levi-Strauss to encompass them in the Split representation taxon.<sup>51</sup>

I am however favourable to the 'Pacific Coastal Route theory' which provides a realistic model that seems in my opinion to be supported by robust studies. (Callaway, 2016). Even if mtDNA samples of Kadiweu aren't available to my knowledge, it seems that the affiliated Guyacuruan speaking tribe Toba from Argentina has been documented on that matter. Further genetic research would of course prove if the use of the same language family by the Toba and the Kadiweu is due to trans-cultural diffusion between two diverse groups or from a shared origins. But at the moment they are the only closest Genetic Data pool I could work on regarding Guyacuruan tribes. According to Andrea Sala et Al. (2012) : *'The four Native American haplogroups (Hgs) were present in these groups, with diverse frequencies. Hgs B2 and D (subhaplogroups D1 and D4g) are well represented in Pilagá, Toba and Wichi. Mocoví showed high frequency in HgA (52%) meanwhile the frequency of HgD is very low (7%). Haplogroup C is absent in Tobas and Wichi'* (Sala et al., 2009).

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<sup>51</sup> I want to make it clear that I am not referring to the work of Betty Meggers on the possible similarities between the Jōmon Culture and the Valdivia Culture on the Western coast of the Ecuador and the hypothesis of a transpacific contact on the coast of Ecuador around 2000 to 3000 AD (Estrada and Meggers and Evans, 1962.), as it seems that this theory has been somehow convincingly refuted by the research community.

Robust research results firmly suggest that Haplogroup B is believed to have arisen in Asia some 50,000 years before present (Starikovskaya et al., 2005) It seems that those sets of clues tend on a preliminary approach to strengthen the possibility of an historical and therefore possibly cultural diffusionism between Jōmon and Kadiweu Culture, or more largely between the Kadiweu and 'A group of population originating from Northeast Asia'. Even though of course this cultural diffusionism would have been conducted through millennia of cultural transmission and dissemination between the Jōmon and the Kadiweu. But as mentioned by Levi-Strauss, more similarities can be observed regarding their specific geometric patterns used in tattooing and on various artifacts. And as will suggest in the study of their tattooing habits, it is maybe not the patterns but more definitely some of the rituals surrounding the practice that present some interesting similarities.

Finally, regarding the probability of a mixing of Andean and Amazonian influences within the Caduveo pattern-making style, it should be mentioned that a genetic study of other people from the Gran Chaco Area ( Wichí and Criollos) lead to the conclusion that : *'from the maternal perspective, despite a common Amerindian origin, an Andean and an Amazonian component emerged in Criollos and in Wichí respectively'* (Sevini et al. , 2013). This would tend in my opinion to corroborate another specificity of the populations from the Gran Chaco area, showing to some extent a melting of people from diverse

origins (i.e. : Andean and Amazonian, before the European encounters), and implying the strong possibilities of cultural borrowing between groups. Once again, further mtDNA studies of the remaining Caduveo people might one day provide a partial answer to those questions and postulates.

## 6.2 Culture

Data about certain points of the Caduveo 'Way of Life' are particularly sparse. For historical reasons as well as for a more technical reason linked to certain habits of the Kadiweu that I will expose later. I must also mention that I was only able to consult documents written or translated in English and French languages for this research.<sup>52</sup>

Food was scarce in the Gran Chaco. And Mbaya were hunters and fishermen, who later adopted the use of horses from the European (Oberg, 1949: 54). Compared to the Haida and Māori, and to some extent the Ainu people, the nomadic Mbaya and their Caduveo descendants '*have neither strongly built houses nor grass huts*'. In my opinion, this and the scarcity of resources available in the Gran Chaco area - necessitating to allow more daily time in the quest for basic supplies and food-

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<sup>52</sup> (It should be noticed however that according to Portuguese speaking researcher Professor Mônica Thereza Soares Pechincha, few information are indeed available about the ritualistic or medicinal use of plants by Kadiweu people, be it in English, French, Spanish or Portuguese – See later in this chapter our personal email exchange on the subject-)

prevented them to produce a large body of crafts and art works. (see the case studies on Haida and Māori as a comparison). Even though they knew pottery, weaving and of course facial paintings. Small scale sculpture were also produced from time to time by the men (Levi-Strauss, 1961).

### 6.2.1 Shamanism

Regarding shamanism, and not surprisingly for a tribe from South America, the practice is attested. Notably by Jose Sanchez Labrador, a Spanish Jesuit priest who founded the mission of Belen on the Ipane River in 1760 and who lived among them until the Jesuits were expelled from the Chaco in 1767 (Sánchez Labrador, 1770).

According to his journal, shamans are called 'nigienigi' amongst Caduveo. Few things should be mentioned regarding this testimony and available ethnographic studies of Caduveo shamanism at large. First, only few details are given about the shamanic practice amongst the Mbaya (shamanism was of course viewed as a trickery by this Jesuit). Then, regarding the use of plants and possible entheogens by Mbaya and contemporary Caduveos in shamanic or in daily life context (I.e. medicinal, recreational

drugs, food, etc...), as it was confirmed to me by the Professor Mônica Thereza Soares Pechincha who conducted a field study amongst the Caduveo:

The use of plants was not subject of my research, so I did not register the data you are looking for. I conducted fieldwork among the Kadiwéu in the early 1990s and, at that time, there was only one recognized shaman who, nevertheless, refused to maintain any interlocution with me. The use of medicinal plants was not evident in everyday life, although the Kadiwéu sometimes commented on it. The healing rituals that I observed used only chants performed by old women. As far as I know there is no research on the subject until now.<sup>53</sup>

Levi-Strauss himself seems to have not conducted any inquiry regarding that matter (at least amongst the Caduveos). It should be of course also mentioned that in the South and North American context many cases indicate that shamans have been quite reluctant to give any information to western observers regarding their ritualistic use of plants (Maclean, 2012:14). Clues and fragmentary information are still available in historical documents (explorers and Jesuit missionaries' personal journals, etc...) and research papers.

First, Jose Sanchez Labrador mentions the making and consumption of a type of mead made from wild honey in his journal written in 1770:

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<sup>53</sup> (Pothier – Soares Pechincha, personal communication, 27 April, 2017)



Sanchez Labrador also describes the Mbaya as being very fond of "chicha," an alcoholic beverage made from wild honey. Drinking, he says, is a ceremony in which many men take part :

When the material is ready and the bodies are prepared by fasting the ceremony begins at sunset and lasts for 24 hours. While the guests drink, a trumpet is played . . . this trumpet being nothing more than a cow's horn or a large gourd . . . just like trumpets which boys make. . . . The way in which the drink is served is as follows : Everyone receives either a bowl or calabash full of "chicha." They all sit in a circle. A woman serves the drinks. They drink as long as they can and talk even more than they drink.

(Oberg, 1949: 54)

According to Oberg, Sanchez Labrador further mentions that the drinking of this mead was part of the shamanic ritual. Sanchez Labrador's testimony about the Caduveos being one of the earliest available, this account seems very valuable for this study:

A crescent-shaped gourd rattle called lodani and a tuft of rhea feathers called otigadi are the typical symbols of these notable deceivers. . . .

There is no encampment without a nigienigi in each captaincy, and sometimes even two or more. They have an important task and that is why their profession is so widespread. They receive a few little things, which are given to them or they collect in payment for their gestures and efforts in bringing about a cure. There are also medicine women, these are not old but young women who try to make a living and a name in this way. . . . They do not lack disciples. When a master is satisfied with his pupil's abilities they all gather in his shed, bringing with them their tufts of feathers and their rattles which are their symbols of office. When they see the novice, everyone lifts his otigadi and makes a noise with his lodani, intoning an introductory chant which is customarily sung at this stage. The novice is very attentive and in each lesson he learns how to live freely and to cheat authoritatively. When this event, which is the eve of the ceremony, is over the graduates retire to rest from their efforts. . . . Next day they gather at the same place and it is the obligation of the initiate to offer refreshments to His masters. They drink until they lose

their senses. During the drinking the initiated one equipped with his lodani and otigadi ... continues to sing during the entire night.

(Oberg, 1949)

The Caduveos apparently switched later on from the consumption of their alcoholic beverage made from wild honey to the consumption of 'Pinga', a distilled spirit made from sugar cane that was introduced to Brazil around 1532 by the Portuguese (Medeiros et al., 2017). Levi-Strauss confirms that the Mbaya used to consume mead in order to access visions:

(...) drinking-parties would be organized, during which hydromel was served in goblets made from horns or skulls; and women would borrow the warriors armour and take one another on in mimic combat. The nobles, seated in order of precedence, were served by slaves who were forbidden to drink. Their task was to help their masters to vomit, in due course, and to watch over them until they finally fell asleep in search of the delicious visions which drink would procure for them.

(Lévi-Strauss, 1961: 164)

We can clearly identify from those accounts a *modus operandi* in the ritual of the Mabya that is widely disseminated in culture practicing shamanism, in the Amazonian context as well as many parts of the Northern West Coast of America, and to some extent in the Asian-Siberian context : fasting or a specific diet, the taking of a specific substance in a ritualized context, vomiting and finally the quest for 'Visions'. ( Eliade, 1959; Narby, 1999)

## 6.2.2 Tattooing

First, it must be mentioned that contemporary Caduveos practice ‘temporary tattooing’. They use the juice of *Genipa americana* to draw their patterns, a practice widely recorded in the overall Amazonian context.

The artist – always a woman – works on the face or body of a companion with a thin bamboo spatula dipped in the blue black juice of the ‘genipa’ fruit. She improvises without model, or sketch, or established points of design. The highly developed compositions, at once asymmetrical and balanced, are begun in one corner or another, and carried out without hesitation, going over, or erasure, to their conclusion. They evidently spring from an unvarying fundamental theme, in which crosses, tendrils, fretwork and spirals play an important part. Nevertheless each one constitutes an original work: the basic motifs are combined with an ingenuity, a richness of imagination, even an audacity, which continually spring afresh. The genipa paint lasts only a few days; when it begins to wear off, it is removed, to be replaced by another decoration.”

(Lévi-Strauss, 1942:34)

However as mentioned by Luciana Martin there is a controversy regarding the origins of tattooing techniques amongst Kadiweu and more generally amongst Mbaya tribes. Whereas contemporary tattooing experts like Lars Krutak follow the theory that tribes from the Chaco area used to do permanent tattoos, Boggiani raised the hypothesis as early as 1895 that it was not the case, basing his hypothesis on his studies of Andean mummies.

Boggiani concluded emphatically that the mummies had been painted, and not tattooed. He identified the material used in the painting as genipa dye, following a technique recorded by both early and modern travellers to South America. Rejecting the idea that the patterns were a trace of the decline of a tattooing practice (according to Boggiani, traditional customs get abandoned, not modified), he argued that body painting – once a common practice across the Inca empire – had been adopted by the indigenous peoples of South America, especially by those who had easy access to genipa trees and their fruits. This conclusion challenged the assumption accepted by most scholars at the time.”

(Martins, 2017: 196)

Finally, Krutak, following the most acknowledged hypothesis on the subject regarding tattooing or ‘Facial and Body painting techniques’ in the Gran Chaco area, suggest that:

Although tattooing in the Chaco has been replaced by less painful and infective forms of body-painting in the modern-era, it had "magical" implications in the past and nearly all indigenous groups practiced it. Women generally displayed more abundant tattooing than men, and it was truly exceptional to find males as profusely tattooed as women. Girls were first marked on their foreheads when five to seven years old, and with the passing of the years they received additional tattoos consisting of small circles, crosses, half-moons, and lines on their faces. By the time a girl reached maturity, her facial tattoos were finally completed at which time she was eligible for marriage. Tattoo artists were almost always old women. They first traced the outline of the design on the client's face (or other body part) with charcoal. Then the tattooist punctured the facial skin with a small bundle of cactus thorns or a single bone awl dipped in a mixture of saliva and soot. Soon thereafter, the skin began to swell as a steady stream of blood ran down the client's face. <sup>54</sup>

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<sup>54</sup> [http://www.vanishingtattoo.com/tattooing\\_in\\_gran\\_chaco\\_south\\_america.htm](http://www.vanishingtattoo.com/tattooing_in_gran_chaco_south_america.htm)

It should be first mentioned in connection with diffusionists theories that those practices present a lot of similarities with the tattooing practices of the Ainu people ( and therefore supposedly those of the Jōmon people, as we saw ). The ritualistic tattooing of the mouth amongst women being one example of those similarities.

Furthermore, and contradicting Levi-Strauss theories regarding Caduveo women's facial paintings and their alleged relation to seduction, Krutak indicates that:

From Dobrizhoffer's report, it does not appear that Abipón tattooing served merely as a form of "ornament" used to beautify the body. Rather, all Chaco women were tattooed in much the same way and with many of the same motifs, the only variation being in their positioning. In this way no particular woman could have hoped to gain aesthetic advantage over her "competitors" through tattooing. Furthermore, women fasted, were secluded and carefully covered during the tattoo ritual which seems to indicate that tattooing had a religious significance. These facts, combined with the belief that tattoo pigment and the tattooist's saliva were in themselves purificatory substances utilized to repel evil spirits, suggests that Chaco tattooing practice was not simply a form of facial adornment. It was something altogether different. Carbon-based substances used as tattoo pigment were considered in nature to be prophylactic. The inherent power of the pigment lay specifically in its connection to fire, and among many indigenous peoples of the Chaco, Brazil, and Patagonia, ash or charcoal procured from fire was utilized ritually as a radical means of purification. For example, the Abipónes threw ashes in the path of whirlwinds (thought to be passing spirits) to repel them; the ancient Tupis, at the ceremonial killing of enemy prisoners taken in war, painted their bodies with ashes to protect themselves from the vengeful spirits of the soon

to be deceased; and Fuegian shamans heaped ashes upon themselves to enter the realm of the spirits.<sup>55</sup>

To the defence of Levi-Strauss it should be mentioned that he at least also indicates a religious aspect of tattooing amongst the Mbaya (Levi-Strauss, 1945).

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<sup>55</sup> [http://www.vanishingtattoo.com/tattooing\\_in\\_gran\\_chaco\\_south\\_america.htm](http://www.vanishingtattoo.com/tattooing_in_gran_chaco_south_america.htm)

### 6.2.3 Kadiweu Patterns

For this description, as well as my overall frame of research on the Caduveo and their artistic styles, I will use mainly the photographs of Kadiweu facial and body paintings produced by Levi-Strauss and his wife Dina, as well as some drawings that were made by Kadiweu women at his request. Within the framework of this research I was granted access to Levi-Strauss's expeditions notebooks and other photographic documents and archives through an authorization delivered by Levi-Strauss's widow and by Madame Anaïs Dupuy-Olivier in charge of the Levi-Strauss's archival Fund at the French National Library.

Other sources come from the remarkable work of Kalervo Oberg (1948), based on the journal of Jose Sanchez Labrador, as well as his research on field studies conducted by Guido Boggiani, an Italian artist and ethnologist who visited the Caduveo between the years 1892 and 1897. For the work of Boggiani (1895), and beyond the comments from Oberg, I will also rely on a collection of Boggiani's photographs edited by Pavel Frič (2001), the grandson of the Czech explorer and botanist Alberto Vojtěch Frič who was able to recover a part of Boggiani's work from the natives after his death. Additional information on the tattooing practices in the Gran Chaco area come mostly from the widely acknowledged work of Dr Lars Krutak, a world renowned tattoo expert.

#### 6.2.4 General view of the Patterns

The patterns were reproduced on potteries<sup>56</sup> and ‘tattooed’ through the temporary tattoo ‘Jagua’ technique, as documented by Levi-Strauss in his essay, but also painted on the body and face during specific events, as it is attested by Oberg: *‘(...) In preparing to dance these dances, both men and women paint some of the characteristic Caduveo designs on their faces and bodies, using red, black, and white colors.’* (Oberg, 1949:64). The designs drawn on the face and body are of a quite unique style, that might indeed present on a preliminary approach some similarities with the artistic style of other groups from the SRQ. The use of whorls and spirals being one of its specific feature, but with a degree of apparent geometric deconstruction that makes Kadiweu designs so unique <sup>57</sup>. As Oberg remarkably summarizes the Caduveo style, regarding their use of pattern and specific designs on pottery and facial paintings :

A complete analysis of Caduveo decorative designs will not be attempted here, for not all the designs were collected and all those on hand have not as yet been satisfactorily analyzed. Caduveo designs occur not only on pottery but on skin work and in the form of face paintings and are, as a whole, quite complicated. As has already been mentioned, the basic over-all color of vessels is brick with the designs painted on in black and white. More specifically, we might define the decorative pattern as black on brick with corded outlines in white. The white corded outlines are used both for blocking out the area to be decorated, usually in the form of parallel lines, and for defining the borders of the designs themselves. Sometimes the white lines are themselves the

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<sup>56</sup> See 6) and 5) Figure 46

<sup>57</sup> See 1), 4) and 7) figure 46



decoration, (...) The outstanding elements in the decorative patterns are: Conventionalized foliage, curvilinear figures, volutes and scrolls, triangles, diamond shaped and rectilinear figures, ovals joined by V-shaped lines, bands showing bird and fishlike figures and rectilinear frets. Foliage designs may appear in quatrefoil, trefoil, or running curvilinear patterns. They may be enclosed within white lines or they may stand out free of enclosed lines.

(Oberg, 1949: 67-68)



The pattern feature indeed the typical curvilinear style that seems common amongst tribes from the split representation group.

FIGURE 49 : KADIWEU WOMAN, 1892 (PROBABLY FROM BOGGIANI)

On facial tattooing they however present sometimes a kind of 'diagonal splitting' or 'double splitting' that was described in this way by Levi-Strauss:

In addition, we observe that the arrangement of Caduveo paintings around a double axis, horizontal and vertical, divides the face according to a process of double splitting, so to speak-that is, the painting recombines the face not into two profiles but into four quarters. Asymmetry serves the formal function of insuring the distinction between quarters, which would merge into two profiles if the fields were to be symmetrically repeated to the right and left instead of being joined by their tips. Dislocation and splitting are thus functionally related.

(Levi-Strauss, 1945)

### 6.2.5 Discussion

I would argue that the postulates of Levi-Strauss on that matter are highly questionable. I do agree that Caduveo designs, including tattooing patterns, present some striking similarities, but also divergences from Northern West Coast or Māori art. And that a puzzling kind of 'double splitting' appear sometimes. However, The work of Boggiani, as well as photographs and drawings collected by Levi-Strauss that were collected in his archival fund at the French National Library, offer many examples of a more diverse type of tattooing patterns amongst the Caduveos, including some showing a clear symmetry and some showing a de-centered pattern that may sometimes as well include a double diagonal splitting. As a consequence, it seems to me that the theory drawn by Levi-Strauss from his observations is subject to caution. And I will provide comments and insights about this point throughout this chapter.

First, as mentioned by Luciana Martin (2017), it seems that Levi-Strauss didn't based his research on all the corpus of photographs from Boggiani. This assumption is apparently confirmed by the claim by Levi-Strauss in his 1942's essay 'Indian Cosmetics' that : *'The largest collection – and no doubt the last, in view of the quick tempo of the tribe's rhythm of extinction – is the one that we ourselves gathered in 1935'* (Levi-Strauss, 1942).

This claim of attaining 'The largest collection' of patterns would be only confirmed to my knowledge by Levi-Strauss's own claim that he brought back from his expedition 400 drawings of Caduveo patterns made by Caduveo women, but I haven't been able to find this mentioned taxonomy of drawings in Levi-Strauss's Fund at the French National Library, so I cannot confirm nor infirm this information.

It is also easily arguable that at the time of his own field research among the Caduveos, their culture was on the decline and under the influence of the western culture. As stressed by Martin:

Although Levi-Strauss was aware of Boggiani's two expeditions to Caduveo territory, mentioning that he 'left important anthropological documents relating to his journeys, as well as a charming travel diary, I have been unable to find any evidence that Levi-Strauss knew of Boggiani's photographs, since his source is mainly Boggiani's book published in 1895.<sup>100</sup> (Levi-Strauss's analysis of Caduveo graphic art is based on his own collection of photographs and drawings, supplemented by Boggiani's engravings.) Nor could I find any evidence that Levi-Strauss knew of Boggiani's piece on Peruvian mummies, for he never expressed any doubt that the Caduveo body and facial paintings reproduced patterns that were once tattooed.

( Martins, 2017: 208)

It seems however relevant, and in a faithful spirit of continuation of Levi-Strauss's work, to reconsider his conclusions on the Kadiweu patterns and the SRQ at large, by grounding my study on new discoveries and researches that were conducted in the

South American context and worldwide in the fields of archaeology and affiliated sciences, as well as on existing photographic documents collected 40 years before his own travel to Kadiweu's territory, that present certainly a more accurate description of the Kadiweu style. I will show how Kadiweu artistic practices, including their quite unique patterns, reflect much more their historical cultural mixing and their complex origins, as well as the possible use of an entheogen, than any kind of 'structural laws' that would apply as much to the political structure of Mbaya society as to their artistic style, nor as Levi-Strauss stressed:

Caduveo art carries the dislocation process both further than, yet not as far as, Northwest Coast art. It does not carry it as far, because the face or body on which the artist works is a flesh-and bone face and body, which cannot be taken apart and put together again. The integrity of the real face is thus respected, but it is dislocated just the same by the systematic asymmetry by means of which its natural harmony is denied on behalf of the artificial harmony of the painting. But since this painting, instead of representing the image of a deformed face, actually deforms a real face, the dislocation goes further than in the case previously described. The dislocation here involves, besides the decorative value, a subtle element of sadism, which at least partly explains why the erotic appeal of Caduveo women (expressed in the paintings) formerly attracted outlaws and adventurers toward the shores of the Paraguay River

(Levi-Strauss , 1945)

Beyond the highly discussable and in my opinion 'ethnocentric' mention that '*The dislocation here involves, besides the decorative value, a subtle element of sadism*' and the description of the '*erotic appeal of caduveo women*', that seems, to say it lightly, quite

subjective, I want to point out that the assumption that the facial pattern provoke a dislocation of the face, is indeed only an ethnocentric assumption. I would argue that it is as well possible to claim that in fact the pattern enlightens the natural face by opposition between the cultural drawing and the outlines of the 'Biological face'. And particularly for the Caduveo style, that never covers totally the face, at least compared to the manners of the Māori style for example.

As I mentioned in section 1.1.3, many testimonies tend to prove that Levi-Strauss was in contact, at the time he wrote and published his essay, with members of the Surrealist movement, including of course its founder Andre Breton, whom he met in the boat that brought many French Intellectuals and refugees to New York in order to escape the Nazi occupation of France. Andre Breton viewed in Sade an iconic historical and cultural figure, and I postulate that the claim about the alleged 'Sadism' was probably much more related to a 'Cultural trend' amongst Levi-Strauss's intellectual circle, or to his own very subjective approach of this specific tribe and its artistic style, than to any accurate and objective anthropological observation. The comment about the 'erotic appeal' of the Caduveo women only arising from the aforementioned subjective appreciation.

However Levi-Strauss looks in my opinion in the right direction when he claims, comparing later on his essay, Caduveo designs with the art of the Māori, that :

In native thought, as we saw, the design is the face, or rather it creates it. It is the design which confers upon the face its social existence, its human dignity, its spiritual significance. Split representation of the face, considered as a graphic device, thus expresses a deeper and more fundamental splitting, namely that between the "dumb" biological individual and the social person whom he must embody. We already foresee that split representation can be explained as a function of a sociological theory of the splitting of the personality.

(Levi-Strauss, 1945)

And even more accurately in the South American context: As we saw in my case study of Ayahuasca traditions in the Amazon (section 1.6), how the design is *'a polysemiotic manifestation that transcend much more its decorative character than what has been attributed to these beautiful designs by the western world'*<sup>58</sup>

Therefore, if I do agree at least with Levi-Strauss when he claims that *'In native thought, as we saw, the design is the face, or rather it creates it. It is the design which confers upon the face its social existence, its human dignity, its spiritual significance.'*, I tend however to express serious doubts, to say it lightly, when he claims that *'split representation can be*

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<sup>58</sup> Resolución Directoral RD N 540/INC-2008'

*explained as a function of a sociological theory of the splitting of the personality.'* And I already partially refuted this point in my case study of the Māori people.

### 6.2.6 Origin of the pattern

As I will show, it appeared through my research that some caduveos' patterns present striking 'affinities' with patterns found on textiles in ancient Peruvian cultures that can hardly be the result of some 'happy coincidence'. I base my claims on my study of 'The necropolis of Ancon in Peru; a contribution to our knowledge of the culture and industries of the empire of the Incas' by Wilhelm Reiss, a German geologist and explorer (Reiss and Stübel, 1880). As well as an online research on Wari and Tiwanaku textiles digitalized by museums worldwide. But it should be mentioned again that Guido Boggiani highlighted this probable Andean lineage or 'connection' as early as 1895 (Martins, 2017: 208).

This theory doesn't seem however to be supported by Levi-Strauss throughout his various essays covering the topic. One anecdote reported by Levi-Strauss must be mentioned, regarding the possibility that the body-painted patterns of the Caduveos were inspired by patterns 'printed' on clothing by 'An ancient Culture peopling the

South America' as it seems indeed that there is an historical account of the Caduveos copying clothing designs for a body painting, even though in this case of the clothing of a 'white officer' around 1857:

The recurrence in these paintings of lines, spirals, and curlicues must inevitably remind us of the iron- and stucco-work of Spanish baroque. Perhaps we are, in effect, faced with a style that has been borrowed from the Caduveo's conquerors? They did undoubtedly appropriate certain themes: we know of more than, one example of this. In 1857, when a warship, the Maracanha, made its first appearance on the Paraguay a party of Indians paid her a visit; and on the following day they were seen to have drawn anchors all over their bodies. One Indian had gone so far as to cover all the upper half of his body with a complete representation of a white officer, complete with buttons, stripes, belt, and coat-tails. This only proves that the Mbaya were already habitual and accomplished painters

(Lévi-Strauss, 1955: 172)

Of course, and contrary to Levi-Strauss's postulate, I would raise serious doubts about a possible Spanish influence on their pattern making tradition at large beyond this puzzling case, but we can deduce at least that the possibility that the Mbaya had inspired their body painting patterns from an ancient Andean textile style is reinforced by this anecdote. I will demonstrate how, beyond a possible 'cultural borrowing', the similarities between the Caduveos' body painting styles and ancient textile patterns in the Andean context could be also explained by the shared habits by the Chavin and Wari culture and the Mbaya of using a specific entheogen for shamanic rituals.



Finally , two points should be considered. First the general comments by Levi-Strauss that some of the patterns collected amongst the Caduveos by Boggiani and forty years later by Levi-Strauss himself presented some striking similarities, could also lead us to the use of an entheogen through Klüver's form constants theory that I exposed in section 1.6 and I would argue, as Levi-Strauss indicates '*Their occasional drawings were of Leaves*' (Levi-Strauss, 1955: 164), that an ethnobotanical study of such drawings could provide further clues on that matter (I have been however unfortunately unable to source such drawings in Levi-Strauss's archival fund at the French National Library).

### 6.3 The Case study of *Anadenanthera colubrina* var. *cebil*

My enquiry on the traditional and ancestral use of entheogens in the overall South



American context tend to let me make the strong postulate that the Caduveo style might have been influenced by the consumption of some parts of *Anadenanthera colubrina* var. *cebil*. I will show how its historical use, connection to honey, geographic distribution as well as chemical properties of some of its active principles makes it a robust candidate for

this study. *Anadenanthera colubrina*, known in north-eastern Brazil as 'Angico', is largely used in rural constructions, as an energy source, as well as in popular medicines.

FIGURE 50 : ANADENANTHERA COLUBRINA VAR CEBIL

"Angico" belongs to the family Mimosaceae and is widely distributed in the caatinga. The tree grows to between 5 and 20 meters tall, and the trunk has large numbers of conspicuous thorns (characteristic of this species) [9] (Figure 1). It is used in traditional medicine to treat respiratory problems and inflammations, as well as in industry for tanning leather [10]. The seeds of *Anadenanthera peregrina* (L.) Speng., an related species, are used to prepare yopo, a hallucinogenic inhalant used by the curandeiros of the Piaroa tribe inhabiting southeastern Venezuela [11]. The use of yopo as a hallucinogenic among indigenous peoples of Latin America has been confirmed by archeological evidences"

(Monteiro et al. , 2006)

First, the distribution of the species matches with the Andes (and therefore being coherent with the assumptions of an Andean influence on the style made by Boggiani) as well as with Brazil and the Gran Chaco area at large.

Secondly, its use as an entheogen is definitely confirmed and widely documented in the Andean traditions, but also apparently documented for the Mbya people and other tribes from the Gran Chaco area. Divergences between the Andean pictorial traditions and Caduveos' designs could be reasonably explained by different societal conditions and technical advancement, geography and ecology, as well as by the confirmed use within the ancient Andean societies of many other drugs that are currently considered as entheogens.

Iconography and artifacts from Chavín de Huántar attest to the importance of psychoactive substances consumed nasally as snuff, and consequently

hallucinogens other than San Pedro cactus must have been utilized. This article presents iconographic evidence from a Chavín de Huántar sculpture demonstrating the religious significance of *Anadenanthera* sp.(vilca), a plant containing the vision-producing bufotenine. *Anadenanthera colubrina* var. *Cebil* is found east of the Peruvian Andes and consequently it is the most likely source of the psychoactive snuff ingested in the rituals at Chavín de Huántar and related ceremonial centres

(Burger, 2011)

As mentioned by Torres and Repke in their Book 'Anadenanthera: visionary plant of ancient South America', the use is attested for the M'baya, the ancestors of the Caduveos :

The Abipones of the Chaco, ca 1784, were using cebil bark for tanning leather. To achieve an intense state of inebriation , they would tightly close their hut and set fire to Cebil pods and seeds, and vigorously inhale their smoke through both mouth and nose (Dobritzhoffer 1967). A similar practice of collective fumatory inhalation was attributed to the Mbaya, a Chaquean tribe of the Paraguay River. The Mbaya and Guarani of Paraguay referred to *A. colubrina* snuffs as kurupa (Pages Larraya 1959; Pardal 1937).

(...) The practice of snuffing and smoking seeds of *A. colubrina* var, *Cebil* has continued in the Chaco up to the present. Among the Wichi, also known as Mataco, cebil seeds are ingested during shamanic rituals (Alvarsson 1995; Califano 1976; Dasso 1985; Dijour 1933; Metraux 1939, 1946; Palavecino 1979). The Wichi inhabit the area of the Pilcomayo and Bermejo rivers ( Alvarsson 1988). This area, known as the Chaco Central (plate 59), is culturally and ecologically a transitional zone between the Amazon, the Pampas, and the Andes. Consequently , the Wichi share cultural traits with all of these regions. Religious beliefs and shamanic practices are similar to those of Amazonia (Metraux, 1946)

(Torres and Repke, 2014:85 )

The seeds and seedpods contain bufotenine and DMT amongst other active principles (Rätsch, 2005:52), and as we will see some symptoms of the taking of bufotenine by human beings, most clearly the visions it can procure, seems closely related to the artistic style of the Caduveos.

Regarding the visions procured by the taking of the plant, Ott describe in this way his own experimentation : *'C.M. Torres and I had tested our own preparations of cebil-seed snuff from material we collected in Argentina; I experienced "sinuous, multihued, arabesque patterns, first viewed behind closed eyes, then on a stuccoed wall in a darkened hallway, at length even on surfaces . . . illuminated via a skylight by the crepuscular, desert sun'* (Ott, 2001), and Rätsch describes in a more technical way its effect as this:

The effects of cebil snuff last for some twenty minutes and consist of profound hallucinations that are often in black and white, less frequently in color. These are not, or are only rarely, geometrical but are, rather, very flowing and decentralized. They are clearly reminiscent of the depictions of the Tiahuanaco culture. When smoked, cebil seeds also produce hallucinogenic effects that are very pronounced for approximately thirty minutes and that disappear completely within two hours. Because of the short duration of these effects, cebil is an ideal drug for shamanic diagnoses. The effects begin with a sensation of bodily heaviness. After some five to ten minutes, visual hallucinations begin to appear when the eyes are closed. These *Anadenanthera colubrina* either appear as phosphenes (entoptic or endogenous images of light that the "inner eye" sees in the form of characteristic patterns) or flow together in worm- and snakelike manners. Symmetrical and crystallographic hallucinations are less common."

(Rätsch, 2005)

The visions procured by the Bufotenine from *Anadenanthera colubrina* seeds make an interesting case regarding a study of the Kadiweu designs:

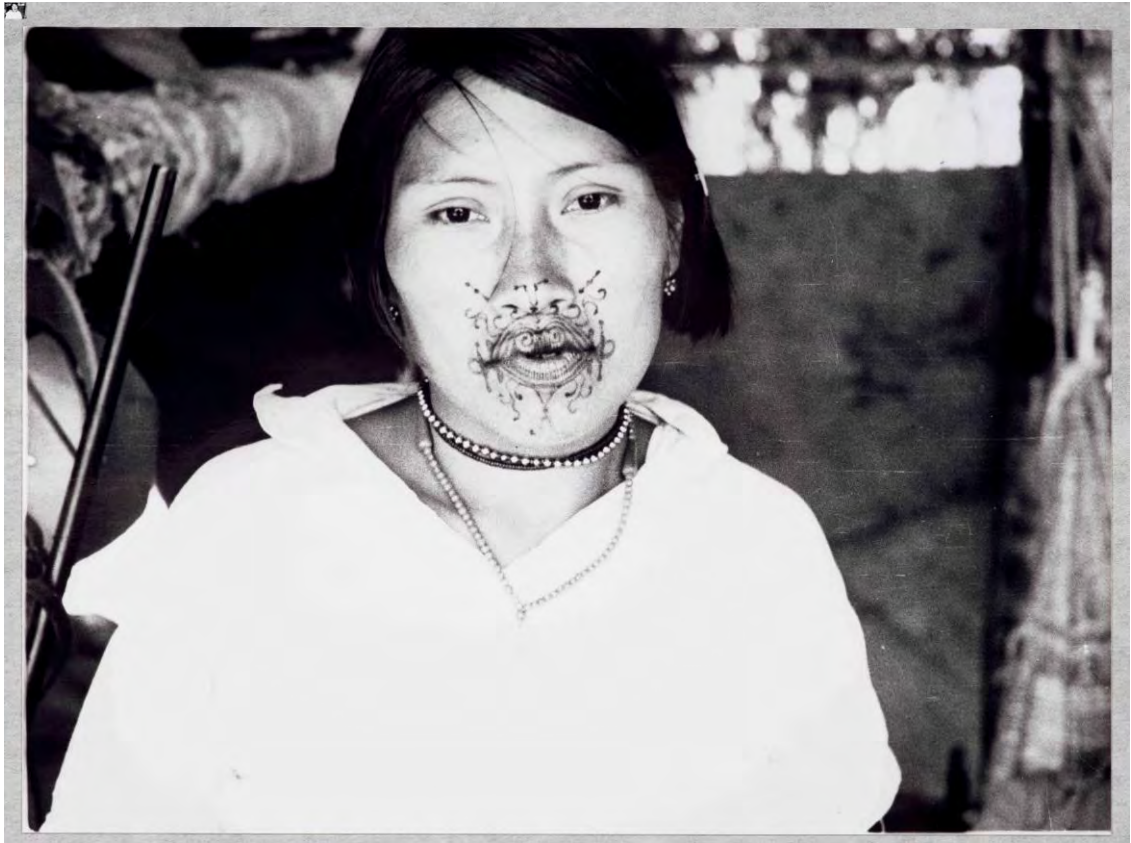


FIGURE 51 : PHOTOGRAPHIE D'UNE FEMME CADUVEO AVEC PEINTURES SUR LE VISAGE (NAF 28150 (246))

At least for the facial paintings, I would argue that on many of them (see above) we are definitely confronted with a troubling similarity with '*sinuous, multihued, arabesque patterns*', '*The quickly changing patterns turned into a chaotic river of spermatozoa*' and '*phosphenes (entoptic or endogenous images of light that the "inner eye" sees in*

*the form of characteristic patterns) or flow together in worm- and snakelike manners.*

*Symmetrical and crystallographic hallucinations are less common'* (Ott, 2001).

It should be howbeit mentioned that the ritualistic use of *Anadenanthera colubrina* and affiliated plants is recorded by many neighbouring tribes whose patterns don't feature a curvilinear style. But in most of the case the consumption is recorded by the Men or male shamans only, whose roles aren't to paint patterns. (Altschul, 1972). The facial and body painting being apparently painted by the women amongst the Caduveo, my postulate of a direct influence of the *Anadenanthera colubrina* on their style could be only proven, or at least reinforced, by an attested use of the plants parts by the women, a task that seemed quite difficult to conduct at the time I conducted this case study (2018-2020).

This point was however confirmed by the Swiss and Argentine anthropologist and ethnologist Alfred Métraux in his ethnography of the Chaco, (with another mention of drinking in a shamanic context ) as early as 1946 :

When a Mbayá apprentice shaman, male or female, had acquired proficiency in chanting, all the shamans of the community gathered in his hut for 2 days to chant special songs while brandishing tufts of rhea feathers. The teachers drank at the expense of the disciple, who spent a whole night chanting and rattling his gourd to show his skill.

(Steward, 1946: 360)

The apparent connection with the Chavin, Wari and Tiahuanaco (Tiwanaku) style, as well as many other clues, including the history of the Mbaya themselves, as a kind of former 'royalty' of the Gran Chaco, could indicate in my opinion a possible more widely spread use of this entheogen amongst the whole male and female Caduveos population, as it was probably the case in the Andean context. This seems I agree hard to prove, but I would definitely estimate that the description of the effects of Bufotenine as well as numerous ethnographic accounts provide us a very interesting case regarding the possible origins of the Caduveos artistic style.

As we will see in section 6.5 , a further inquiry on the artistic style of ancient Peruvian cultures provides in my opinion some robust clues to confirm the theory of an entheogenic origin of the visual patterns of the Caduveos.

#### 6.4 [A study of Claude Levi-Strauss's expeditions notebook and photographic archives in the lights of his essays on the Caduveo and the split representation](#)

Around 10 years before he wrote 'the Split representation in the Art of Asia and America' in 1944, between November 1935 and March 1936, Levi-Strauss and his wife Dina conducted together field studies of the Bororo and Caduveo Indians in the Mato Grosso. Levi-Strauss was at the time an invited Professor of Sociology at the University



of Sao Paulo, while his wife Dina was an invited professor of Ethnology; both were invited as such in the framework of a French cultural mission.

I was granted access to Levi-Strauss archival Fund at the French National Library in the framework of this research. The documents I was allowed by Levi-Strauss's widow to consult include :

- Brazilian Expeditions Notebooks (NAF 28150 (126).
- Brazilian Expeditions Photographic Archives NAF 28150 (245) and (246)
- Other Photographic Archives including Caduveo Postcards NAF 28150 (244)
- Documents and Photographs used to illustrate Books NAF 28150 (247)

#### 6.4.1 Broad general view of the fund

The fund consist of large 'boxes', each one containing a binder. The various documents being protected by transparent folders. Some boxes contain documents that were never previously published by Levi-Strauss, his editors nor by any academic researchers at the time of my research. Even though photography was not allowed during the study of the archival founds, I have received a special authorization by Levi-

Strauss's widow to reproduce some of the documents that I present in this chapter. I also reproduced manually by drawing, and as scrupulously as I could, some patterns that were featured in the fund, both as drawing or as photographic documents.

#### 6.4.2 Content of the boxes

Regarding the Brazilian expeditions notebooks (NAF 28150 (126)). I was only allowed to consult documents related to Caduveo designs. Noteworthy documents include a Portuguese translation of the Gospel according to Saint John (figure 51) with each pages covered with Caduveo patterns drawings (probably made with Genipa americana juice), as well as five other book or notebook pages covered with Caduveo patterns drawings. All those drawings were probably made on the fields during the expeditions in Brazil. Only few patterns are however recognizable in the Gospel, as the ink tends to wear off. Those drawings seems frankly to have been randomly and quickly made, with no fields data available for each drawing on each page, making this document inadequate for any serious anthropological study of the caduveo designs.

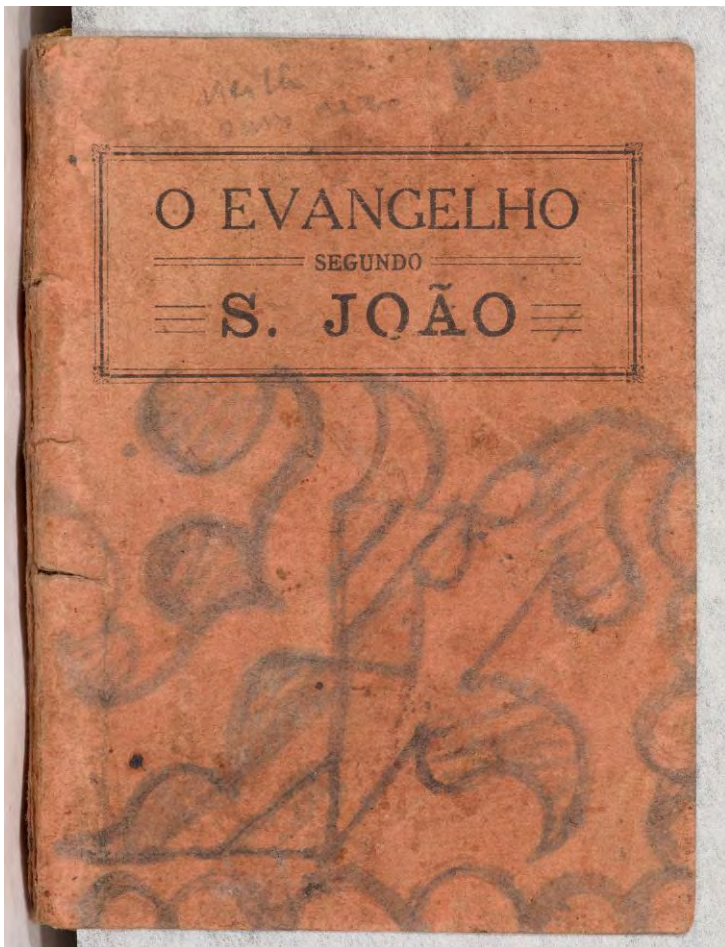


FIGURE 52 : COUVERTURE DE L'EVANGILE SELON SAINT JEAN COUVERT DE MOTIFS CADUVEOS (NAF 28150 (126))

Regarding the Brazilian expeditions photographic archives NAF 28150 (245) and (246) and other photographic archives including Caduveo postcards NAF 28150 (244) , they contained amongst other

things some photographs of Caduveo women faces, featuring facial decorative patterns, as well as some photographs of tanned animal skins with painted traditional patterns. (Those animal skins were later exhibited in Paris amongst other artefacts that Dina and Claude Levi-Strauss brought back from their expeditions, during the 'Indiens du Mato-Grosso (Mission Claude et Dina Lévi-Strauss)' exhibition at the Musée de l'Homme in 1937)

The box 'Documents and Photographs used to illustrate Books NAF 28150 (247) ' contained many photographic reproduction of documents already featured in NAF 28150 (245) and (246) and NAF 28150 (244), and apparently no documents from the Brazilian expeditions notebooks (NAF 28150 (126). (But a fine study should be conducted to totally confirm my claims.)

And interestingly a tracing paper featuring 12 drawings of Caduveo facial paintings that to my knowledge have never been reproduced before, and that I suspect to have been made in preparation for a book or article publication .

### 6.4.3 Ascertainment

The first puzzling point to be highlighted in my opinion amongst those documents is the presence in the expeditions notebooks collection of a copy of the Gospel according to Saint John with each page covered by Caduveo patterns. May have Levi-Strauss drawn himself the patterns on the Saint John's Gospel, or asked some Caduveo informants to draw the patterns, I find it in any way very suspicious that the same Levi-Strauss wrote later on that :

As a Jesuit and a missionary, Sanchez-Labrador showed an exceptional perspicacity when he divined the presence of the demon in these paintings

(Levi-Strauss, 1955: 170)

As indeed the action of covering the Gospel with such patterns cannot be merely seen as a non-symbolical action for someone claiming that there is 'the presence of the demon in these paintings'. I should also indicate that this document was apparently never mentioned by Levi-Strauss in his various essays.

For me this seems symptomatic of the bias of Levi-Strauss's attitude toward the study of the tribe and its artistic style, as well as toward many other subjects in his various essays. Subjectivity and some puzzling paradoxes abound when scientific objectivity should be expected, and I provide other examples taken from Levi-Strauss later on in

this Chapter. I think this paragraph is worth being quoted entirely, in order to provide an insight about Levi-Strauss's views about the Caduveos and their arts :

The Mbaya manifested in their face-paintings that abhorrence of Nature which made them resort so freely to abortion and infanticide. Their art revealed, in fact, a sovereign contempt for the clay of which we are made; art, for them, comes dangerously close to sin. As a Jesuit and a missionary, Sanchez-Labrador showed an exceptional perspicacity when he divined the presence of the demon in these paintings. He himself underlined, the Promethean aspect of this savage art when he described how the natives would cover the body with star-shaped motifs: "Each Eyiguayegui sees himself" he wrote, " as an Atlas who bears, not only upon his hands and shoulders but upon his whole body, the weight of a clumsily charted universe" And this may, indeed, explain the exceptional character of Caduveo art: that it makes it possible for Man to refuse to be made in God 's image.

(Levi-Strauss, 1955:170- 172)

I frankly consider that the possible connections between the Caduveos' pasts tendency to infanticide and abortion nor any supposed 'abhorrence of Nature', and the characteristics of their artistic style is never convincingly demonstrated by Levi-Strauss. And that his intellectual positions at large regarding their culture, that arise from a reading of his various essays on the subject as well as a study of his archival fund, might have certainly obscured his scientific objectivity.

Another highly discussable point about Levi-Strauss so-called 'structural anthropology', also presented by him in the same essay (A World on the Wane, 1955), highlights in my

opinion, and retrospectively, the flaws in his 'structural-anthropological' grid of analysis. Indeed, Levi-Strauss, applying his 'structural method', compares in his essay the town of Porto Esperanca in the Mato Grosso area with the Fire Island in the State of New York, in a disturbing way:

Lugubrious and ill-named Porto Esperanca remains in my memory as the oddest site to be found anywhere on the globe. Its only possible rival in this respect is Fire Island in the State of New York; and it amuses me to put the two side by side, for they have at least one thing in common: that each, in its different key, offers within itself the wildest contradictions. Geographically and humanly speaking an identical absurdity finds outlet in them: comic in the one case, sinister in the other.

(...) the inhabitants of Cherry Grove, the hamlet which stands at the half-way point of the island, can move about only on a network of wooden gangplanks that has been put up on stilts. The picture is completed by the fact that Cherry Grove is mainly inhabited by homosexual couples doubtless drawn to the area by its wholesale inversion of the normal conditions of life. As nothing grows in the sand, save large clumps of poison ivy, there's daily revictualing at the island's only shop. This stands at the landing-stage; and as each sterile couple clambers back up towards the cabins that line the slender alleys above the dunes, it pushes before it a pram: no other form of vehicle can negotiate the narrow streets. Empty they are, none the less, but for the week-end bottles of milk that no nurslings are waiting to drink.

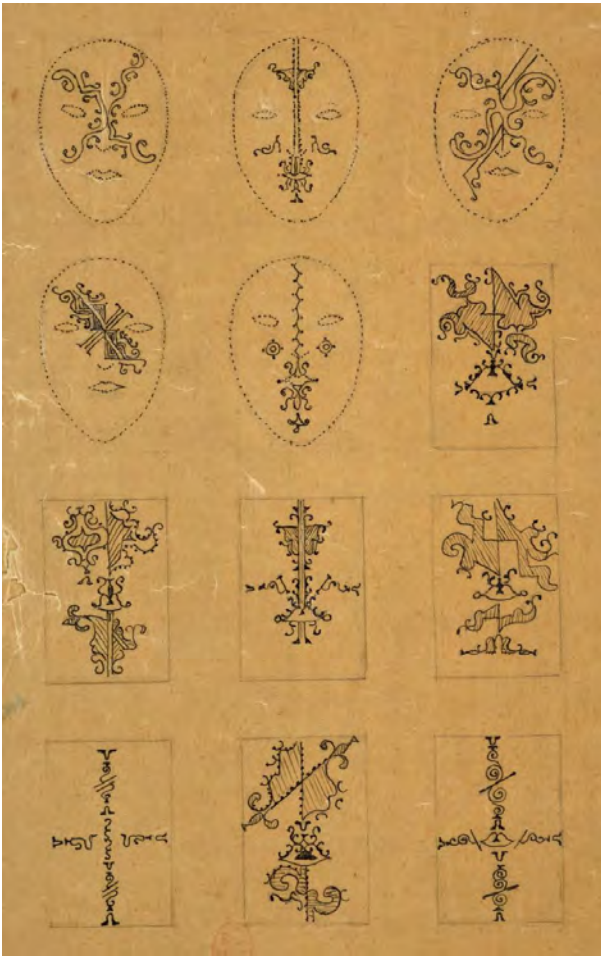
(Levi-Strauss, 1955:143-144)

And indeed, I definitely consider that Levi-Strauss's assumption that '*the fact that Cherry Grove is mainly inhabited by homosexual couples doubtless drawn to the area by its wholesale inversion of the normal conditions of life. As nothing grows in the sand*' is highly subjective, scientifically unprovable and of course clearly morally questionable, like many of his other assumptions and general cultural comments that we can find in his essays.

The second puzzling point rises in my opinion from the evidence of the tracing paper featuring 12 drawings of Caduveo facial paintings reproduced on the next page that tend to corroborate my general views on the Caduveo facial patterns, after having studied Boggiani's work on this matter as well as the photographs and drawings collected by Levi-Strauss, and available in his various books and within his archival fund at the French National Library.

The work was ordered to a drawing artist by Levi-Strauss or his editor for planned publications, and I would suggest they seem to be the reproduction of authentic Caduveo facial patterns, probably first photographed. My main concern being that in those 12 designs, at least 5 present only a 'classical' Split representation and a clear symmetry, as opposed to the assumption by Levi Strauss that the main characteristic of the Caduveo was their 'unbalanced' diagonal double splitting, finding apparently an explanation in the supposed 'unbalanced' political and social structural order of this tribe (Levi-Strauss, 1955).





**FIGURE 53 : CALQUE DE DESSINS CADUVEOS CONSERVE AVEC LES DOCUMENTS AYANT SERVI A L'ILLUSTRATION D'OUVRAGES NOTAMMENT TRISTES TROPIQUES (NAF 28150 (247))**

Having consulted Levi-Strauss and Boggiani's works and photographs, I would 'loosely' estimate the ratio of at least around 40% of 'classical' symmetrical splitting and 60% diagonal double splitting or 'decentred' highly geometric patterns among the various portraits and

drawn pattern I have been able to study. And interestingly roughly matching the ratio of the patterns drawn on this tracing paper.

I would be therefore much more cautious than Levi-Strauss before elaborating any structural law about the Caduveos, their artistic style and their 'social system' and system of thoughts, based on what represents only very roughly 60% of their artistic style. (Even though I do admit that my point is also based on a rough estimation).



FIGURE 54 : PAGE 28 OF ' THE MAN WHO KNEW ALL ' WITH CADUVEOS PATTERN (NAF 28150 (126))

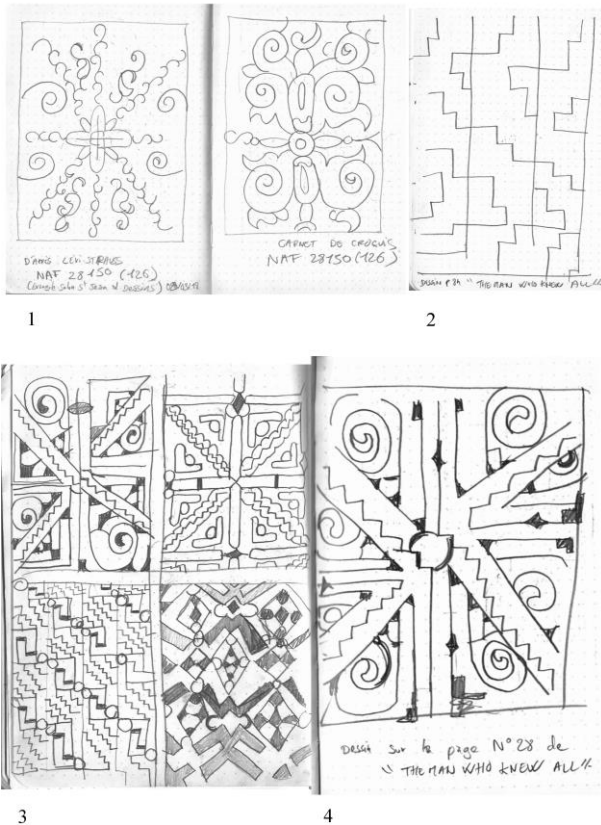
Thirdly, I reproduce here my hand copies of the patterns that were painted by Caduveos on tanned animal skins that were later exhibited in Paris in 1937, as well as a

page of the Book 'the Man who knew all'

(NAF 28150 (126) covered with a kind of similar pattern. My drawing is based on a photographic document coming from the box NAF 28150 (247). As I will

demonstrate in this chapter, I would strongly postulate that those designs show a clear connection to the Andean tradition, mainly Wari and Tiwanaku Cultures, and as mentioned researches in the fields of archaeobotany and affiliated disciplines tend to show that

those designs were influenced by the traditional use of various snuff powders and entheogens, including *Anadenanthera colubrina* (Knobloch, 2000).



**FIGURE 55 : CADUVEO DRAWINGS ON TANNED ANIMAL SKINS, NAF 28150 (247). (HAND DRAWINGS BY THE AUTHOR)**

To the credit of Levi-Strauss, it should be mentioned that he briefly highlighted 10 years after his essay on the SRQ in his book 'A World on a Wane' at least a possible Andean Chavin influence on the Caduveo patterns, but without mentioning any possible incidence from an entheogen :

Their curvilinear style has few counterparts in pre-Colombian America, but it offers analogies with archaeological documents which have been discovered in more than one part of the continent: and some of these predate the discovery by several centuries. Hopewell, in the valley of Ohio, and the more recent caddo pottery in the Mississippi valley; Santarem and Marajo, at the mouth of the Amazon; Chavin, in Peru. This dispersion is in itself a sign of antiquity. (...)

(levi-Strauss, 1955:172 )

And in my opinion wrongly identifying a possible connection with art from the Mississippi or Ohio valley that I consider quite unlikely. As indeed the connection seems much looser to me than the highly probable Andean affinity. It seems to me that he based his postulate of a possible connection to some North American artefacts from the presence of some kind of 'Spirals' on pottery found in Hopewell and in the Mississippi valley, neglecting or being unaware of the strong similarities of some Caduveo designs as a whole with the Pre-Incan tradition. And I should mention again that the currently accepted human dispersal models of South America as well as ethnobotanical accounts tend to largely back up my hypothesis. As we will see, Levi-Strauss's 'Structural approach' led him, notably in his book 'A World on the Wane', to

identify 'elementary patterns' (probably like spirals or whorls). Postulating that the specificities of Caduveo patterns would rely much more on 'compositional procedures' than on those elementary patterns. A structural approach that has been largely refuted by Alfred Gell in his essay 'Art and Agency', as I mentioned in section 1.2.3 and in my case study of the Māori people's artistic styles.

The real problem lies elsewhere. Any student of the Caduveo designs will soon realize that their originality does not lie in the elementary patterns, which are simple enough to have been invented rather than borrowed (probably they were both invented and borrowed) ; it lies in the combination of these initial patterns in the result, that is to say the finished work. But the compositional procedures are so systematic and so fastidious that they go far beyond any suggestions, in the same field, that the Indians might have picked up by way of European Renaissance art. Whatever the point of departure may have been, the development was so extraordinary that it can only be explained by features native to the Indians themselves"

(Levi-Strauss, 1955: 172 -173 )

Levi-Strauss then argues, and in a way in an attempt at deconstructing the method by which Caduveo women tend to paint complex designs, that their '*compositional procedures*' and the final results obtained are in a way '*as if as the result of a conjuring-trick.*' (Levi-Strauss develop his theory and analysis on the subject page 174 – 176 of 'A World on the Wane', but it would be irrelevant to quote it entirely here)

I will argue, and beyond his obviously biased statement of a '*Conjuring-trick*', that far from being exclusive to the Caduveos, this technique is in fact probably very similar to the one used by many indigenous tribes worldwide, including in the South American context, to draw for example patterns around a pottery, in a manner that permits to maintain a general balance of the design as a whole, without the help of any pre-drawing on the artefact, by slightly adapting the size and shape of every elementary pattern drawn during the whole creative process (See the work of Peter G Roe or Dorothy K Washburn and others on the subject), and that the technique itself can hardly be used as an example to highlight a supposed structural foundation of the diagonal splitting that appears sometimes in Caduveo designs.

Levi-Strauss continues later on, commenting on the compositional procedures of the Caduveos, following an intellectual path that ultimately lead him to consider that the speculated intrinsic 'unbalance' of the Caduveo patterns mirrored in a way their supposed dislocated social, political and almost metaphysical order. In my opinion a very unlikely theory, remarkably summarized in this way by Marcelo Fiorini :

Some of the bolder statements Lévi-Strauss did make in relation to photography – like his suggestion that about the Caduveo women's facial drawings he photographed express an ambivalence between hierarchical and egalitarian structures inherent to this society, are based on his field observations of how nobles and commoners, warriors and vassals, men and women, are related in a society historically fraught by social differences. But

Lévi-Strauss' own argument points to the relativity of this cultural feature, since the Caduveo sought dissimilar means of expressing themselves: the abstract women's drawings tellingly revealed this intrinsic tension of their lives, whereas the figurative sculptures and drawings were not directly related to such tensions. The efflorescence in Caduveo women's mouths, in this sense, is an expression of an unresolved contradiction, acting as a kind of deep structure inhabiting the lives and minds of certain individuals in Caduveo society. As Lévi-Strauss himself states: this contradiction continued to trouble the Caduveo in an insidious fashion, and because they paid no heed to it on a conscious level, they began to dream about it.

(Fiorini, 2008)

I would argue that Levi-Strauss's training as a sociologist at the time of his expedition in Brazil amongst the Caduveos, as well as his apparent lack of interest into the use of entheogens amongst South American tribes in connection with 'decorative' pattern-making, his visible 'ethnocentric' bias toward the study of the Caduveos, the clear flaws in his method that are partly due to the general intellectual Zeitgeist of the 1930's and 1940's, and his lack of knowledge of any genetic data in connection to human dispersal models in the South American context, lead him to construct a theory that might be highly satisfying intellectually and that tends to provide a confirmation on his wider allegations on the SRQ; a theory that however fails ultimately on a reality check, as I will demonstrate. To his defence I have to clarify that many of the data were not available for Levi-Strauss when he conducted his field research in 1936.



But I must however expose what I consider as the biggest miscalculation in Levi-Strauss's theory regarding the art of the Caduveos, as I consider that his views are clearly in contradiction with archaeological findings.

## 6.5 Caduveo compositional procedures and Andean influences

I argue what Levi-Strauss pretends to be '*compositional procedures*' allegedly symptomatic to the geometric art of the Caduveos only (i.e. a 'double or diagonal splitting'), and in which he thought he had identified an unconscious representation of some alleged socio-political imbalance in their society that he visited in 1936 (Moebius and Nungesser, 2013:10-11), were in fact already in use in the textile art of at least the Wari culture dating back to the 6<sup>th</sup> to 10<sup>th</sup> century AD. And a preliminary research in online collections of several museums worldwide helped me to quite strictly corroborate this fact, as we can see in the following figures. It seems to me that we can find on this tunic fragment and many similar artefacts a final and conclusive refutation of Lévi-Strauss's theories. As it appears that this very specific type of 'pattern' and overall '*compositional procedures*' of a kind of double splitting or diagonal splitting '*also*



appears on Wari tapestry tunics, high-status garments worn by officials of the Wari state'<sup>59</sup> according to the Cleveland Art museum.



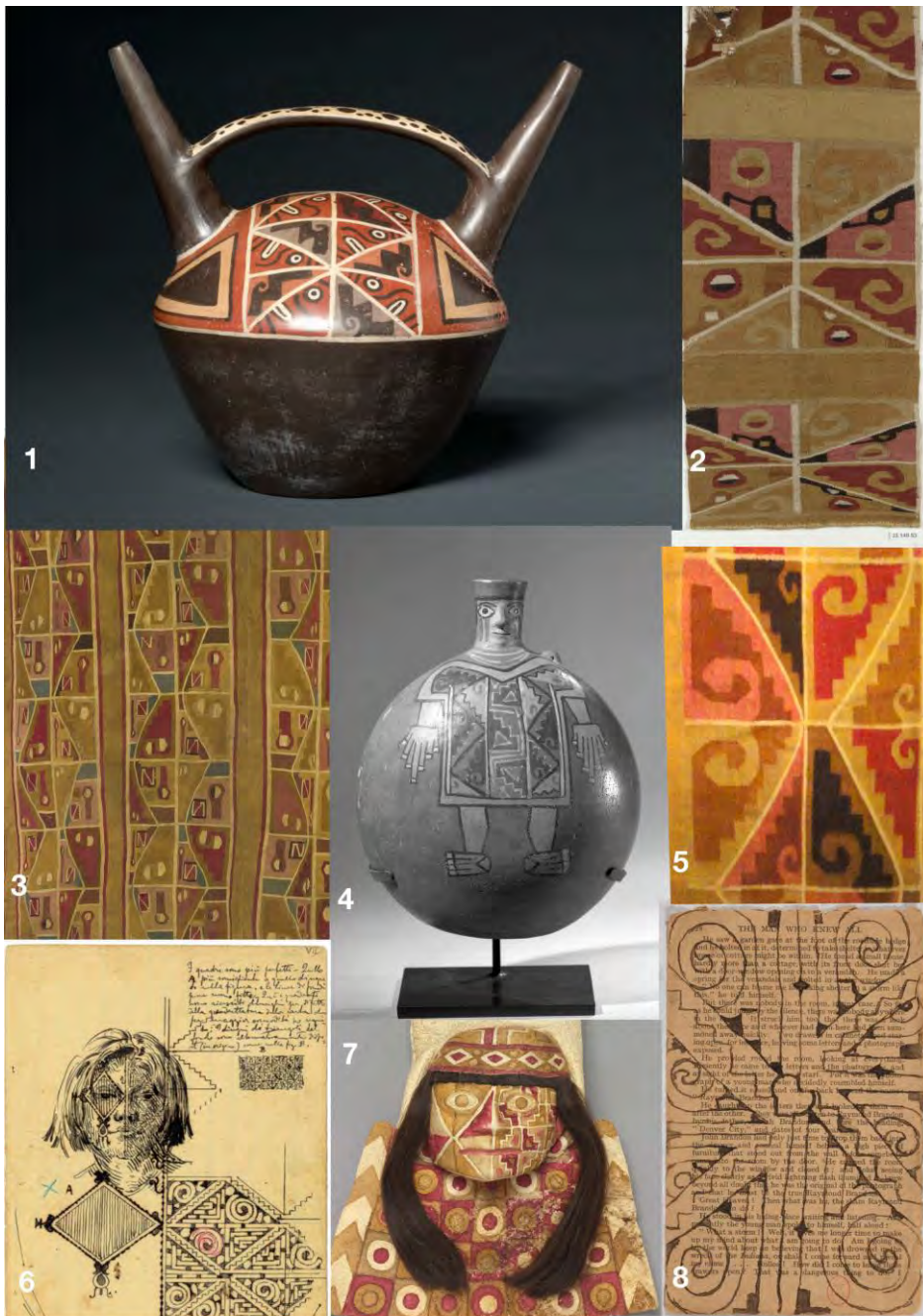
FIGURE 56 : TUNIC FRAGMENT, 7TH-9TH CENTURY, WARI CULTURE, PERU, METROPOLITAN MUSEUM

As we can see on this Double-Spouted Vessel reproduced on the next page that in my opinion leaves few doubts about the Wari origins of this specific '*Compositional procedure*' that we can also find in the art of the Caduveos as demonstrated on the next page. And I would argue that this apparent 'genealogy' contradicts irrevocably and unconditionally Levi-Strauss's assumptions of an

unconscious influence of the socio-political imbalance of Caduveo's Society on their artistic styles and '*Compositional procedures*'.

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<sup>59</sup> <https://www.clevelandart.org/art/2002.94>



- 1) Double-Spouted Vessel 500-900, Wari Style, Cleveland Museum of Art
- 2) Tunic Fragment, 7th to 9th Century, Wari Culture, Metropolitan Museum
- 3) Tunic, 600-1000, Wari, Brooklyn Museum
- 4) Face-Neck Jar, 600-1100, Wari, Brooklyn Museum
- 5) Detail: Tapestry tunic, Wari Style, the American Museum of Natural History
- 6) Caduveo Facial painting, details of Guido Boggiani's sketchbook of his first expedition to Caduveo territory, 1892, copyright Pavel Fric / Yvonna Fricová. Reproduced from (Martins, 2017)
- 7) Bag with Human Face and containing Coca Leaves, Wari, Cleveland Museum of Art.
- 8) Caduveo pattern drawing on a page of "The man who knew all", 1936, Levi-Strauss archival fund, BNF

**FIGURE 57 : VISUAL OVERVIEW, WARI AND KADIWEU STYLES**

### 6.5.1 Discussion

I need to add two points in order to close this case. First, if I consider that a ‘cultural transmission’ of the ‘*Compositional procedure*’ is at least plausible, taking into consideration ethnographic data about the Caduveos and their supposed origins -even though it would mean that the pattern would have been transmitted for around thousand years- the underlying possible influence of an entheogen or even the combined use of multiple entheogens on the earliest Wari ‘patterns’ shouldn’t be neglected. And of course, as we saw several times the form constants theory would explain this enduring use of a similar pattern for thousands of years.

- First, the pattern was apparently connected with high-ranking individuals within Wari culture, but the ritualistic consumption of drugs or combination of drugs was also most certainly conducted by those high-ranking individuals (Knobloch, 2000 ; Bélisle, 2019). I would therefore suggest that this apparent connection with rank shouldn’t be understood in a ‘Levi-Straussian’ perspective.

- And second, if for the first type of fine curvilinear facial painting that the influence of *Anadenanthera colubrina* seems highly plausible; in my opinion, the 'compositional procedures' that I expose here would need further inquiry to be explained, even though its most probable Wari -or preceding cultures- origins leaves few doubts about the potential influences of other types of entheogens like, and in a speculative order of probability: *Echinopsis pachanoi* (San Pedro cactus) or *Anadenanthera columbrina* itself, but also Ayahuasca, psilocybe mushrooms, Coca leaves or Brugmansia tree (Angel's trumpet). All of those plants having been potentially used to some extent in Wari culture for entheogenic and medicinal purposes.

### 6.5.2 Estimated date of the Patterns

I would make the postulate that, as demonstrated, the patterns used by Caduveo are not entirely specific to their tribe, and that they show a strong similarity with at least the Andean tradition in the South American context, and for some of the patterns painted on the body a strong affiliation with patterns found on textiles in Wari Culture.

I would suggest that we could potentially date the sources of inspiration for the patterns before the Wari (600 AD to 1200 AD) era, but no archaeological proofs can at this point back up this hypothesis, (apart from the earliest proven use of *Anadenanthera colubrina* dating back to 2130 AD in the South American continent (Torres, 1995). To estimate the 'date of creation' of the patterns around 600 AD seems therefore the most provable working hypothesis at this point.

### 6.5.3 Conclusion

I argue recent discoveries in anthropology and affiliated sciences, as well as older ethnographic accounts that were not mentioned by Levi-Strauss in his various essays on the Caduveos tend to provide a strong string of clues that would invalidate most Levi-Strauss's postulates on the origins and specificities of their artistic styles and decorative patterns.

Studies tend to clearly show that Caduveo patterns present striking similarities with the ancient Andean Chavin, Wari and Tiahuanaco Culture's artistic styles. A fact in concordance with the currently accepted human dispersal models in the Gran Chaco and Matto Grosso area.

I have demonstrated how the '*Compositional procedure*', that Levi-Strauss considered to be 'symptomatic' of the Caduveo people, were in fact already in use around the 6<sup>th</sup> Century AD within Wari culture on a large number of artefacts, providing therefore a robust invalidation of Levi-Strauss's assumptions regarding the meaning and origins of such '*Compositional procedure*' within the Caduveo society.

I would suggest that recent researches indicate as well a solid probability of an influence of the ritualistic use of *Anadenanthera colubrina*, a Bufotenine containing plant and one of oldest plant used for its entheogenic potential in the South American context, on the shape of some Caduveo designs. As it is robustly proven that the bufotenine contained in this plant procures the visions of geometric form constants that are for some very similar to the Caduveo patterns.

This probability seems to be reinforced by the already widely documented case of the connection between the taking of Ayahuasca and the geometric patterns painted by the Shipibo-Conibo in the Amazonian context, showing a widely documented tendency of the South American tribes and civilizations toward a skilful use of entheogens for ritualistic purposes and their influences on their artistic styles. Further studies in the fields of genetic research could potentially provide as well some more detailed insights

about those questions, the study of the genetic origins and dispersal patterns of the Caduveo people through mtDNA analysis having not been conducted to these days.

## Final Conclusion

As exposed in the first chapters and throughout this dissertation, my research aims were to cross-check the current relevance of Levi-Strauss's theories on the SRQ in the light of new scientific advancements, and to conduct a systematic transdisciplinary study of the cultures included in my taxon and their possible interrelations in the framework of the SRQ, regarding and without limitation:

- 1) Their possible genetic connection to each other that could potentially imply a cultural borrowing or diffusionism of artistic styles.
- 2) The potential identification of traditional entheogenic drugs in use within those cultures and the study of the possible correlation between the taking of those entheogens and the visions of form constants that would match with their artistic styles.
- 3) The system of beliefs of each culture and their attitude toward artistic representation, and its possible incidence on those artistic styles.



- 4) The genealogy of their artistic styles in a wider geographic area and time period and its possible connection to their systems of belief or other significant factors in order to re-contextualize their artistic production.

In the first parts of this dissertation I exposed Levi-Strauss's views on the SRQ and shown how his essay was grounded on the previous works of Adam, Boas, Creel and Karlgren. I have demonstrated that their theories were built up on the inaccurate presupposition of a chronological development and supposed evolution from the figurative to the abstract and geometrical that they more or less all applied to the study of artistic styles from our taxon.

As stressed by Moebius and Nungesser, Levi-Strauss's essay *'concentrates on the splitting of representation and attempts to prove that this ultimately corresponds to the dualism of face and mask, of nature and culture, person and impersonation, individual existence and social function, community and hierarchy'* (Moebius and Nungesser , 2013). Levi-Strauss claimed to have demonstrated that this system of representation was commonly shared by the people included in our taxon, and that their socio-political structure had a major influence on this allegedly shared system of representation.

Probably dampened by inaccurate diffusionists theories that had flourished in the 1930's, and clearly following the steps of Leonhard Adam, Levi-Strauss searched for underlying psychological and social causes to those apparent similarities and ended-up suggesting in a way that art acts as a kind of structural map of the socio-political order of the societies in which it is created, and not merely in the themes and content explored through artistic creativity, but in an unconscious manner in the 'compositional procedures' used by the artists.

I have highlighted that Levi-Strauss and other contemporary researchers at the time he wrote his essay were understandably puzzled by the apparent similarities between the art of the Māori people, ancient China, Ainu people, Neolithic Japan and Amur area, Haida people and tribes from the Northern West Coast, and the Caduveo (Kadiweu) people that Levi-Strauss had visited in person in 1936. One of the similarities being for most of them the use of a curvilinear and generally 'horror vacui' style and the geometric representation of spiral and whorls.

Using the example of the Shipibo-Conibos and the proven connection between their ritualistic use of the entheogenic brew Ayahuasca and the 'Kené', their geometric traditional pattern, and through a presentation of Klüver's form constants theory and

the work of Lewis-Williams and other contemporary researchers on the subject, I have shown how the ritualistic consumption of entheogenic substances could have been the 'gateway' to geometric representations amongst AMH and within indigenous tribes. And how this could bring new light to the study of the SRQ by potentially demonstrating that rather than having derived from the socio-political structure of those people, as suggested by Levi-Strauss in his essay, the Split Representation technique might have originated from the shamanic perspective of those people, due for a part to their experience of ASCs (potentially inducing entoptic phenomena) that may have been induced by psychoactive plants, as well as their animistic beliefs. Notwithstanding the fact that that all those people apparently used a shamanic type rhythmic drumming to attain trance that by itself could procure the vision of form constants that may have influences their artistic styles.

Building up on those cases, I decided to conduct a more in-depth study of each group from my taxon in order to identify if their potential ritualistic consumption of entheogenic substances or other factors might explain the striking similarities between their traditional artistic styles.

In the Ainu Chapter (2) I demonstrate how robust ethnographic and archaeological research results show in ancient Japan and the area of the Amur basin an enduring ritualistic use of *Rhododendron tomentosum* (Formerly *Ledum palustre*) as well as potentially *Cannabis Sativa* and most certainly other odoriferous, sesquiterpene-containing plants species like the Juniper. I mentioned how the intoxication to the active principles present in some *Rhododendron* species is proven to potentially trigger the vision of whirling lights, and how the apparent ritualistic use of *Rhododendron* species in Japan and the surrounding area seems to match geographically with the presence and probable 'birth' of curvilinear artistic styles and the preponderance of representations of spirals since the Neolithic that even makes the area a possible centre of dissemination of those motifs in at least a European and more speculatively North and South American context, though I highlight the existing controversies regarding the presence or not of grayanotoxins in *Rhododendron tomentosum* (Formerly *Ledum palustre*) as well as the potential influence of *Amanita Muscaria* in the wider geographic area for millenia.

Contrary to Levi-Strauss's views on the subject I suggest that the Ainu patterns should be considered as dating back at least to Japan's Neolithic Jōmon period. I highlight that robust ethnographic records of the spiritual importance of the 'abstractness' of the patterns in Ainu context -in order to prevent evil spirits to enter the patterns-,

that I consider as an early Neolithic cognitive warning against pareidolia, could be puzzlingly put in parallel with the presence in the art of the Shang dynasty of numerous figurative and monstrous figures embedded in their curvilinear style. Even more considering that those two styles clearly originate from analogous Neolithic, and mostly abstract curvilinear traditions. I finally suggest the potential similarities between those patterns and mandalas, even more in an Asian context. I highlight following Gabora (2003) that those patterns are 'externalized symbol storage' , and document the robustly proven cognitive implications of the 'drawing' of such types of patterns in terms of access to higher order states of consciousness and 'Flow' state that could also explain the enduring use of such types of patterns, answering therefore to questions raised by Levi-Strauss.

I show in the Haida Chapter (3) how the style of the Haida people can be tracked as well to the Neolithic, pinpoint a confirmed use of varieties of Rhododendrons (Labrador tea), and possibly other plants that are strictly proven to contain grayanotoxins like *Kalmia latifolia*, and highlight the rarely mentioned but solid confirmation of the high spiritual importance and ritualistic use of Devils club (*Oplopanax horridus*) in the area to attain visions, though evidence of the potential triggering of form constant through its consumption are lacking. I document how solid ethnographic records show that parts of the plant were used as well in the

context of pattern making and face painting (tattooing ink made from ashes, berries used for face painting). I document how Franz Boas, who however produced a compelling work on the art of the Northern West Coast, seems to have largely underestimated the importance of plants studies in his work on which Levi-Strauss based his research. I finally follow Carson by considering that animism and shamanism might have much more influenced the artistic style of the Northern West Coast than social structure and questions of kinship and hierarchy, and suggest that the rarely mentioned taxonomy of facial paintings of the Haida people conducted by Boas (1898) and his mention that *'The full and rather realistic representation of animals are considered (...) as indicating higher rank'* brings new lights to the study but also demonstrate that the Northern West Coast context shows ultra-local variations of the degrees of importance and significance of figurative vs symbolical representation in regards to ranks within tribes. Adding to the complexity of the study but also to the irrelevance of Levi-Strauss theories on the subject.

In the Shang dynasty Chapter (5) I demonstrate how the work of Max Loehr leads to the unambiguous refutation of Karlgren's theories about an alleged chronologic development of the Taotie mask from the figurative to the abstract in ancient Chinese art, how this postulate can be considered as a cornerstone of Levi-Strauss's theories and how this robustly proven flaw provides de facto a solid refutation of an entire

portion of his theories on the SRQ. I expose how contemporary research results tend to indicate that bronze age Chinese art was largely influenced by earlier Neolithic pottery styles, and I propose that a large number of clues could lead to hypothesize that those earlier styles were influenced by the ritualistic or inadvertent use of *Rhododendron* species and *Cannabis*, following a trend already described in the case study of the Ainu. I highlight that several researchers tend to challenge the idea that only alcohol was used during Shang rituals, potentially suggesting the ritualistic use of entheogenic substances that could trigger the visions of form constants. I finally mention in this chapter the presence in Appendix [A] of my study of a potential ritualistic use of *Caesalpinia sepiaria* in ancient China.

For the Māori Chapter (4), I highlight that contrary to Levi-Strauss's assumptions, genetic anthropology tends to show that Māori's ancestors originated from an area in North East Asia where a curvilinear style had flourished in the Neolithic, but I show how the lack of strict similarities between the overall Polynesian style and the art of ancient Asia (even though I admit that there are still few similarities, one being a tendency to an 'horror vacui' style), tends to strongly suggest that the Māori style studied by Levi-Strauss is native to the Islands of Aotearoa (New Zealand). I demonstrate following Gell how Levi-Strauss's approach to Māori art can be considered as superficial, stressing that he neglected for example the robust proofs of

variations in styles between the art of the Northern and Southern Islands, even though to my knowledge the social structure of the tribes from both islands were quite similar. And I document as well how his claims that '*chain of privileges, emblems, and degrees of prestige which, by means of masks, validate social hierarchy through the primacy of genealogies.*' (Levi-Strauss, 1944) are largely mitigated if not refuted, not only by Mead but even by earlier ethnographic accounts dating back to the 19<sup>th</sup> century, which stressed that the Tā moko facial tattoos weren't 'per se' emblems of rank and hierarchy, but much more connected to war making.

Moreover, and following Thorne (2012), I suggest, and in opposition to the current scientific consensus, that my case study of the Māori people's use of the potentially hallucinogenic *Coriaria arborea* (or Tutu Tree) and allied species, tends to show that hallucinogenic substances were 'consumed' by Māori people prior to western encounters; and that the plants seems connected to shamanic traditions and rituals in ancient Māori culture. I ultimately make suggest that clues tend to indicate a possible connection between the birth of the curvilinear style of the North Island and the use of *Coriaria arborea* by various means. One being the apparent preponderance of Tutu tree wood (*Coriaria arborea*) as wood material for the making of shamanic flute in the North of the Island were the curvilinear style seems to have originated from.



Finally, in the Kadiweu Chapter (6), I expose the apparent bias in Levi-Strauss's approach to their culture, what I tend to consider as an ethnocentric perspective, and his complete lack of study of entheogenic substances, which seems particularly troubling in a South American and Amazonian context in the light of robust contemporary studies on the subject in a large number of disciplines. I document the ethnographic and archaeological records of the ritualistic use of *Anadenanthera colubrina* var *cebil* amongst the Kadiweu, a plant which provides the visions of form constants similar to some geometric patterns found in their art, as well as unequivocal similarities with the art of ancient Peruvian Wari and Tiwanaku cultures that Kadiweu artistic style was compared to as early as 1895 by Guido Boggiani who had visited the Kadiweu around 40 years before Levi-Strauss; some serious clues that Levi-Strauss totally ignored, building a theory that I can only disapprove. I demonstrate how most of the specificities of the Kadiweu geometric '*compositional procedures*' that Levi-Strauss tried to connect to their socio-political structure were in fact already present around the 6<sup>th</sup> Century AD in the Wari decorative patterns mostly featured on their textiles work. And I show how ethnographic and ethnobotanic data suggest that those similarities could be reasonably attributed to a cultural transmission through Time, but could be as well the result of the consumption of similar entheogenic substances, or both. In any case, and by doing so, I invalidate

therefore Levi-Strauss's assumptions on the subject, leading in my opinion to a robust refutation of his overall theories on the split representation.

In closing, I would state as follow: I consider that the theories developed by Levi-Strauss in his essay 'Split representation in the art of Asia and America' do not withstand scrutiny and close examination of the data he was or could have been aware of at the time he wrote his essay and a cross-checking of new data relevant to the subject that he couldn't have been aware of. And I would therefore suggest that researches using his theories on this specific subject as a starting point in the fields of art theory as well as art history, anthropology and allied sciences that were published since the release of his essay should be taken with caution.

I consider that the already confirmed refutation by Loehr of Karlgren's theories on which Levi-Strauss grounded a large part of his study is sufficient to demonstrate the inaccuracy of Levi-Strauss's assumptions on the split representation question, and I let my readers judge my demonstrations regarding the arts of the Ainu, Haida, Māori and Kadiweu.

I suggest that there is a sufficient number of clues to interrogate further the potential entheogenic origins of some if not all the patterns included in the split representation taxon, with a particular inflection on the artistic style of the Māori for which the incidence of the *Coriaria arborea* seems highly plausible to me even though the triggering of the vision of form constants by any means of consumption of its active principles is yet to be demonstrated . In any cases my research demonstrate that all the tribes, cultures and civilizations included in the SRT used to employ potentially entheogenic plants in a ritualistic context connected to shamanism. I.e. : *Rhododendron tomentosum* and possibly *Cannabis sativa* and sesquiterpene containing plants like the Juniper for the Ainu, Amur basin area and ancient China, *Oplopanax horridus* for the Haida people, *Coriaria arborea* for the Māori people and *Anadenanthera colubrina* var *cebil* for the Kadiweu and the more ancient Wari culture. And that in any cases shamanic type rhythmic drumming would have been sufficient to induce the vision of geometric patterns, making the argument for a shamanic origin of those artistic styles (either from the consumption of entheogenic substances, or from drumming or both) much more probable than Levi-Strauss structuralist and socio-political hypothesis.

I highlight that genetic migration studies tend to show that all cultures from our taxon seems to 'originate' from 'Somewhere in North East Asia', but that the chronological

evolution of Māori art tends to corroborate much more my hypothesis of an entheogenic origin than a cultural diffusion of those similar artistic styles.

Finally, I consider that those similar patterns are connected in each and every cases to shamanic and animists beliefs and contexts, as well as to some specificities of the human brain and visual apparatus. I postulate that the questions of shamanic type rhythmic drumming, rapid identification of two dots as eyes by the human brain, spirals and whirling lights perceived through the consumption of entheogenic substances as form constant, and questions of pareidolia as well as higher order states of consciousness and flow state attained through the reproduction of those patterns, explain as well in part the birth of those artistic styles and the perpetuation of such types of artistic styles within groups of populations in some case for millennia. Ultimately answering questions left unanswered by Levi-Strauss an the end of his essay regarding the reasons for the remarkable perennality of those artistic styles over time.

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**Appendix [A] : Grayanotoxins poisoning symptoms, artistic styles from the SRQ taxon and Siberian Shamanism**

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## GRAYANOTOXIN POISONING SYMPTOMS, ARTISTIC STYLES FROM THE SRQ TAXON AND SIBERIAN SHAMANISM

### POISONING SYMPTOMS

#### WHIRLING LIGHTS TUNNEL EFFECT



Neolithic, Majiayao Yangshao, Banshan phase Date: ca. 2600–2300 B.

#### DIPLOPIA



Double vision, also called diplopia, causes a person to see two images of a single object.

[https://www.health.harvard.edu/a\\_to\\_z/double-vision-diplopia-a-to-z](https://www.health.harvard.edu/a_to_z/double-vision-diplopia-a-to-z)

#### DELIRIUM AND EXCITEMENT VISUAL HALLUCINATIONS

#### TRANSIENT PERIOD OF EXCITATION

What is the essential meaning of the word shaman? In Sanskrit sram = to be tired, to become weary; sramana = work, religious mendicant. In the Pali language the word samana has the same meaning. These two latter words have been adopted by the Buddhists as names for their priests." But, according to Banzaroff, the word shaman originated in northern Asia : saman is, a Manchu word, meaning 'one who is excited, moved, raised ' ; samman (pronounced shaman) and hamman in Tungus have the same meaning

Czaplicka, Marie Antoinette. Aboriginal Siberia: A study in social anthropology. Clarendon Press, 1914.

#### TONIC-CLONIC SEIZURE Convulsions and loss of consciousness

#### IMPAIRED CONSCIOUSNESS FOLLOWED BY RECOVERY

A universal feature of the shamans' initiatory periods involved an experience interpreted as a death and rebirth, often involving as dismemberment, and followed by reconstruction of the initiate's body, accompanied by introduction of spirit powers.

Winkelman, Michael. "Shamanism as neurotheology and evolutionary psychology." *American Behavioral Scientist* 45.12 (2002): 1875-1887.

#### CARDIAC ARRHYTHMIA



Shaman Otshir-boö, Baijalgol valley, Mongolia, 1909/1985. Gelatin silver print. The Finnish Museum of Photography.

*What characterizes perfect ecstasy is the complete loss of consciousness, and it is accompanied by epileptic seizures or convulsions.*

Waida, Manabu. "Problems of central Asian and Siberian shamanism." *Numen* 30.2 (1983): 215-239.

Historically, epilepsy has been linked to religion, ecstatic healing and prophesy (Temkin 1971). So extensively does TLE replicate trance states and religious ecstasy that it attracted the name The Sacred Disease to indicate its connection with metaphysical and religious states. Descriptions go back to Greek writers, such as Hippocrates and the Bible(...). The link between temporal lobe pathology and religious experience is attested to in the works of Waxman and Geschwind

Kaplan, Robert. "The neuropsychiatry of shamanism." *Before Farming* 2006.4 (2006): 1-15.

So we expect to find from anthropological data: 1. a changing stimulus frequency to encompass the range of individual brain rhythms, and 2. susceptibility to particular rhythms by particular individuals. Anthropological accounts indicate that the rhythm is slowly increased over the length of the ceremony. For example, among the Siberian Tungus : This slow and soft drumming of the beginning of the performance produces its effects: the attention of the shaman is concentrated as well as that of the audience. The spirits may now arrive at any moment. Since the arrival of a spirit means ecstasy (sic), the drumming shows gradual increase of tempo and gradually changes from piano into forte . . . When the shaman is in a state of ecstasy, the assistant takes the drum and continues the drumming, both for maintaining the shaman's state of ecstasy and for controlling the behavior of the audience. ( Shirokogoroff , 1935, pp. 326, 329)

Neher, Andrew. "A physiological explanation of unusual behavior in ceremonies involving drums." *Human biology* 34.2 (1962): 151-160.

### Artistic styles & Ethnographic records



Ainu robe, Meiji period (1868–1912)



Title: A Tluwulahu mask--Tsawatenok, 1904  
Summary: Kwakiutl man, head-and-shoulders portrait, facing front, wearing a mask depicting a loon on top of a man's head to facilitate the loon changing into the form of a man.  
Contributor Names: Curtis, Edward S., 1868-1952, photographer



Taotie Monster-Mask, Theriomorphic image on a bronze vessel, Shang dynasty

Modern toxicological studies identify grayanotoxins as breathing inhibitors and hypnotics that act dramatically on the central nervous system. Depending upon the amount consumed, one experiences tingling sensations and numbness, dizziness, psychedelic optical effects such as whirling lights and tunnel vision, giddiness and swooning, and impaired speech in which words and syllables are uttered out of sequence. Symptoms may progress to vertigo, delirium, nausea and vomiting, respiratory difficulty, very low pulse rate, a ghastly blue skin color, muscle paralysis, unconsciousness, and even death.

Mayor, Adrienne. "Mad honey!." *Archaeology* 48.6 (1995): 32-40.

