

PROCESS AND KAONA: IN SEARCH OF A MODERN NATIVE HAWAIIAN AESTHETIC  
THROUGH ARCHITECTURAL ORNAMENT

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Nohealani Canon

DArch Committee:

Daniel Friedman, Chairperson

Ivy Andrade

Healoha Johnston

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## Dedication

To Princess Bernice Pauahi Bishop. Thank you for the amazing opportunity to receive an exceptional education. I am forever grateful.

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## Abstract

Because the indigenous culture of these islands is Hawaiian, it is important that a Native Hawaiian cultural awareness is a part of all professions doing work here. The profession of architecture is one of the many in Hawai'i that must develop a greater Native Hawaiian consciousness. Currently, there is little presence of the culture in architecture; however, I plan to change this.

My goal for this dissertation was to develop a contemporary aesthetic based on authentic Native Hawaiian cultural practices and architecture in Hawai'i that can be applied to today's architecture. I first examine the definitions and philosophies of aesthetics within architecture. For the focus of this project, I have chosen architectural ornament and thus next review ornament's role in architecture throughout history and discuss its relevance to today's art. Then, I examined several Native Hawaiian cultural practices and architectural case studies in Hawai'i in order to distinguish a Hawaiian identity within design. Finally, I tested my findings by developing general guidelines and swatches which together can be considered the first steps toward a Native Hawaiian aesthetic.

## Table of Contents

Dedication .....	ii
Acknowledgments.....	iii
Abstract.....	iv
Table of Contents .....	v
List of Figures .....	vii
Introduction .....	14
<b>Chapter 1. Aesthetics</b> .....	16
What is aesthetics? What is environmental aesthetics? .....	16
Environmental Aesthetics and Architecture .....	17
<b>Chapter 2. Ornament</b> .....	23
The Different Elements of Ornament .....	27
<b>Pattern</b> .....	28
<b>Symbols</b> .....	32
<b>Color</b> .....	35
<b>Material</b> .....	39
<b>Texture</b> .....	39
<b>Technique</b> .....	40
Imagery .....	41
Creating Successful Ornamentation .....	42
Ornament-Rich Case Study .....	44
<b>Chapter 3. Native Hawaiian Aesthetic</b> .....	51
Native Hawaiian Sources & Typical Research Strategy.....	51
What is Native Hawaiian Aesthetic? .....	53
Hawaiian Cultural Practices .....	59
<b>Kākau Ka Uhi</b> .....	59
<i>Keone Nunes</i> .....	72
<b>Hana Ke Kapa</b> .....	77
<b>Hana Ka ‘Ahu ‘Ula</b> .....	86
<b>Chapter 4. Case Studies</b> .....	93
Hawai‘i’s Architectural Case Studies.....	93
<b>Indigenous Architecture</b> .....	93
<b>Kawaiaha‘o Church</b> .....	99

<b>‘Iolani Palace</b> .....	107
Modern Case Studies .....	113
<b>Ke Kula Kaiapuni ‘O Ānuenuē – UH Architecture Students – Rollin Ritter &amp; Michael Honyak</b> .....	113
<b>Honolulu High-Capacity Transit Corridor Project – Honolulu Rail – WCIT Architecture</b> ...	122
<b>Chapter 5. Conclusion &amp; Design</b> .....	128
Guidelines .....	130
Swatches .....	136
Glossary .....	146
Bibliography .....	165

## List of Figures

Figure 1: Semper's Hut - ( <a href="https://courses.cit.cornell.edu/arch262/notes-t/images/08b-primitivehut01.jpg">https://courses.cit.cornell.edu/arch262/notes-t/images/08b-primitivehut01.jpg</a> ) .....	18
Figure 2: Carpet Wall from Caribbean Hut – ( <a href="https://s-media-cache-ak0.pinimg.com/736x/a3/a3/7e/a3a37ee7ee8f7a99883bfefd8ffe652d.jpg">https://s-media-cache-ak0.pinimg.com/736x/a3/a3/7e/a3a37ee7ee8f7a99883bfefd8ffe652d.jpg</a> ) .....	19
Figure 3: Example of Turkish prayer rug – ( <a href="http://www.azerbaijanrugs.com/anatolian/ottoman-rugs-XVI-XVIIc/XVI_century_anatolian_rug_christopher_alexander_collection.htm">http://www.azerbaijanrugs.com/anatolian/ottoman-rugs-XVI-XVIIc/XVI_century_anatolian_rug_christopher_alexander_collection.htm</a> ) .....	31
Figure 4: The Munsell Color Wheel – ( <a href="https://s-media-cache-ak0.pinimg.com/736x/43/9d/31/439d310e93e79846e8cf27d1598bbcd9.jpg">https://s-media-cache-ak0.pinimg.com/736x/43/9d/31/439d310e93e79846e8cf27d1598bbcd9.jpg</a> ) .....	35
Figure 5: International Association of Color Consultants/Designers - North America Logo – ( <a href="http://iaccna.com/wp-content/uploads/2016/01/IACC-NA-Logo-150x150.png">http://iaccna.com/wp-content/uploads/2016/01/IACC-NA-Logo-150x150.png</a> ) .....	36
Figure 6: One of Frank Mahnke's Books on Color – ( <a href="https://images-na.ssl-images-amazon.com/images/I/41g67NWk9SL._SX337_BO1,204,203,200_.jpg">https://images-na.ssl-images-amazon.com/images/I/41g67NWk9SL._SX337_BO1,204,203,200_.jpg</a> ) .....	36
Figure 7: Color Studies by Wassily Kandinsky – ( <a href="http://architizer.com/blog/kandinskys-color-theory-and-architecture/">http://architizer.com/blog/kandinskys-color-theory-and-architecture/</a> ) .....	37
Figure 8: Famous Building Identified by color "The White House" – ( <a href="http://www.diaricatala.cat/wp-content/uploads/2016/02/Casa-Blanca-1068x712.jpg">http://www.diaricatala.cat/wp-content/uploads/2016/02/Casa-Blanca-1068x712.jpg</a> ) .....	38
Figure 9: TEA - Tenerife Espacio de las artes interior (building's exterior wall from interior) – ( <a href="https://thearchandthedome.files.wordpress.com/2013/06/tenerife-espacio-de-las-artes_06.jpg?w=740&amp;h=492">https://thearchandthedome.files.wordpress.com/2013/06/tenerife-espacio-de-las-artes_06.jpg?w=740&amp;h=492</a> ) .....	40
Figure 10: Assyrian carpet pattern engraved in stone (seen in Semper's book: Style in the Technical and Tectonic Arts, or, Practical Aesthetics) – ( <a href="https://books.google.com/books?id=5mCcKu6HhMAC&amp;pg=PA2&amp;source=gbs_selected_pages&amp;cad=3#v=onepage&amp;q&amp;f=false">https://books.google.com/books?id=5mCcKu6HhMAC&amp;pg=PA2&amp;source=gbs_selected_pages&amp;cad=3#v=onepage&amp;q&amp;f=false</a> ) .....	41
Figure 11: Vinyl tile with wood design example – ( <a href="http://www.homedepot.com/hdus/en_US/DTCCOMNEW/fetch/Category_Pages/Flooring/Vinyl_Flooring/vinyl-flooring-project-guide-12g.jpg">http://www.homedepot.com/hdus/en_US/DTCCOMNEW/fetch/Category_Pages/Flooring/Vinyl_Flooring/vinyl-flooring-project-guide-12g.jpg</a> ) .....	43
Figure 12: The Linz Cafe entrance - (Alexander 1981) .....	45
Figure 13: Linz Cafe Exterior - (Alexander 1981) .....	46
Figure 14: Linz Cafe alcoves - (Alexander 1981) .....	47
Figure 15: Colors of the cafe in sketches and actual - (Alexander 1981) .....	48

Figure 16: sketches of ornament patterns - (Alexander 1981).....	50
Figure 17: custom construction detail (left) and cafe interior (right) - (Alexander 1981).....	50
Figure 18: Pre-contact tattoo examples - (Kwiatkowski 2012).....	59
Figure 19: Post-contact tattoo example - (Kwiatkowski 2012).....	60
Figure 20: Customary Hawaiian tattoo tools - (Kwiatkowski 2012).....	61
Figure 21: pattern known as Alanui o Kamehameha (left) koa'e birds (right) - (Kwiatkowski 2012) .....	62
Figure 22: Niho manō variation - (Kwiatkowski 2012).....	62
Figure 23: Niho manō pyramid style - (Kwiatkowski 2012) .....	62
Figure 24: Niho manō linear without border - (Kwiatkowski 2012) .....	62
Figure 25: Niho manō pattern single strand - (Kwiatkowski 2012) .....	62
Figure 26: Ānuenu pattern - (Kwiatkowski 2012) .....	63
Figure 27: Wave or scallop pattern - (Kwiatkowski 2012) .....	63
Figure 28: Makaloa mat - (Kwiatkowski 2012).....	64
Figure 29: Puakala (left) puhala (middle) kuhanu or kahanu (right) - (Kwiatkowski 2012) .....	64
Figure 30: Nene (left) Humuniki (right) - (Kwiatkowski 2012) .....	64
Figure 31: Hale - (Kwiatkowski 2012).....	65
Figure 32: Papalua - (Kwiatkowski 2012) .....	65
Figure 33: Illustration of giving thanks to an 'aumakua – ( <a href="http://dlnr.hawaii.gov/sharks/files/2014/06/img_aumakua-300x178.jpg">http://dlnr.hawaii.gov/sharks/files/2014/06/img_aumakua-300x178.jpg</a> ).....	67
Figure 34: Palm tattoo example (left) finger tattoo example (right) - (Kwiatkowski 2012) .....	68
Figure 35: Calf and ankle tattoo example (left) hand tattoo example (right) - (Kwiatkowski 2012) .....	68
Figure 36: Hand tattoo examples - (Kwiatkowski 2012) .....	68
Figure 37: Tattooed officer showing symmetry with right chest/shoulder tattoo and left thigh tattoo - (Kwiatkowski 2012).....	68



Figure 38: Calf and ankle tattoo examples - (Kwiatkowski 2012).....	69
Figure 39: Kauwā tattoo examples - (Kwiatkowski 2012).....	69
Figure 40: Tattoo detail of “Death of Captain Cook” - (Kwiatkowski 2012) .....	70
Figure 41: Tattoo examples - (Kwiatkowski 2012).....	70
Figure 42: tattoo on dancer (left) bar design (middle) Liholiho pattern (right) - (Kwiatkowski 2012) .....	71
Figure 43: Bird and triangle design (left) niho manō variation (right) - (Kwiatkowski 2012) .....	71
Figure 44: Niho manō variations - (Kwiatkowski 2012) .....	71
Figure 45: Detail of “Interieur” - (Kwiatkowski 2012).....	71
Figure 46: Tattoos by Keone Nunes – ( <a href="http://honolulumuseum.org/12749-tattoo_honolulu">http://honolulumuseum.org/12749-tattoo_honolulu</a> )....	72
Figure 47: Keone Nunes (left) Keone practicing tattoo (right) – ( <a href="https://ab976f528c498801423d-2376439231beb5d718e8f49fe25fed31.ssl.cf1.rackcdn.com/uploads/media/media/8362/featured_exhib_nunes.jpg">https://ab976f528c498801423d-2376439231beb5d718e8f49fe25fed31.ssl.cf1.rackcdn.com/uploads/media/media/8362/featured_exhib_nunes.jpg</a> ) ( <a href="http://www.hawaiiimagazine.com/sites/default/files/field/image/Photo%20Olive%20Koning.png">http://www.hawaiiimagazine.com/sites/default/files/field/image/Photo%20Olive%20Koning.png</a> ) .....	73
Figure 48: Customary kākau tools – ( <a href="https://www.olukai.com/keone-nunes.html">https://www.olukai.com/keone-nunes.html</a> ) .....	73
Figure 49: Close up of kākau – ( <a href="http://www.hawaiiimagazine.com/content/what-you-should-know-about-traditional-hawaiian-art-tattoo">http://www.hawaiiimagazine.com/content/what-you-should-know-about-traditional-hawaiian-art-tattoo</a> ) .....	74
Figure 50: Keone Nunes work: leg tattoo (left) hand tattoo (middle) whole body tattoo (right) - ( <a href="https://yosotattoo.files.wordpress.com/2008/12/072507keone2.jpg">https://yosotattoo.files.wordpress.com/2008/12/072507keone2.jpg</a> ) ( <a href="https://yosotattoo.files.wordpress.com/2008/12/072507keone3.jpg?w=575">https://yosotattoo.files.wordpress.com/2008/12/072507keone3.jpg?w=575</a> ).....	76
Figure 51: Keone with his “skin stretchers” – ( <a href="https://s-media-cache-ak0.pinimg.com/736x/cc/b1/e8/ccb1e837cab965f078dfbe34f3328c54.jpg">https://s-media-cache-ak0.pinimg.com/736x/cc/b1/e8/ccb1e837cab965f078dfbe34f3328c54.jpg</a> ) .....	76
Figure 52: Tattoo by Keone Nunes – ( <a href="https://www.google.com/url?sa=i&amp;rct=j&amp;q=&amp;esrc=s&amp;source=images&amp;cd=&amp;ved=0ahUKEWjKhdK5vNTSAhVE2mMKHU37BocQjBwIBA&amp;url=http%3A%2F%2Fstatic.pechakucha.org%2Fpechakucha%2Fuploads%2Fslide%2Fimage%2F5345fe764f5c2916640000f%2Ffull_10_10.jpg&amp;psig=AFQjCNHc--wTBHwjSZ2kSH9zSE63PB3cAA&amp;ust=1489526791603326">https://www.google.com/url?sa=i&amp;rct=j&amp;q=&amp;esrc=s&amp;source=images&amp;cd=&amp;ved=0ahUKEWjKhdK5vNTSAhVE2mMKHU37BocQjBwIBA&amp;url=http%3A%2F%2Fstatic.pechakucha.org%2Fpechakucha%2Fuploads%2Fslide%2Fimage%2F5345fe764f5c2916640000f%2Ffull_10_10.jpg&amp;psig=AFQjCNHc--wTBHwjSZ2kSH9zSE63PB3cAA&amp;ust=1489526791603326</a> ) .....	76
Figure 53: Kapa-making – ( <a href="http://www.kumukahi.org/images/1301/kapa7__medium.jpg">http://www.kumukahi.org/images/1301/kapa7__medium.jpg</a> ) .....	77
Figure 54: Wauke plant - ( <a href="http://www.ehoiilili.com/uploads/1/7/9/6/17965961/8431806_orig.jpg">http://www.ehoiilili.com/uploads/1/7/9/6/17965961/8431806_orig.jpg</a> ).....	78

Figure 55 : Strips of wauke – ( <a href="https://kapakulture.files.wordpress.com/2013/01/3491.jpg">https://kapakulture.files.wordpress.com/2013/01/3491.jpg</a> ) .....	79
Figure 56: kapa beaters - ( <a href="https://s-media-cache-ak0.pinimg.com/1200x/66/9e/47/669e4706300e7b591d72ade32754edb2.jpg">https://s-media-cache-ak0.pinimg.com/1200x/66/9e/47/669e4706300e7b591d72ade32754edb2.jpg</a> ) .....	80
Figure 57: Kapa showing beater marks – ( <a href="http://tapa.gla.ac.uk/images/webimages/translight%20(4).jpg">http://tapa.gla.ac.uk/images/webimages/translight%20(4).jpg</a> ) .....	80
Figure 58: Kapa showing beater marks – ( <a href="http://mauimagazine.net/beauty-in-the-bark/">http://mauimagazine.net/beauty-in-the-bark/</a> ) .....	80
Figure 59: Kapa being stored – ( <a href="https://aeimke.files.wordpress.com/2015/01/storing.jpg?w=648">https://aeimke.files.wordpress.com/2015/01/storing.jpg?w=648</a> ) .....	81
Figure 60: Kapa designs by Kalani Tanahy - ( <a href="https://honoluluuseum.org/learn/classes/textiles_fiber/14156-the_arts_of_hawaiian_kapa_making_64">https://honoluluuseum.org/learn/classes/textiles_fiber/14156-the_arts_of_hawaiian_kapa_making_64</a> ) .....	81
Figure 61: Finished kapa - ( <a href="http://mauimagazine.net/beauty-in-the-bark/">http://mauimagazine.net/beauty-in-the-bark/</a> ) .....	81
Figure 62: Finished kapa - ( <a href="http://britishmuseum.tumblr.com/post/113056006632/the-%C3%B6mie-people-of-papua-new-guinea-are-a-small/embed">http://britishmuseum.tumblr.com/post/113056006632/the-%C3%B6mie-people-of-papua-new-guinea-are-a-small/embed</a> ) .....	81
Figure 63: Table of Dyes – (Rose 1971).....	82
Figure 64: Colors of dyes made from natural sources – ( <a href="http://www.kapahawaii.com/hawaiian-kapa-designs-and-patterns.html">http://www.kapahawaii.com/hawaiian-kapa-designs-and-patterns.html</a> ) .....	82
Figure 65: ‘Ohe kapala - ( <a href="http://kamahawaii.blogspot.com/2011/10/weekend-update-october-6-8-2011.html">http://kamahawaii.blogspot.com/2011/10/weekend-update-october-6-8-2011.html</a> ) .....	83
Figure 66: Kapa liners - ( <a href="http://data.bishopmuseum.org/ethnobotanydb/images/ohe_kapa_liners.jpg">http://data.bishopmuseum.org/ethnobotanydb/images/ohe_kapa_liners.jpg</a> ).....	84
Figure 67: Kapa assortment – ( <a href="https://kapakulture.files.wordpress.com/2013/02/kapa-assortment.jpg">https://kapakulture.files.wordpress.com/2013/02/kapa-assortment.jpg</a> ).....	84
Figure 68: Kapa assortment – ( <a href="https://www.hawaii.com/discover/always-stylish-aloha-shirts/">https://www.hawaii.com/discover/always-stylish-aloha-shirts/</a> )	85
Figure 69: Kapa clothing - ( <a href="http://paieaprojects.com/blog/?category_name=design">http://paieaprojects.com/blog/?category_name=design</a> ) ( <a href="http://mauinow.com/2014/01/14/macc-presents-new-hula-work-kapa-symposium/">http://mauinow.com/2014/01/14/macc-presents-new-hula-work-kapa-symposium/</a> ) .....	85
Figure 70: Kapa pā’ū – ( <a href="http://www.bishopmuseum.org/hulia-ano/">http://www.bishopmuseum.org/hulia-ano/</a> ) .....	86
Figure 71: Kapa kīhei (shawl) - ( <a href="https://s-media-cache-ak0.pinimg.com/originals/6d/c5/f8/6dc5f8a1cf0450a3fcce55a675de644f.jpg">https://s-media-cache-ak0.pinimg.com/originals/6d/c5/f8/6dc5f8a1cf0450a3fcce55a675de644f.jpg</a> ) .....	86

Figure 72: Various Hawaiian birds used for feathers - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	87
Figure 73: 'Uo (feather bundle) - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	88
Figure 74: Table of Main Hawaiian Bird Species – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	89
Figure 75: 'Ahu 'Ula (feather cape) - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	89
Figure 76: Various 'ahu 'ula – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	<b>Error! Bookmark not defined.</b>
Figure 77: Various 'ahu 'ula – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	91
Figure 78: Various 'ahu 'ula - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015) .....	91
Figure 79: Different hale forms - (Brigham 1908).....	94
Figure 80: Honolulu in 1822 - (Brigham 1908).....	94
Figure 81: End of rafter with "chin" for lashings - (Brigham 1908).....	96
Figure 82: Polynesian cord – (Brigham 1908) .....	96
Figure 83: Hale with netting over thatching – (Brigham 1908) .....	97
Figure 84: Hale showing thorough thatching - (Brigham 1908).....	97
Figure 85: Example of Hawaiian hale - (Brigham 1908).....	98
Figure 86: Example of hale with small doors - (Brigham 1908) .....	98
Figure 87: Hawaiian hale with lānai - (Brigham 1908) .....	99
Figure 88: Bingham hale - (Damon 1945) .....	100
Figure 89: First church in Honolulu 1822 - (Damon 1945).....	100
Figure 90: The fourth church – (Damon 1945) .....	103
Figure 91: An example of a gallery – (Damon 1945).....	104
Figure 92: The fifth church – (Damon 1945).....	105

Figure 93: Church interior – (Damon 1945).....	105
Figure 94: Church with the added steeple – (Damon 1945).....	106
Figure 95: Ka wai a ha’o memorial pool – (Damon 1945).....	106
Figure 96: Memorial gateway - (Damon 1945).....	107
Figure 97: The first palace - ( <a href="https://www.nps.gov//subjects/teachingwithhistoricplaces/images/iolani-palace_firstpalacejpg.jpg">https://www.nps.gov//subjects/teachingwithhistoricplaces/images/iolani-palace_firstpalacejpg.jpg</a> ) .....	108
Figure 98: The new palace – (Iolani Palace Restoration Project. and Moore 1970).....	108
Figure 99: The palace in 1922 - ( <a href="https://upload.wikimedia.org/wikipedia/commons/6/62/Iolani_Palace%2C_ca._1922.jpg">https://upload.wikimedia.org/wikipedia/commons/6/62/Iolani_Palace%2C_ca._1922.jpg</a> ) ...	110
Figure 100: Pūlo’ulo’u marking the palace - ( <a href="https://s-media-cache-ak0.pinimg.com/736x/6a/74/5b/6a745befdf7cfbd8368fed4451a26530.jpg">https://s-media-cache-ak0.pinimg.com/736x/6a/74/5b/6a745befdf7cfbd8368fed4451a26530.jpg</a> ).....	111
Figure 101: Palace interior - ( <a href="https://everywhereonce.files.wordpress.com/2013/09/iolani-palace-grand-hall-staircase-honolulu-hawaii.jpg">https://everywhereonce.files.wordpress.com/2013/09/iolani-palace-grand-hall-staircase-honolulu-hawaii.jpg</a> ) .....	111
Figure 102: The throne room - ( <a href="https://s-media-cache-ak0.pinimg.com/736x/6f/f7/a4/6ff7a43ffbc4b20e48c57be9b8214b68.jpg">https://s-media-cache-ak0.pinimg.com/736x/6f/f7/a4/6ff7a43ffbc4b20e48c57be9b8214b68.jpg</a> ).....	112
Figure 103: (left) The music room - ( <a href="https://s-media-cache-ak0.pinimg.com/236x/fd/0d/6f/fd0d6fb304ea8c81ded67fd6d79ece06.jpg">https://s-media-cache-ak0.pinimg.com/236x/fd/0d/6f/fd0d6fb304ea8c81ded67fd6d79ece06.jpg</a> ) .....	113
Figure 104: (right) The blue room – ( <a href="https://s-media-cache-ak0.pinimg.com/originals/1b/36/a6/1b36a69658396869b752347530ea5839.jpg">https://s-media-cache-ak0.pinimg.com/originals/1b/36/a6/1b36a69658396869b752347530ea5839.jpg</a> ) .....	113
Figure 105: The dining room - ( <a href="http://www.explorationhawaii.com/wp-content/uploads/2011/09/diningroom.jpeg">http://www.explorationhawaii.com/wp-content/uploads/2011/09/diningroom.jpeg</a> ).....	113
Figure 106: Palace front gate - ( <a href="http://oldhousehistory.com/files/2010/04/march-2010_img_24.jpg">http://oldhousehistory.com/files/2010/04/march-2010_img_24.jpg</a> ) .....	113
Figure 107: Aerial photo of school - (Ritter and Honyak 2016) .....	114
Figure 108: Presentation slide: Material Callout - (Ritter and Honyak 2016).....	116
Figure 109: Presentation slide: Rainwater Collection (top) Natural Ventilation (bottom) - (Ritter and Honyak 2016) .....	116
Figure 110: Presentation Slide: Trellis - (Ritter and Honyak 2016).....	116

Figure 111: Presentation Slide: Culturally Derived Structure - (Ritter and Honyak 2016) .....	117
Figure 112: Hale hālāwai (meeting house) - (left) open end style (right) thatched end style - (Honolulu 2017) .....	119
Figure 113: Hale hālāwai framing - (Honolulu 2017) .....	120
Figure 114: Three foundation types (top left) pou kanu (top right) kahua (bottom left) pa pōhaku - (Honolulu 2017) .....	120
Figure 115: Hale ku'ai or eating house (left) shed style (left bottom) shed style framing (right) gable style (right bottom) gable style framing - (Honolulu 2017) .....	120
Figure 116: Hale noa or house free of restrictions (top left) framing (top right) foundation (bottom left) section (bottom right) – (Honolulu 2017) .....	120
Figure 117: Hale wa'a or canoe house (top left framing (top right) foundation (bottom) – (Honolulu 2017) .....	121
Figure 118: Exterior renderings of gym design - (Ritter and Honyak 2016) .....	121
Figure 119: Exterior renderings of the gym design - (Ritter and Honyak 2016) .....	122
Figure 120: Interior renderings of the gym design - (Ritter and Honyak 2016).....	122
Figure 121: WCIT Architecture logo - ( <a href="https://pbs.twimg.com/profile_images/1084786371/logo_square_300x300_400x400.jpg">https://pbs.twimg.com/profile_images/1084786371/logo_square_300x300_400x400.jpg</a> ) ...	122
Figure 122: Firm's presentation of the explanation of the 3 papa - (WCIT 2010) .....	125
Figure 123: Firms presentation of: list of ahupua'a that rail will go through (top) and explanation of the 3 papa for the Waipahū Station (bottom) - (WCIT 2010).....	125
Figure 124: Final design of Waipahū station marker - (WCIT 2010) .....	126
Figure 125: Another example of WCIT work - (WCIT 2010).....	127

## Introduction

As a person with Native Hawaiian blood, I choose to identify myself with my Hawaiian ancestry. I am always striving to learn more about the Native Hawaiian culture and also to bring clarity about the culture to others. Because the indigenous culture of these islands is Hawaiian, it is important that a Native Hawaiian cultural awareness is a part of all professions doing work here. The profession of architecture is one of the many in Hawai'i that must develop a greater Native Hawaiian consciousness. Currently, there is little presence of the culture in architecture; however, I plan to change this.

My goal for this dissertation was to develop a contemporary aesthetic based on authentic Native Hawaiian cultural practices and architecture in Hawai'i that can be applied to today's architecture. I first examine the definitions and philosophies of aesthetics within architecture. For the focus of this project, I have chosen architectural ornament and thus next review ornament's role in architecture throughout history and discuss its relevance to today's art. Finally, I examined several Native Hawaiian cultural practices and architectural case studies in Hawai'i in order to distinguish a Hawaiian identity within design. Finally, I tested my findings by developing general guidelines and swatches which together can be considered the first steps toward a Native Hawaiian aesthetic.

This dissertation is divided into five chapters: Aesthetics, Ornament, Native Hawaiian Aesthetics, Case studies, and Design. In chapter 1, I start with the definition of aesthetics, the difficulties that arise when determining aesthetic value, and possible perspectives for evaluating the aesthetic level of an object. I then shift focus to environmental aesthetics, its definition, and the complexities involved in the assessment of an environment's aesthetic. I trace the evolution of enclosure, not developments resulting from the hostile elements of nature, and identify changes that occurred to aesthetics over time. Here I also look at the diffusion of ornamentation and the role re-presentation plays in architecture today.

Ornament was once a key element in architecture and remains highly beneficial today, if applied correctly. In chapter 2, I present a brief history of ornamentation, covering its importance to early architecture and its fall from grace in the early nineteenth century, and discuss the difficulties inherent in understanding and applying proper ornamentation today without official

principles to guide its return to beauty. I point out the forgotten spiritual qualities of ornament and its meaning. I then outline the basic rules of ornament, understood as elements that go beyond necessity. As ornament may take many forms, I summarize the work of selected theorists, reviewing what to do and what to not do to achieve successful ornamentation. Ornament must be honest, must be faithful to the true nature of the material from which it is made, must be made by hand, and must incorporate natural properties. The final section of the chapter is a case study, a thorough examination of an architectural project rich in ornament, the Linz Café.

Chapter 3 begins with a review of the challenges one faces when doing research on Hawaiian culture. Our history is directly related to the information we are able to obtain about our culture today. I then investigate three Hawaiian customary practices: *uhi*, *kapa*, and *‘ahu ‘ula*. Cultural practices, which are both functional and symbolic, are parallel to ornament. These three, in particular, have the most similarities to ornament in terms of process and pattern. I explore the Hawaiian aesthetic through the recovery of indigenous knowledge. I present a brief history on the banishment of the Hawaiian language and the resulting loss of language and deteriorating of culture. I explain how we are able to revitalize our culture and identity using *mo‘olelo*. A specific code is needed to interpret the Hawaiian symbolism and meaning, and therefore aesthetic, because there are no direct translations between Hawaiian and English. However, we are able to point out parallels, such as *kaona*, as secondary function of Hawaiian symbols.

In chapter 4, I analyze the evolution of Hawaiian architecture through case studies. I first evaluate, in chronological order, Hawaiian vernacular architecture, Kawaiaha‘o Church, and ‘Iolani Palace. I finish with analyses of two modern case studies, Ke Kula Kaiapuni ‘O Ānuenue and the Honolulu High-Capacity Transit Corridor project. These case studies can aid in identifying persisting design elements and how we can develop them today to create an authentic Native Hawaiian aesthetic.

Finally, in chapter 5, I apply the research and findings to the development of a set of guidelines, presented in a table, that can help architecture in Hawai‘i respond to the lack of presence of a Native Hawaiian aesthetic. Also, I present a small library of swatches to contribute to Native Hawaiian conscious architectural ornament in Hawai‘i.

## Chapter 1. Aesthetics

### What is aesthetics? What is environmental aesthetics?

Aesthetics is defined as “the philosophical theory or set of principles governing the idea of beauty in a given time and place.”<sup>1</sup> When we consider an object’s aesthetic quality, we typically base our judgement of its success on such principles. The principles themselves, however, remain largely undefined. Many theorists, artists, and design professionals have attempted to establish aesthetic principles, but none are universally accepted. As the definition states, these principles depend on the time and place to which they refer. Because aesthetics evolves over time, defining exact principles is difficult. The word aesthetics originated from the Greek word *aisthetikos*, which means “relating to perception by the senses.”<sup>2</sup> To avoid misinterpretation, in this dissertation aesthetics will be referred to as the visual appreciation of beauty in relation to our current place and time.

How is an object’s aesthetic quality determined? According to Allen Carlson, philosopher and scholar, there are two perspectives a person may take when evaluating the aesthetic quality of something: the subjective and the objective. The subjectivist questions the validity of any judgement of aesthetic quality based on the absence of any authoritative standard. As a result, the subjectivist believes that a final decision of whether something is aesthetically successful or not can never be reached. The objectivist, on the other hand, believes a judgment can be made. The objectivist draws upon two resources to determine aesthetic quality: the appreciator and the object. As long as all of the object’s basic information is known, the appreciator is able to evaluate the design; this basic information allows the appreciator to change his or her “frames,”<sup>3</sup> or attitudes, toward the object or design.

For the purpose of this dissertation, I approach aesthetic quality from an objectivist point of view. I obtained thorough information about the relevant objects of ornamentation and I will act as the direct appreciator. As a member of the Native Hawaiian community, I am able to make culturally sensitive judgements on the aesthetic and relevance of objects of ornamentation that have a high chance of being accepted by the greater Hawaiian community.

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<sup>1</sup> (Dictionary.com 2016)

<sup>2</sup> (Press 2016)

<sup>3</sup> (Carlson 1999)



This dissertation focuses on environmental aesthetics, or the assessment of the beauty of our surroundings. Environmental aesthetics can be applied in a variety of contexts, from rural environments to urban ones, from a forest to a living room. Aesthetic appreciation of our surroundings is based on the perceptions of our senses. Historically, aesthetics was judged by the enjoyment of a thing—enjoyment that grew from the pleasant sensations that were seen, heard, touched, smelled, or tasted.

Assessing the aesthetic quality of an environment is challenging for several reasons. First, the appreciator is immersed in his or her environment, the object of assessment, which engulfs the senses and influences perspective. Moreover, a person's presence within the environment affects constant change on both the environment itself and on his or her relationship to the environment. Second, the passage of time and seasonal cycles cause uncontrollable alterations, and thus the environment is undergoing constant change. Third, a person's ability to analyze can be skewed by the historical events that have become associated with a place. In such cases, a person or community can fall victim to bias caused by the memories or retelling of these often-negative events. Bias can block the appreciation of any setting. Therefore, in order to fully appreciate or assess the aesthetics of something, a person must abandon his or her preconceptions, interests, and conditioning completely. All bias must be dropped in order to experience a place as it is. The question then follows: is it possible to abandon one's preconceptions? I am not sure. Not all biases, of course, are negative; but, whether positive or negative, the objective is to rid one's perspective of any skewing.

### *Environmental Aesthetics and Architecture*

"The fact is, a person is so far formed by his surroundings, that his state of harmony depends entirely on his harmony with his surroundings."<sup>4</sup>

In the context of architecture, one's environment is defined by various building components. For example, indoors, the environment may be defined by a series of walls enclosing the space; outdoors, it may be defined by a series of columns suggesting a walkway. My aim here will be to focus on components that cause one to see beauty or ugliness.

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<sup>4</sup> (Alexander 1979)

Gottfried Semper, a notable German architect, discusses the elements of architecture in his work *The Four Elements of Architecture*. According to Semper, all begins with the hearth. The hearth is the first sign of settlement; it is the spiritual/moral element of architecture; it is the sacred focus that the three remaining elements—roof, enclosure, and mound—protect against the hostile elements of nature. Semper writes, moreover, that in an effort to protect the hearth, men and women developed new skills. They fashioned ceramics and then metal for the base of the hearth, developed masonry to build the mound and carpentry to build the roof, and invented weaving to assemble the enclosure. Semper writes that the “store of architectural forms in ancient times arose from the material.”<sup>5</sup> He then adds, “Architecture, like its great teacher, nature, should choose and apply its material according to the laws conditioned by nature,”<sup>6</sup> but does not identify those laws. He writes, “If the most suitable material is selected for their embodiment, the ideal expression of a building will of course gain in beauty and meaning by the material’s appearance as a natural symbol.”<sup>7</sup>



Figure 1: Semper's Hut - (<https://courses.cit.cornell.edu/arch262/notes-t/images/08b-primitivehut01.jpg>)

Semper goes on to detail the evolution of enclosure to explain why architects should aim to convey a natural symbol. The first enclosures were fashioned from weaved mats and carpets, offering vertical protection for the hearth, and originating the “art of the wall fitter, that is, the

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<sup>5</sup> (Semper 1989)

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

weaver of mats and carpets.”<sup>8</sup> Wickerwork and hanging carpets were the original space dividers, or walls. In time, for practical reasons such as security, load support, and permanence, wall materials changed to clay tile, brick, or stone. Although transformed, the walls were treated as functional structure and were hidden behind “colorful woven carpets”<sup>9</sup> and other painted and sculptured decorations used to imitate colorful embroideries.



*Figure 2: Carpet Wall from Caribbean Hut – (<https://s-media-cache-ak0.pinimg.com/736x/a3/a3/7e/a3a37ee7ee8f7a99883bfefd8ffe652d.jpg>)*

Wall treatments as “substitutes for the earlier carpets”<sup>10</sup> continued to be used and became a “general diffusion,” taking the forms of paneling, dressings, wall murals, stone patterning, and colorful carpet-like adornments. Even exterior walls were dressed with braided reeds, carpets, and sculptural paintings. The act of dressing had become “a custom widely practiced among all prehistoric peoples.”<sup>11</sup> For example, the Tabernacle of Moses, a holy shrine, was celebrated in part because no piece of the structure was left undressed. Unfortunately, with the series of substitutions followed by diffusion, the natural symbol of the materials became lost and resulted in a “struggle toward naturalism.”<sup>12</sup> Semper warned that a “wall should never be permitted to lose its original meaning as a spatial enclosure by what is represented on it; it is always advisable when painting walls to remain mindful of the carpet as the earliest spatial enclosure. Exceptions can be made only in such cases where the spatial enclosure exists materially but not in the idea. Then painting enters the realm of theater decoration, which it often may be able to do with good results.”<sup>13</sup>

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<sup>8</sup> (Semper 1989)

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> (Semper 1989)

Philosopher and theorist Karsten Harries addresses aesthetics and ornament in his essay “Representation and Re-Presentation in Architecture.” He begins with the question, “What distinguishes architecture from mere building?” and argues that the distinguishing factor is the touch of the architect, who “builds but also does something ‘more.’” He then quotes scholar Nikolaus Pevsner who claims that the “more” refers to “a view to aesthetic appeal” but counters this argument by pointing out that because aesthetic appeal has yet to be adequately defined, using this concept as the meaning for “more” results in an empty definition. Instead, he argues, “what distinguishes architecture from mere building is its power of re-presentation.”<sup>14</sup>

A building becomes a work of architecture when its design embodies pure self-representation. Harries explains, “Buildings must arrest our attention not as representations, not as signs or symbols referring us to something other, but as the buildings they are.”<sup>15</sup> When a building attempts to resemble something it clearly is not, the performance only underlines the differences between itself and the something it is trying to be. Harries briefly discusses the writings of Marc-Antoine Laugier, the eighteenth century architectural theorist, who agrees that what lifts architecture beyond mere building is its power of representation. He also argues that to achieve a pure representation, the architect must return to the “natural elements of a building.”<sup>16</sup>

Re-Presentation means “to go back and express oneself again.” The expression “to go back,” in this case, means “to reinterpret original forms of representation so that new expressions can be offered.”<sup>17</sup> In this dynamic, the new expression is often based on the original; in other words, representation serves self-representation. This seemingly difficult concept helps explain why representation is an art that creates a tension within the work it supplements which “gives it life.”<sup>18</sup> Another way to understand representation is to think of it as translation. A building translates its meaning to its viewers. Is this not the primary purpose of designing a building? And, how does one cause the resulting translation to be called beautiful? Beauty is an intrinsic part of human experience. Even so, it is most often a secondary concern, both in architecture and in our everyday lives. Things of everyday life are so familiar to us that we don’t often linger over appearances. Harries says, “we really only look at it when it fails in some

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<sup>14</sup> (Harries 1988)

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

way,”<sup>19</sup> whereas, “everything that strikes us as beautiful dislocates us as it captures our attention by its presence.”<sup>20</sup> What then causes this dislocation and are we able to mimic this in artwork? Harries answers, “what strikes us as beautiful presents itself to us as if in a frame. Thus ‘framed’ it invites us to look again, now with more open eyes.”<sup>21</sup> This is re-presentation.

With this statement, Harries hints that the viewer has a charge as well. He quotes Erwin Panofsky, a German-Jewish art historian who says, “to experience something aesthetically we have to disengage ourselves from the world.”<sup>22</sup> Aesthetic experience is based on our usual involvement with things. Ideas that usually prevent us from being truly unbiased “lead us beyond the present to an uncertain future.”<sup>23</sup> However, aesthetic experiences should exist in the present. Panofsky says, “Let us just look at it, without relating it intellectually or emotionally to anything outside itself.”<sup>24</sup> This is easier said than done; but if accomplished, the viewer is able to see the originally-intended representation offered by the object or thing. In this way, the thing being viewed needs to have a self-sufficient presence, and, as Harries says, needs to frame itself.

This “more” Harries writes about, or re-presentation of itself, is also fundamentally a sign. An object must both execute its function and act as a sign. Harries offers the example of a house; it “not only functions as a house, but signifies a house. Not only physical but spiritual.”<sup>25</sup> Harries discusses the writings of Robert Venturi in *Learning from Las Vegas*, who stresses “the forgotten symbolism of architectural form.”<sup>26</sup> Venturi believes that “modern architects have abandoned ‘a tradition of iconology in which painting, sculpture, and graphics were combined with architecture,’”<sup>27</sup> a tradition that gave architecture a voice the viewer could understand. Venturi praises the kind of architecture that lets sign dominate space. Signs have visual appeal. They draw out attention then send it on as what is signified. Without signs, buildings become mute. Manfredo Tafuri, an Italian architect and theorist, refers to this muting dynamic as “the language crisis of modern architecture.”<sup>28</sup>

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<sup>19</sup> (Harries 1988)

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> (Harries 1988)

As a result, Venturi demands an architecture of communication, an architecture that can be read like a text. He is not suggesting that we cover buildings with inscriptions because a direct translation is not possible. In translation, connotations from the original are always lost. Art and architecture do, however, belong to language. They seek to communicate something. But, what language is the new architecture to speak? And how do we “read” this language? Harries writes, the “language of architecture is language of representation”<sup>29</sup> where “building is designed to say something about building.”<sup>30</sup> In order to read such a message, “the moving eye in the moving body must work to pick out and interpret a variety of changing, juxtaposed orders.”<sup>31</sup>

Buildings include specific connotations that give us insight into the ethos of those who built them. Thus, a building may signify an ideal community by representing an ideal architecture. Harries explains, “it represents this ideal architecture by drawing on both past architecture and on the then firmly established understanding of the spiritual significance of things to create metaphors of what transcends all our building and dwelling.”<sup>32</sup> The connection with an original or genuine dwelling then endows an aura of tradition. For example, “churches were thus built as representations of roman basilicas”<sup>33</sup> where the facades represented city gates. Harries urges, “We need to rediscover the re-presentational function, not only of architectural ornament, but more generally of all the aesthetic aspects of architecture.”<sup>34</sup>

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<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

## Chapter 2. Ornament

“Ornament must serve the ornament bearer if it is to live as ornament. The point of such service is first of all re-presentation,” writes Harries. Ornament must serve to re-present a building in its setting. “Ornament should serve the ornament bearer as a bracelet should serve the arm it circles; or as a picture frame should serve the framed picture. There is indeed a profound relationship between ornament and frame. Both re-present. Not that either is an indispensable condition of aesthetic beholding. To some extent, everything that strikes us as beautiful dislocates us as it captures our attention by its presence.”<sup>35</sup>

The role ornament plays in architecture has changed dramatically over the centuries. In order to find the parameters for the applications of ornamentation today, this section reviews the history of ornamentation through the writings of Leon Battista Alberti, Antoine Picon, John Ruskin, Gottfried Semper, Adolf Loos, and Umberto Eco, among others.

Prior to the nineteenth century, ornament held an important place in architecture. It was believed that ornament elevated a structure to a higher level of meaning and value.<sup>36</sup> In *On the Art of Building In Ten Books*, fifteenth century architect and theorist Leon Battista Alberti writes, “Three conditions apply to every form of construction—that what we construct should be appropriate to its use, lasting in structure, and graceful and pleasing in appearance,” and calls the last condition “the noblest and most necessary of all.” He dedicates his sixth book to the pleasing appearance, or beauty, of architecture. Here, he presents several benefits of ornamentation: first, it increases the life of a building because society is more willing to protect and preserve a beautiful structure; second, it becomes the source of a building’s dignity, charm, authority, and worth; and third, it provides stimulation and inspiration for the eyes, which are hungry for beauty. Unfortunately, beauty is an element that cannot be broken down into a simple collection of rules or a series of steps. Alberti discusses the ambiguous and complicated nature of beauty and the difficulty of its achievement in architecture. He defines it precisely: “Beauty is that reasoned harmony of all the parts within a body, so that nothing may be added, taken away, or altered but for the worse.”<sup>37</sup>

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<sup>35</sup> (Harries 1988)

<sup>36</sup> Ibid.

<sup>37</sup> (Alberti 1988)

In the early nineteenth century, the philosophy and applications of architecture teetered uneasily between utility and beauty.<sup>38</sup> The concept that form follows function, a theory inspired by the works of Roman architect Vitruvius and written about by architect Louis Sullivan, led architects to question the compromises that were being made for the purpose of ornamentation. Adolf Loos, an early twentieth century theorist and pioneer of modern architecture, strongly condemned the wasteful application of ornament. Consequently, many architects discarded traditional ornament as having little use or value in modern building design.

Loos's dramatic essay, "Ornament and Crime," offers a critical perspective on the use of ornament in his day. He uses provocative language—words such as "degenerate," "erotic," and "criminalize"—to condemn excessive ornament. According to Loos, "mankind had reached the point where ornament was no longer a source of pleasure"; man had become numb to ornament because of its wasteful and excessive applications. Loos also argues that ornament had become a waste of money and labor due to the short timespan each design remained popular and the length of time it took craftsmen to produce. He points out that these craftsmen were increasingly poorly paid, which resulted in lower quality ornament that then lost its connection to culture. Ornament had "no parents and no offspring, no past and no future."<sup>39</sup>

Loos's arguments are compelling. They help clarify the origin of modern design, away from ornament toward the plain and simple. Through his work, Loos has created a parameter for defining true beauty in architecture: waste is unsightly. His writing stresses the importance of the correct use of ornamentation. Loos also writes, "lack of ornament is a sign of spiritual strength."<sup>40</sup> While this statement may have been true in his day, I contend that it no longer applies. In our current time, ornament represents a cultural identity and is therefore a sign of spiritual strength.<sup>41</sup>

In his essay "Ornament," Ananda Coomaraswamy elaborates on the spiritual aspect of ornamentation. Coomaraswamy was an art historian who interpreted theory and symbolism in Indian culture. He is known for his interest in cross-cultural perspectives which he uses to tie theories to multiple ethnicities' traditions. In his essay, he lists the words equivalent to ornament in Sanskrit, Chinese, Latin, English, and Greek. He then breaks all words down giving readers an

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<sup>38</sup> (Harries 1988)

<sup>39</sup> (Loos and Opel 1998)

<sup>40</sup> (Loos and Opel 1998)

<sup>41</sup> Ibid.



insight to origin words and original intentions of the word itself. He argues that our relationship to objects has become unbalanced in terms of the physical and metaphysical, or spiritual. Objects that are labeled ornament have become purely physical. Ornament is an art form whose living meaning has been lost through the denial of its relationship to the metaphysical as the image of a spiritual truth. Coomaraswamy defines ornament as a combination of utility and meaning, “a natural and radical pair.”<sup>42</sup> In Sanskrit this combination is known as *artha*, or “purpose.” Therefore, meaning is half of ornament and to remove this half defeats the purpose of ornament.<sup>43</sup>

The word for ornament in Sanskrit is *alamkara*. In Sanskrit the letters “l” and “r” are interchangeable. Thus, *alamkara* can be broken down into *alam-kr*, “to make sufficient,” and *aram-kr*, “to satisfy” or “to adorn.” The Greek word for ornament *ἀραρίσκω* can be translated as “order, arrange, equip, adorn, dress, embellishment.” In this case, adorn means “to enhance an object’s effects, to empower.” Coomaraswamy argues that that which we call ornament makes the thing it embellishes “more in act and more in being.”<sup>44</sup> In other words, the ornament makes an object or building greater, glorified, magnified, nourished, or supported. For this reason, there is no such thing as a “mere” ornament, only equipment by which man himself is made greater in degree.<sup>45</sup>

Another word Coomaraswamy examines is *decorate*, which lies at the heart of the words like *decorous* and *decent*. *Decent* means “suitable to a character, time, place, or occasion.” By this definition, then, decoration is something appropriate and unique to a certain time, person, or event. We are thus unable, from our modern and aesthetic points of view, to fully understand the original intention or significance of early bodily ornaments such as tattoos and jewelry. Coomaraswamy quotes Karsten who says that “traditional art can only be properly studied in connection with a study of culture and religious beliefs.”<sup>46</sup>

Customs that apply to the ornamentation of objects also apply to the ornamentation of people. An ornament has long been a symbol that showed that the person or object was properly equipped and complete; and with completion comes satisfaction and pleasure. This was true to

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<sup>42</sup> (Coomaraswamy 2004)

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

the extent that without such ornament, regular function was potentially impossible. Coomaraswamy uses jewelry in the Hindu culture as an example. He writes, "The Hindu woman feels herself undressed and disorderly without her jewels which, however much she may be fond of them from other and 'aesthetic' points of view, she regards as a necessary equipment, without which she cannot function."<sup>47</sup>

Jewelry was originally used as a spiritual talisman. Refusing to wear jewelry was considered inauspicious and disrespectful, especially when appearing in public and taking part in social functions. Compare this to a judge showing up in court without his robe or a king to his royal courts without his crown. In these cases, ornament serves as the gear that causes contentment, not of appearance, but of a thing made and used for its proper purpose. The gear a person adorns him- or herself with is an attribute that has the same significance as any other attribute. Thus, ornament also gives the wearer power. The primary consideration in choosing ornament was function and the fulfillment of spiritual requirements rather than beauty.<sup>48</sup>

Coomaraswamy writes, "Beauty is proportionate to the perfection of the object and is the attractive power of this perfection." The beauty originates from the object's order and the satisfaction resulting from that order. According to him, there is no such thing as decorative instinct or aesthetic purpose. The objectivism needed to define beauty depends "upon truth and not upon opinion." Opinion is based on "aesthetic view and decorative values of art which depend on taste and liking," meaning that opinions are based on opinions, which thus lacks justification. He quotes St. Augustine who says, "The beautiful is not just what we like, for there are some who like deformities."<sup>49</sup> Aesthetic purpose is a false concept caused by "our romantic eyes," eyes with no restraint, which have lent ornament to luxury, corrupting necessity. "Excess does not equal richness" and "ornamentation exceeding the bound of responsibility to the content of the work is sophistry." Coomaraswamy again quotes St. Augustine who writes, "nothing can be useful unless it is honest."<sup>50</sup>

To summarize, ornament is important to architecture for the following reasons: Ornament increases the life of a building as societies are more likely to preserve that which is visually pleasing. Ornament acts as the source of a building's identity, charm, worth, and

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<sup>47</sup> (Coomaraswamy 2004)

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

authority. Ornament provides stimulation and inspiration for the eyes which are hungry for beauty. It offers a source of meaning and glorifies, nourishes, magnifies, or supports the architecture. Ornament makes the architecture appropriate for the time and place. It implies completion and suggests that the building is properly equipped. It allows for regular function. And finally, ornament acts as a spiritual talisman.

All good ornament had a necessary aspect inherent in its intention to communicate rather than to please. The use of ornament was in this way a form of eloquence. However, because communication varies and is often unsuccessful, in time the necessary aspect of ornament was lost. Ornament's function shifted from necessary to optional and was less intentionally applied. At this point, the art turned into labor. Its meaning had begun to degenerate, creating the preoccupation that "decorative" and "aesthetic" had little to do with the purpose of ornament. Ornament became unnecessary, accidental, and sign of luxury, made only for show. Just as superstition has no basis in reason, ornament lost its connection to meaning.<sup>51</sup>

Now, in the twenty-first century, ornamentation is making a sophisticated comeback. In *Ornament: The Politics of Architecture and Subjectivity*, Antoine Picon, professor and scholar, discusses the transformation of ornamentation in the digital age. Picon explains that ornament has become inseparable from the skin of a building. Whereas in the past, ornament had become an additional feature, unnecessary to the structure, today, structure is designed in a way that serves as both decoration and structure. Architects have shifted from a tectonic approach to an ornamental one. With the help of computers, stability, no longer a worry for architects, has taken the back seat. This new movement is referred to as the neo-ornamental movement.<sup>52</sup>

### *The Different Elements of Ornament*

Ornament is not necessarily a physical object. It comes in many forms, both two- and three-dimensional. This section explores different possibilities when designing with ornament, according to seven different elements of ornament: pattern, symbols, color, material, texture, technique, and imagery.

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<sup>51</sup> (Coomaraswamy 2004)

<sup>52</sup> (Picon 2013)

## ***Pattern***

Pattern is the most common form of contemporary ornament. The popularity pattern receives in design is probably connected to the current culture of computer art and design. Contemporary digital technology makes it easy to create complex patterns that are easily achievable and editable. Pattern in architecture is generally applied to building facades in the form of motif or as part of the building structure.

Then it becomes a piece of nature. When we see the pattern of the ripples in a pond, we know that this pattern is simply in equilibrium with the forces which exist: without any mental interference which is clouding them. *And, when we succeed, finally, in seeing so deep into a man-made pattern, that it is no longer clouded by opinions or by images, then we have discovered a piece of nature as valid, as eternal, as the ripples in the surface of a pond.*<sup>53</sup>

Pattern is not limited to motifs or even repetitive tangible objects. Pattern can be rendered in different ways, such as in events, space, or even relationships. Christopher Alexander, architect and author, explains these phenomena in his book *A Timeless Way of Building*.<sup>54</sup>

A pattern can be of a series of events that happen at a certain site at a particular time. These events give character to the place where they occur. Alexander says, "A building or a town is given its character, essentially, by those events which keep on happening there most often." As a result, "what a town or building is, is governed by what is happening there." The same is true for the ornamentation of the building. Events then become extremely important because of their significant impact. According to Alexander, events are not necessarily human events. Anything that has a physical effect on us can be considered an event. Every culture has its own pattern of events; the people who build their lives around such events then become people of that particular culture. Events and site both support and rely on each other and are unable to separate. An event will always need a place to occur. However, this does not mean that the place creates the event. People of different cultures have different patterns which cause them to act differently within the same place. Alexander writes, all of these patterns and their connection to

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<sup>53</sup> (Alexander 1979)

<sup>54</sup> Ibid.

events are “commonplace in nature.” Therefore, we may consider patterns of events as a living system.<sup>55</sup>

Certain patterns are associated with certain elements. Elements combine to make an environment. Elements either remind or inform us of what people do in such an environment. The combination of elements in a space support the patterns of events happening there; however, it is impossible to predict the changes that will occur in the patterns of events when changing the elements of a space. Elements occur differently each and every time and are not constant through time. Alexander demonstrates this by asking the question, “If every church is different, what is it that remains the same, from church to church, that we call ‘church’?” “The things which seem like elements dissolve, and leave a fabric of relationships behind, which is the stuff that actually repeats itself.” In other words, “a building is defined by certain patterns of relationships among its elements.” Using the example of a church, it may be the equal spacing of columns, the cross-like building plan, or the wrapped ambulatory around the outside of the apse. Patterns of relationships seem to be insignificant at first but, as mentioned earlier, are what specifies a building. In some churches, the aisle runs alongside and parallel to the nave as both share the same columns. The aisle does not necessarily have to be next to something or even parallel to it, but if not, is it still an aisle? In addition, Alexander tells us that patterns can be based on other patterns. So, the world is a complex composition of interlocking non-material patterns; Alexander calls these “the atoms of our man-made universe” which are all dependent on culture.<sup>56</sup>

Patterns determine the extent to which we come to life in any given place because they contain forces that either aid or hinder the resolution of inner forces. Alexander explains, “It is an instinctive expression of the fact that a room without a window place is filled with actual, palpable organic tension.” This tension is the result of unresolved forces within the space which then directly affect our ability to come to life. “The fact is, a person is so far formed by his surroundings that his state of harmony depends entirely on his harmony with his surroundings.” Understanding this relationship between ourselves and our surroundings will help us to act as nature does.<sup>57</sup>

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<sup>55</sup> (Alexander 1979)

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

Patterns themselves can also be alive. Alexander calls patterns which are alive stable. Stable here means they allow internal forces to resolve themselves. The opposite of a stable pattern is a dead pattern, or one which self-destructs. The number of live patterns within a space will dictate the space's level of liveliness. Moreover, "the more life giving patterns the more beautiful it seems." When one calls an environment aesthetically pleasing they are actually perceiving an abundant number of live patterns. According to Alexander, beauty is "not just an aesthetic whim."<sup>58</sup>

"A pattern language gives each person who uses it, the power to create an infinite variety of new and unique buildings, just as his ordinary language gives him the power to create an infinite variety of sentences."<sup>59</sup> If a pattern in design is seen as a rule, then a pattern language is the unique choice of rules one chooses to follow. The endless combinations of these rules create an infinite variety of new designs. It is the same with spoken language systems; each rule describes what one must do to get the desired entity which it defines. Usually, again like a spoken language system, a pattern language will have one set of elements or symbols and one set of rules for combining them. Alexander describes a pattern language as a kind of code, particularly like the genetic code of a living organism. This is similar to Eco's view on symbols that code depends on culture. However, in this case, a pattern language is a driving code whereas Eco's code is an interpretation code. People within a town will have similar pattern languages which are the cause of the pleasant uniformity seen in the buildings of the town. Therefore, the environment is determined by some kind of pattern language.<sup>60</sup>

A successful pattern language is a response to the existing relationships within a site or building based on profound observations. Alexander tells us that this ability, heightened observation, is the power of an architect. He uses Turkish prayer rugs as an example and writes that they have most wonderful colors. The pattern language includes the rule that dictates, "wherever there are two areas of color, side by side, there is a hairline of a different third color, between them." This simple rule, Alexander says, triples the beauty and brilliance of the rug, and although simple, maintains its depth and spirituality. He offers a different example of a pattern language that can be used on buildings:<sup>61</sup>

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<sup>58</sup> (Alexander 1979)

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

Example outline in pattern language used in Alexander's A Timeless Way of Building:

- North south axis
- West facing entrance down the slope
- Two floors
- Hay loft at the back
- Bedrooms in front
- Garden to the south
- Pitched roof
- Half-hipped end
- Balcony toward the garden
- Carved ornaments



*Figure 3: Example of Turkish prayer rug – ([http://www.azerbaijanrugs.com/anatolian/ottoman-rugs-XVI-XVIIc/XVI\\_century\\_anatolian\\_rug\\_christopher\\_alexander\\_collection.htm](http://www.azerbaijanrugs.com/anatolian/ottoman-rugs-XVI-XVIIc/XVI_century_anatolian_rug_christopher_alexander_collection.htm))*

The basic requirements of a successful pattern language are: it must address all forces within a situation, solve a problem that cannot be resolved from existing forces, and resolve it without future side effects.<sup>62</sup> Testing whether a pattern language is successful or not requires experience and careful discernment on the feelings of the viewers. A balanced pattern is established by feelings. Alexander explains that there is a “fundamental connection between the balance of a system of forces, and our feelings about the pattern which resolves these forces.” He stresses that feelings are not opinions. You cannot dispute a feeling like a theory, argument, or idea. He also acknowledges that testing based on feelings is not reliable but writes, “we need a

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<sup>62</sup> (Alexander 1979)

way of understanding the forces which cuts through this intellectual difficulty and goes closer to the empirical core” because “patterns made from thought, without feeling, lack empirical reality entirely.” It can be surprising the degree of agreement that exists in people’s feelings about patterns. In this effort, there exists also the risk of preconception. Just as Carlson warned us to analyze our surroundings, we must do the same in this situation. Our judgment should never block our attention to reality. Alexander says it is not about values, it is about honesty.<sup>63</sup>

It is Alexander’s logic for achieving a balanced pattern based on feelings that forms the basis of my argument on why the filtering of what is and is not culturally appropriate can only be judged by a person of Hawaiian ancestry. Alexander states that “people from the same culture do to a remarkable extent agree about the way that different patterns make them feel.”<sup>64</sup> After the thorough review on feelings as indisputable inner forces, no matter the amount a person may learn, there remains a unique feeling response to people within the same culture to the same patterns, and this feeling cannot be taught. In other words, the feelings of a person of Hawaiian ancestry on what makes a balanced pattern will most likely agree with the feelings of others of Hawaiian ancestry.

Pattern is important because it is able to dictate the character of ornament. Furthermore, with a certain character, pattern can also dictate a certain culture. Pattern itself is a composition of numerous relationships among elements and therefore signifies a connection between two things. Patterns by means of self-resolving forces can bring people, place, and ornament to life. Pattern can act as a parameter for design and even define a pattern language in which ornament is included.

### *Symbols*

Italian philosopher, novelist, and semiotic theorist Umberto Eco expounds on the basics of semiotics in his writing *Functionalism and Sign: The Semiotics of Architecture*. Architecture is capable of many functions, one of which is mass communication. Even so, architecture is mainly designed to serve a programmatic function. Although function can be interpreted as a form of communication, the communicative possibilities of architecture can also be understood as a system of symbols.<sup>65</sup>

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<sup>63</sup> (Alexander 1979)

<sup>64</sup> Ibid.

<sup>65</sup> (Eco 1997)



According to Eco, signs and symbols are based on codes, which are the tools needed to interpret them. Code allows certain recognition of symbols that are not a part of the modern, standard perspective; although it is possible to imply a new code. Codes can range from general to specific but must always be viewed in their cultural context. General codes refer to language structure while specific codes to a particular language. Within a specific cultural context, a symbol's coded meaning can be inferred through what Eco calls a sign vehicle, or that which communicates an object's possible function. Therefore, a symbol's meaning and function are one and the same. Thus, according to Eco, the definition of a sign is the presence of a sign vehicle whose denoted meaning is the function it makes possible, determined by a culturally contextual code. For architectural signs, when we read the sign vehicles, we are able to delineate and catalog them in order to clarify our architectural code.<sup>66</sup>

The processes of codification operates within the same category as social behavior. This category originates at the starting point of culture and is also located within culture, although codification can be established separately from behavior and its presumed mental reactions. Cultural phenomena could be used to define a system of signs since culture is a form of communication. Eco questions whether symbols can be the key to incorporating culture into architecture. Buildings already serve as symbols of the values of the culture they serve.<sup>67</sup>

Architecture's primary purpose is to function; its secondary purpose is to symbolize. Architects must design for well-defined programmatic purposes, yet unrestricted secondary functions. To emphasize this distinction, Eco offers the example of a cave. A cave promotes the act of taking shelter (its primary purpose) but at the same time signifies the existence of other possible functions (its secondary function) such as security, group presence, or family home.<sup>68</sup>

Primary functions are denoted while secondary functions are connotative. Secondary functions rely on the denotation of the primary. In addition, a secondary function does not need to allow the function but can simply communicate it. Returning to Eco's example of a cave, a cave indicates a shelter (a function) but has come to connote the presence of a family or group. The connotation of a symbol is equal to the primary function but does not diminish any other

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<sup>66</sup> (Eco 1997)

<sup>67</sup> (Eco 1997)

<sup>68</sup> (Eco 1997)

functions' importance (family or security). Primary and secondary functions have the possibility of changing or be substituted.<sup>69</sup>

A designer's job is to fulfill a function with a form. This can be done with various forms. However, one must understand the cultural codes in order to understand function, and more specifically, the codified connection between the form and function. Eco writes that Louis Sullivan's idea that "'form follows function' would be rather naïve unless it really rested on an understanding of the processes of codification involved." Eco restates this, saying, "the form of the object must, besides making the function possible, denote that function clearly enough to make it practicable as well as desirable" and denote the object's meaning. He gives the example of a stair: the stair embodies the "possibility of going up" on the basis of code."<sup>70</sup>

Ornament in architecture can be used as significant symbolic forms in a design. An example of using symbols in architecture is when ornament denotes a form of inhabitation. Eco gives the example of "window elements of an architectural rhythm." The architect could use fake windows, since their denoted function is illusory. The windows and their rhythm function thus imply interior inhabitation.<sup>71</sup>

Eco believes that function should be extended to all uses (communicative and functional or symbolic function and utilitarian function). He writes, "a seat tells me first of all that I can sit down on it. But if the seat is a throne, it must do more than seat one." Eco also notes that meanings are not metaphorical in the case of symbols because although not immediately identified with the function, they represent and communicate a real social utility of the object.<sup>72</sup>

Symbols are important in ornament because they make up the majority of the meaning behind ornament. Therefore, well-known meanings understood by a great number of people allow ornament to act as a form of mass communication. Symbols can denote function, a specific culture, a deeper meaning, and more. We can also use symbols to determine a cultural code. As such, symbols enhance ornament and give it a voice.

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<sup>69</sup> (Eco 1997)

<sup>70</sup> (Eco 1997)

<sup>71</sup> (Eco 1997)

<sup>72</sup> (Eco 1997)

## *Color*



*Figure 4: The Munsell Color Wheel – (<https://s-media-cache-ak0.pinimg.com/736x/43/9d/31/439d310e93e79846e8cf27d1598bbcd9.jpg>)*

Color is a broad topic that touches many different areas of study. In architecture, color has an immense power but is too often subordinate to form and space. Color's powerful persuasive and remedial qualities create an opportunity for it to play a significant part in ornament.

In the field of architecture, color should be thought of as light with the power to form spaces.<sup>73</sup> Color is naturally related to architecture as ornament. Unfortunately, because color is taken lightly, it is often applied in architecture without being fully studied or understood. In such cases, color often ends up clashing with rather than enhancing the structure. Thorough research on the properties of colors and the reactions they create is vital before one can successfully use them as ornament. Architects use color cautiously, if not reluctantly, because it is subjective. Moreover, because color can be changed more easily than form, it is considered less important.<sup>74</sup> Some may go as far as to question the importance of color to the architectural world. However, an organization like the International Association of Color Consultants/Designers (IACC-NA) that accredits architects, interior designers, environmental designers, color psychologists, and other professionals shows the wide role color can play.<sup>75</sup>

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<sup>73</sup> (2015)

<sup>74</sup> (2014b)

<sup>75</sup> (2014a)



Figure 5: International Association of Color Consultants/Designers - North America Logo – (<http://iaccna.com/wp-content/uploads/2016/01/IACC-NA-Logo-150x150.png>)

Because of the extensive knowledge needed for successful application of color, a new specialty has arisen, namely color expert.<sup>76</sup> Understanding color is a much bigger task than most people believe. Color influences humans psychologically and physiologically. Color also has the ability to transfer information as well as enhance the information transferred by ornament. Like all information, a universal system is needed for the accurate transfer of information. Just as writing can potentially have an infinite number of symbols, color can potentially have an infinite number of hues. Moreover, the quality of a hue may vary depending on the viewer's eye. Many experts have invented systems for categorizing and naming colors, but none has yet to explain and confirm all possible colors in the world.<sup>77</sup>

In *Color, Environment, & Human Response*, author Frank H Mahnke, president of the IACC, writes about the effects of color in the built environment. His intention is to provide information and guidance to professionals that design and plan architectural environments to ensure that color is not an afterthought.<sup>78</sup> Mahnke argues that it is possible to create a basic color concept that can satisfy a wide range of users and even possibly cultures. He supports the idea that color can be functional and is an element of both natural and man-made environments.<sup>79</sup>



Figure 6: One of Frank Mahnke's Books on Color – ([https://images-na.ssl-images-amazon.com/images/I/41g67NWK9SL.\\_SX337\\_BO1,204,203,200\\_.jpg](https://images-na.ssl-images-amazon.com/images/I/41g67NWK9SL._SX337_BO1,204,203,200_.jpg))

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<sup>76</sup> (Eckstut and Eckstut 2013)

<sup>77</sup> (Lowengard 2006)

<sup>78</sup> (Mahnke 1996)

<sup>79</sup> (Meerwein 2007)

Twentieth century Russian painter and theorist Wassily Kandinsky developed theories about colors and their meanings. Kandinsky analyzed each color, listing the feelings it radiated and the sound it made. He also explored the relationship between color and the viewer. He believed he could evoke certain feelings in the viewer with color alone.<sup>80</sup> Kandinsky's book, *Concerning the Spiritual in Art*, clearly a classic, was the catalyst for certain developments in art history, philosophy, and practice. Kandinsky believed that the feelings of an artist or viewer can be projected through color. This concept and others provided a foundation on which future artists have continued to build.<sup>81</sup>



*Figure 7: Color Studies by Wassily Kandinsky – (<http://architizer.com/blog/kandinskys-color-theory-and-architecture/>)*

Case studies have been conducted that demonstrate “color’s ability to communicate at a level more basic and universal than architectural form or style.”<sup>82</sup> Some of the studies found that exterior color can define the very identity of a building. For example, the United States presidential residence is commonly known as the White House. The color white was chosen for several reasons. First, white was chosen to erase the public memory of the building’s burning in 1814. Second, the white wash itself protects the sandstone from winter freezing. Finally, at the time of design, platonic whiteness was identified with classical architecture and abundant power; white was chosen to transfer those feelings.<sup>83</sup>

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<sup>80</sup> (Barley 2013)

<sup>81</sup> (Kandinsky and Rebay 1946)

<sup>82</sup> (2015)

<sup>83</sup> (2014b)



*Figure 8: Famous Building Identified by color "The White House" – (<http://www.diaricatala.cat/wp-content/uploads/2016/02/Casa-Blanca-1068x712.jpg>)*

Semper informs us that polychromy, or the ornamental use of color in architecture, arose from “that ancient supremacy of the wall fitter’s technique over the mason’s in domestic furnishing.” Masons were in charge of building large walls while wall fitters dealt with the tedious. He offers us parameters for choosing an appropriate color palette: “the climate and even the customs of a country must be considered in the selection of the color key and the subject matter, and nothing new may be sought which is not, in a manner of speaking, already present in the motive.” He also notes that “a large and open field of exterior polychrome effects remains open to us in the use of different colored materials, whose artistic development does not encroach upon our traditions, and that, as shown above, corresponds perfectly with the present state of technology. This is true provided that the selection of decorative forms and colors is determined not by an architectural element foreign to the wall, but by the construction itself and the material available.”<sup>84</sup> An early example of successful polychromy can be found in ancient China where use of stucco with a rich general palette was prevalent. Semper notes that building color was used for the artistic painting of “the visible constructive parts.” He discusses iron columns and the static nature of the materials that should be accounted for when choosing color. “For instance, with

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<sup>84</sup> (Semper 1989)

ironwork, which looks more perfect the thinner it is, I would never use bright colors, but black, bronze color, and much gilding.”<sup>85</sup>

All in all, color is an important aspect of ornament which is generally not applied to its full potential. Color can be derived from both natural and man-made sources. It has the ability to influence humans physically and mentally. The communication of color is universal and therefore enhances the information transferred by ornament. With the selection of certain colors, color can also aid in the incorporation of culture. Because of this, it can also contribute to and enrich the spirit of ornament.

### ***Material***

Semper writes that “the store of architectural components in ancient times arose from the material.” As such, material is the physical aspect of ornament. Today, the seemingly unlimited choice of material has distanced designers from natural material choices. John Ruskin, a nineteenth century art critic and theorist, writes about true architecture and the deceits common to architecture that ruin its integrity, one of which is to avoid misrepresentation of material. Ruskin would consider a majority of today’s materials dishonest and false portrayals of their true properties.<sup>86</sup> However, many of the factors that have pushed materials in this direction are valid and include reasons such as price, availability, and structural stability.

As discussed earlier, Semper asserts that architecture is the student of nature and should thus apply material “according to the laws conditioned by nature.” If done correctly, “the ideal expression of a building will of course gain in beauty and meaning by the material’s appearance as a natural symbol.”<sup>87</sup> So, how are we to enhance the beauty and meaning of today’s materials while adhering to Ruskin’s advice to avoid the misrepresentation of materials, especially when the natural quality is the material’s connection to the spiritual meaning, or metaphysical component, of the ornament?

### ***Texture***

Texture has always been an important aspect of architecture. Through the use of technology, many new types of ornament have been developed, particularly in the realm of

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<sup>85</sup> (Semper 1989)

<sup>86</sup> (Ruskin 1989)

<sup>87</sup> (Semper 1989)

texture, both superficial and structural. Technology has reached the point where texture can be easily experimented with during the design process. Now designers have the opportunity to make texture an essential part of the design. Even screens have been incorporated as ornament through presentations of vivid display. The line between texture and image has blurred because of software's ability to texture any surface with any picture.

A great example of texture is the Tenerife Espacio de las Artes (TEA) by Herzog & de Meuron. The building's exterior is covered with colored concrete broken up by small glass-filled openings that create a pixelated pattern or texture on the building's façade. These perforations allow natural light into the interior.<sup>88</sup>



*Figure 9: TEA - Tenerife Espacio de las artes interior (building's exterior wall from interior) – ([https://thearchandthedome.files.wordpress.com/2013/06/tenerife-espacio-de-las-artes\\_06.jpg?w=740&h=492](https://thearchandthedome.files.wordpress.com/2013/06/tenerife-espacio-de-las-artes_06.jpg?w=740&h=492))*

Texture is an important part of ornament. It can depict both the physical and metaphysical character of a building. Texture can also portray the natural or artificial qualities of ornament. Texture can range from simple to complex, where at its most complex it becomes image.

### ***Technique***

All things that require application also require technique. Ornament is no exception. The art of technique “make the viewer aware of the productive hand of the construction worker.”<sup>89</sup>

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<sup>88</sup> (Picon 2013)

<sup>89</sup> (Picon 2013)



Ornament was realized by craftsmen who left their mark in the process of creating art. Some of the techniques mastered by craftsmen to make or apply art include staining, sculpting, molding, painting, carving, milling, extruding, burning, glazing, and digital design. Unfortunately, ornament that requires the employment of professional craftsmen or artists is also labor-intensive and costly, which has led to the development of the machine-produced ornament.

Another of the deceits Ruskin lists is the use of machines to create ornament. Ruskin argues that the craftsman's touch and technique create within ornament a connection to the viewer that machine-made ornament cannot. A major part of art and architecture is the viewer's experience. When technique is present, the viewer wonders how the craftsman accomplished such an amazing work of art. The thought that a human produced this great masterpiece using skills developed by serious practice over time produces within the viewer a feeling of awe. This sense of wonder then elevates the spirit and beauty of the ornament.

### *Imagery*

An image should emphasize the character of the building in general. Semper names the Assyrian carpet as an example of successful ornamental imagery. These carpets are known for the splendid colors and intricate pictures woven into them. They incorporated oriental color schemes and depicted images of animals and other things found in nature. In Assyrian culture, carpet weaving was connected to the ancient art of paneling and dressing.<sup>90</sup> In other words, images enhance or denote the character or identity of a building. In this way, imagery is ornament.



*Figure 10: Assyrian carpet pattern engraved in stone (seen in Semper's book: Style in the Technical and Tectonic Arts, or, Practical Aesthetics) –*  
([https://books.google.com/books?id=5mCcKu6HhMAC&pg=PA2&source=gbs\\_selected\\_pages&cad=3#v=onepage&q&f=false](https://books.google.com/books?id=5mCcKu6HhMAC&pg=PA2&source=gbs_selected_pages&cad=3#v=onepage&q&f=false))

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<sup>90</sup> (Semper 1989)

### Creating Successful Ornamentation

All things that require application also require technique. Ornament is no exception. The technique used is imperative in order for ornament to retain its continuing significance as a vital part of architecture. Not unlike Loos, as touched on above, Ruskin offers parameters for achieving successful ornamentation by telling us what not to do.

In Ruskin's book, *The Lamp of Truth*, he defines both true architecture and tectonics. True or honest architecture is the only type of architecture that architects are able to control; beautiful architecture falls outside of this realm of control. According to Ruskin, in order to create honest architecture, three deceits should be avoided: the decorative representation of structural elements that have no actual structural function, the use of paint to conceal or falsify the true nature of a surface, and machine-made ornament. Ruskin's first taboo, false support, reflects the writings of Marc Antoine Laugier, an eighteenth century architectural theorist, who argued against the use of pilasters. Ornament should not pretend to be support. In other words, the tectonic qualities of a building should always be represented with a clearly traceable load path, whether along columns or load bearing walls.<sup>91</sup>

The second taboo, concealing or falsifying the true properties of an object or surface, refers to honesty in material representation. A design should look like what it is; any other representation of the material is a lie. For example, Ruskin would consider a stone cladding a lie because of the possibility that the wall behind it may be constructed from another material. This is still mostly true today, but not in every case. For example, river rock and natural stone cladding are common and it is unlikely that most viewers believe the walls are natural stone walls. Ruskin does qualify his argument based strictly on the material used and the perceptions of the viewer. For example, he writes that gold leaf covering is not deceit because no one would presume that the ornament or object is made of pure gold. In today's world, with the development of technology and efforts to produce affordable finishes, most of the material finishes we see in buildings do not represent the actual materials used. For example, a current trend for flooring is the use of luxury vinyl tile with a natural wood finish. Customers pay for vinyl but get the appearance of a more expensive hardwood.<sup>92</sup>

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<sup>91</sup> (Ruskin 1989)

<sup>92</sup> (Ruskin 1989)



Figure 11: Vinyl tile with wood design example –  
([http://www.homedepot.com/hdus/en\\_US/DTCCOMNEW/fetch/Category\\_Pages/Flooring/Vinyl\\_Flooring/vinyl-flooring-project-guide-12g.jpg](http://www.homedepot.com/hdus/en_US/DTCCOMNEW/fetch/Category_Pages/Flooring/Vinyl_Flooring/vinyl-flooring-project-guide-12g.jpg))

Ruskin's third deceit is the use of machine-made ornament. He notes that much of the beauty of ornamentation is the "sense of human labor" that is embedded in it. Viewers delight in picturing the trials and successes a craftsman may have undergone to produce a piece.<sup>93</sup> I contend that the same holds true today, and is relevant to contemporary Hawaiian ornamentation.<sup>94</sup>

While Ruskin developed parameters based on things to avoid, there are others who developed positive parameters for the achievement of successful ornamentation. In 1908, Frank Lloyd Wright, one of America's most celebrated architects, created a set of propositions, many of which concern the aesthetics of architecture and may be seen as parameters for ornamentation. First, a building's openings should be integrated into the building's structure and form. Openings that do so act as natural ornamentation. Second, décor should only be incorporated if the architect has a great understanding of it; otherwise, it is dangerous and can do more harm than good. Third, styles should be many and varied to reflect the great number of people in the world. Fourth, a building should "grow" from its site and harmonize with its surroundings. Fifth, good natural color schemes are more important than good decoration. Sixth, the identity of the natural materials used should be highlighted because "no treatment can be really a matter of fine art when those natural characteristics are, or their nature is, outraged or neglected."<sup>95</sup> Finally, giving a building character will also give it a sense of timelessness. Wright clearly recognizes the importance of the beauty of a building. His propositions are relevant to this project, especially

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<sup>93</sup> (Ruskin 1989)

<sup>94</sup> (Ruskin 1989)

<sup>95</sup> (Wright, Devane, and Gutheim 1987)

those that tie ornamentation to nature. The Hawaiian culture places great value on its relationship to the land and to nature.

Semper holds similar views to Wright. He developed his own principles for beauty in architecture. Some of these principles are: buildings should be free of false accessories; a material whose appearance represents a natural symbol produces greater meaning and beauty; a wall should always represent a spatial enclosure; the climate and culture of a place should be considered when selecting a color palette and the palette should not contain any color that is not already present on the site; and finally, visible constructive parts should be painted (i.e., roof construction or columns). The principles of Semper, like those of Wright, respect the building in its natural and urban context, which is an appropriate consideration when designing for Hawai'i.<sup>96</sup>

#### Ornament-Rich Case Study

The Linz Café was a building designed by architect and author Christopher Alexander for the 1980 summer exposition, Forum Design, in Linz, Austria. Because it was for an expo, the building had no client or program; its only stipulation was that it was going to be moved in the future. However, like many artists, he needed a purpose or idea to inspire his decisions and drive the project and therefore, decided to design a building that could serve as a resting place for the people visiting the exposition. His initial concept was to create a three-story building with a terrace overlooking the river. The river would become the main focus of the building and its visitors. The terrace was to be located on the main floor (the first floor) which as a result required it to be elevated about eight feet off of the ground to allow a direct, unobstructed view of the river.<sup>97</sup>

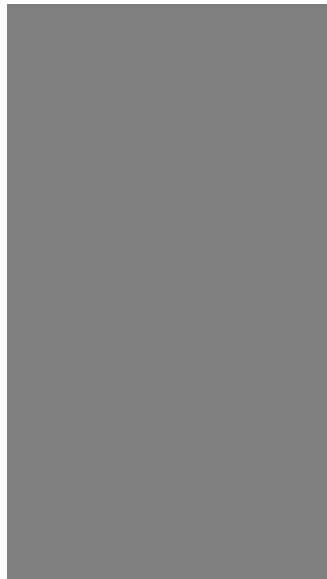
While Alexander's programmatic intention was a resting place, his conceptual intention was much deeper. His desire was to create an experience that evoked certain feelings. He writes, when entering the building one should feel "solidified, made more whole, more at peace, more resolved in one's own inner life ... in essence calmed, and calm, and happy, with a simple

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<sup>96</sup> (Semper 1989)

<sup>97</sup> (Alexander 1981)

happiness.”<sup>98</sup> In order to achieve this simple happiness, he asserts that one must carefully consider both human feelings and function because it is “the small decisions, while the thing is being built, that make it feel just right,” decisions such as ornaments chosen for the building aimed to make the ordinary person feel comfortable, at home, and at peace. The ornaments “play a major role in the feeling of the building.” Design decisions should create a sense of reflective imagery, a mirror, or as Alexander calls it, “pictures of the human soul.” The creation of this mirror will then create, upon entering the building, a feeling of oneself and of familiarity, a state in which humans find the most comfort.<sup>99</sup>



*Figure 12: The Linz Cafe entrance - (Alexander 1981)*

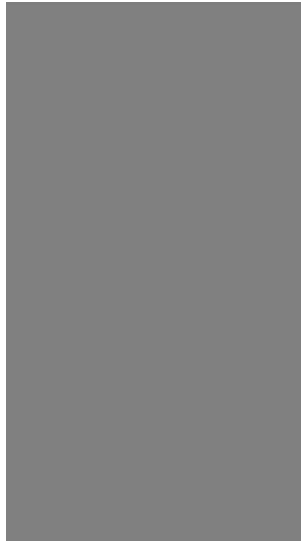
Design decisions began with an acknowledgment of the site. Similar to Ruskin’s views on honest architecture, Alexander asserts that “a correct building can only grow out of the site.” As such, the building is situated along the river and oriented to face it. The building was designed around views on the site; the placement of windows, resting spots, and even order of experiences were designed based on these view. For example, a red canvas awning hovers over a long seat; a seat and overhead protection welcomes the passerby to sit for a moment and enjoy the view distinct to that spot. After journey through the building with its varied views of the river,

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<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

the visitor is led to the end destination, a terrace with built in seats and umbrellas, and a spot without a view of the river to signify the journey coming to a close.<sup>100</sup>



*Figure 13: Linz Cafe Exterior - (Alexander 1981)*

Private alcoves were highly ornamented areas intended for lingering. The alcoves were painted a light shimmering green with white flowers outlined with a grayish red band. The white flowers were brushed on quickly to maintain a freedom of stroke because, as Alexander writes, “slow painting would be susceptible to interruptions in concentration.”<sup>101</sup>

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<sup>100</sup> (Alexander 1981)

<sup>101</sup> (Alexander 1981)



*Figure 14: Linz Cafe alcoves - (Alexander 1981)*

The color scheme used was not Alexander's original choice for the building. When the exterior canopies arrived on site, they turned out to be an unexpected well-saturated red-orange color. Because the canopies play a major role in the facade of the building and their particular shade was too dominant for the original scheme, the interior colors were adjusted. The final color scheme was composed of pale yellow, deep crimson red, peach, light whitish almond green, and white. The exterior was set to be yellow but with the addition of the canopy red, the scheme "went in the direction of peach." Then, as peach was painted around the windows, Alexander decided "a much brighter pale green could sing with the orange light." The entirety of the exterior was thus colored yellow. For the interior, peach was used on the walls, main floor, entrance, stairwell, and inside the alcoves. Light green was used on the ceilings, upper nave, alcove fronts, balustrade, and flowers painted on the peach walls. White was used on the doors, windows, and flowers on the green upstairs. As with the case of the canopy color here, it is important to note that while a color scheme can be planned ahead of time with a set of samples, the scheme must be finalized on site.<sup>102</sup>

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<sup>102</sup> (Alexander 1981)



*Figure 15: Colors of the cafe in sketches and actual - (Alexander 1981)*

As is evident in this case study, the color scheme and placement of colors on the building were carefully considered. Color is an element of ornament important to the visitor's experience within the building. Because of its direct impact on the people within the building, the color palette should show evidence of careful planning. In the following quote, Alexander explains his objectives with his color scheme:

What I am trying to do, with color, is to find a certain soft inner light which only arises out of color in its most subtle use ... a feeling which arises in certain Persian and Turkish miniatures of the 15<sup>th</sup> and 16<sup>th</sup> centuries, for instance, where the colors are so carefully chosen, that together they seem to glow, not in any literal phosphorescent sense like the recent works of "op art", but with something that one can only call "inner light", where one feels that the light of one's own inside person has been directly reached.<sup>103</sup>

With this before him, he placed colors within others to create such a field of light. The careful arrangement allowed sunlight to reflect off of each color and "make white light together." They formed an "intense light," which was "austere but brilliant."<sup>104</sup>

The construction of the café was simple in both material and technique. The building is made almost entirely of wood, which was not a common material for buildings in Austria at the time. In general, Alexander prefers concrete, but it was not yet developed in that part of the country. Some have wondered whether he would have built the café out of concrete if he could have, and if so, could he have gotten the same results. There are many advantages to using wood construction. Wood allows for quick creation, flexibility, and hand-cut variations (to make the spaces work correctly). The level of interaction between wood and the builder allows for unique parts of the building to be "made by feel." Techniques that include steel and concrete would not have allowed for alterations of components or the spontaneous creation of unique shapes. Components such as benches and windows were fit into the framework. When needed, columns and beams were cut into to accommodate these components. It is usually the other way around,

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<sup>103</sup> (Alexander 1981)

<sup>104</sup> (Alexander 1981)



as it would have been with concrete. In this case, however, because the framework was created using a simple and basic method, alterations were not complicated.<sup>105</sup>

When the café was opened, it offered a pleasant setting that felt so much like home that visitors almost forgot the time, according to some reports. The Linz café was “a building of the people.” To be able to achieve such a sense among visitors of all kinds may seem like a hopeless dream but the mere attempt is the proper thing to do! Striving for these types of buildings brings great rewards and gives a “deep presence to person in the outer things we build.” According to Alexander, new buildings make people feel emotions such as despair, rejection, discomfort, unordinary, and artificial. These new buildings are based on “unnatural and extraordinary considerations.” Like the café, buildings should be based on human comfort, a fundamental necessity. Is this not the sensible process? Alexander believes in a simple wholeness, or a movement toward the ordinary where we are most deeply ourselves. The café design is a series of strategic techniques working together to achieve this wholeness. After all, “patterns are the ones which make an ordinary place worth living in.”<sup>106</sup>

There are four major objectives that can be gleaned from this case study that should be implemented in other projects involving ornamentation. First, process should be based on maximum desired human feeling, whatever the feeling may be, and be facilitated by ornament. Second, if designing for comfort, one should strive to create a mirror within the design because this mirror reflects the viewer and instills a feeling of familiarity which maximizes the feeling of comfort. Third, a building should grow out of the site but still be a destination. Fourth, and necessary for achieving the first three objectives, design should be given deep thought and everything should be carefully chosen. All things chosen with careful consideration can be felt within the building.

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<sup>105</sup> (Alexander 1981)

<sup>106</sup> (Alexander 1981)



*Figure 16: sketches of ornament patterns - (Alexander 1981)*



*Figure 17: custom construction detail (left) and cafe interior (right) - (Alexander 1981)*

### Chapter 3. Native Hawaiian Aesthetic

#### Native Hawaiian Sources & Typical Research Strategy

When doing research on customary practices in early Hawai'i, unlike other topics, there is only a certain amount of information available. If one looks back on the history of the Hawaiian people, a slow disintegration of culture can be seen. The amount of information we are able to obtain today is directly proportional this cultural disintegration. For example, after the arrival of the first missionaries in 1820, the practice of tattooing was frowned upon as a pagan custom. Ending this practice also meant the knowledge involved that had been passed down through the generations began to disappear. It also limited the amount of people familiar with the practice, making the practice a specialty rather than common knowledge. Another example is this: soon after Hawai'i was annexed in 1898, the Hawaiian language was banned. Even though writing was introduced at this point in time, publishing companies censored all writings. Up to that point, Hawaiian culture and history had been passed down orally; there was no tradition of written record. In addition, English was not their native language and was limited in its ability to express or describe many parts of the Hawaiian culture. Thus, without a means to communicate, how could Hawaiians pass down knowledge? Any information that was recorded during that time is in *'Ōlelo Hawai'i*, or Hawaiian language, and is therefore unreadable to most Hawaiians today since a majority (as high as 95%) cannot speak or read in traditional Hawaiian. Because of the prohibition on Hawaiian language, information was simply not recorded and, as a result, cultural practices and knowledge slowly faded. Today, information on ancient Hawaiian history and culture is slim. Some of the sources used in this paper note this lack of information in the following ways:

“sporadic accounts”

“offer only a small fraction of information”

“One of the first things I realized while researching Hawaiian tattoo designs, is that there really is not much information regarding the names of many of the designs.”

“no exact date can be given”

“much information has been lost”

*Kūpuna* (elders) are looked to in the hopes of receiving their knowledge and memories of our culture but there are not many *kūpuna* left who remember and not all of those know the particulars of Hawaiian customary practices. Of the small amount of *kūpuna* that have knowledge

of certain practices, how are we to identify them and find them? Moreover, “a lot of the kupuna didn’t want to just give the information out to everyone.”<sup>107</sup> Just because a kūpuna has the knowledge does not mean that he or she will feel that the person seeking it deserves or has earned the right to receive it. Along the same lines, some information is meant only for certain families. This principle of exclusive family knowledge is customary in the Hawaiian culture and others would and should not force families to divulge that information.

So, the only remaining resources were produced by early visitors to the islands. Unfortunately, this means that all of the information recorded in these sources is written through a European lens. An authentic Hawaiian perspective is impossible to obtain if one does not remove his or her own cultural perspective. How do we know whether visitors included their own cultural biases or not when making their recordings? We cannot know this. Therefore, we cannot rely on foreign sources to be completely accurate unless supported across several sources or by other evidence.

What strategies can be used to overcome such a source challenge? First of all, we can strive to earn the knowledge of kūpuna. We can look to other aspects of our culture. We can look to our Polynesian relatives, many of who have similar cultures. We can rely on originals, graphic descriptions, and physical evidence within all sources.

As a result of this lack of sources, it is important to note that all of the research done cannot provide a definitive answer; that would require many more years of research. Versions of this statement are also seen in the sources used here. It may be possible that no matter how much research is done, a complete record of some aspects of the Hawaiian culture is not possible. In many cases, “we have no written or oral history to confirm” the information which creates a “constant struggle for contemporary Hawaiians to receive the cultural and spiritual knowledge within these stories amid the constant colonial disruptions that question and diminish the validity of this knowledge.”

The strategy I have chosen to use when researching the Hawaiian culture is to look into other cultural practices. Because architecture is a form of art, I feel it appropriate to examine what is considered Hawaiian art. I have chosen to look into three specific practices, *uhi* (tattoo), *kapa* (bark cloth), and *‘ahu ‘ula* (feather capes). These three practices have the most in common

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<sup>107</sup> (Hawaii)

with architecture, especially the element, pattern. Others that are similar are *‘umeke* (bowls), *ki‘i pōhaku* (petroglyphs), and *hei* (string figures).

### What is Native Hawaiian Aesthetic?

The Native Hawaiian aesthetic is a contemporary topic of discussion or concept within the design community.<sup>108,109</sup> What is today referred to as the Native Hawaiian aesthetic was previously called “being culturally sensitive” or a Hawaiian sense of place. The objective of this concept is to create a connection between Hawai‘i (people and island) and anything foreign that has been placed here or will be placed here.

Attempts have been made to develop a universal definition for the Native Hawaiian aesthetic. However, insufficient art criticism and research exist on the topic making any attempt at defining it a tremendous challenge.<sup>110</sup> The resources needed to conduct studies that would allow theorists and researchers to compose such a definition are scarce. Hawaiian literature exists and is slowly growing, but not all sources relate directly to the topic. The main resource for acquiring sufficient knowledge, as discussed above, may be the kūpuna, who have the most extensive knowledge of the culture including cultural insights that have been passed down orally. In order to respect the kūpuna, however, a researcher would need to earn this valuable information rather than just ask for it and the time needed to collect the necessary research could take a lifetime. Therefore, at this point in time, the best action to take is to add to the current pool of knowledge.

After a decade of research, Brandy Nalani McDougall offers a great starting point for this discussion in her book *Finding Meaning: Kaona and Contemporary Hawaiian Literature*. This is the first published book-length study of contemporary Hawaiian literature. In her writing, McDougall points out that the Hawaiian aesthetic is currently evaluated by the aesthetic systems of outsiders. She recommends the strategy she calls “indigenous knowledge recovery” as a movement to protect the culture against colonialism. As indigenous knowledge grows, so will the connection to ancestors. Ancestral connection is necessary because the ancestral guides the

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<sup>108</sup> McDougall defines contemporary as the period of time from the 1960s until now. She does not use this term to oppose tradition or authentic. As such, I have the same intentions for the term in this section.

<sup>109</sup> Design community referring to all types of artisans located on the island

<sup>110</sup> Based on my personal experience

contemporary and, inversely, the contemporary is always a part of the ancestral. According to McDougall, if both ancestral and contemporary terms and methodologies are used, a Hawaiian aesthetic system will surely develop.<sup>111</sup>

The Hawaiian language was officially banned from schools and government in 1896, three years after the overthrow of the Hawaiian monarchy, and wasn't reinstated as an official language with a status equal to English until 1978, by which point irreversible damage had been done and the language was at the edge of extinction.<sup>112</sup> With the banishment of their language, Hawaiians began to record their orature to written text.<sup>113</sup> Since Hawai'i Creole English was used in the transition to English, literary production was slim. Over time, the historic event was largely forgotten and Hawaiian literature began to be perceived as underdeveloped and even non-existent. In addition, during this period, texts written by Native Hawaiians were required to undergo censorship from missionaries and publishing companies. According John Dominis Holt, McDougall writes that Hawaiian texts were seen as either foolish or reminiscent with redundant beginnings.<sup>114</sup> Slowly but surely, "erosion of the Hawaiian language by colonial laws and social enforcement" took place.

Hawai'i became a state in 1959. McDougall writes that according to Holt, some people believe *kānaka maoli* (indigenous Hawaiian) literature was established as a result of statehood, when American colonialism became entrenched in Hawai'i. However, this is incorrect; *kānaka maoli* literature began with ancestral *mo'olelo* (story), not with statehood. Though unwritten, it still existed. The same can be said for the Hawaiian aesthetic system. Therefore, it is incorrect to say a Native Hawaiian aesthetic will develop. Rather, it can be said that a Native Hawaiian aesthetic "will be rediscovered."<sup>115</sup>

According to McDougall, residual censorship from outsiders created a traumatic realism and ongoing colonization. She quotes Susan Nijita who argues, "the traumatic colonial past resurfaces in fragments precisely because they [past memories] continue to constitute not only lived reality but also genealogical discontinuity."<sup>116</sup> Contemporary Hawaiians, those who lived through the Hawaiian renaissance, struggle to properly intake indigenous knowledge due to the

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<sup>111</sup> (McDougall 2016)

<sup>112</sup> <https://www2.hawaii.edu/~donaghy/eng/csqa.html>

<sup>113</sup> Meaning information passed down orally

<sup>114</sup> (McDougall 2016)

<sup>115</sup> (McDougall 2016)

<sup>116</sup> (McDougall 2016)

conditioned colonial disruption which questions the validity of such knowledge.<sup>117</sup> Current generations have to be pushed to “see through the eyes of our kūpuna.” Even today’s context can be considered a continuation of colonial disruption because meanings of the *‘ōlelo no‘eau* (Hawaiian proverbs) which are mostly based on nature, no longer apply. The results of this can be seen in the number of contemporary Hawaiians who cannot speak or read Hawaiian. By the 1990s, the deep need to reclaim land and culture caused a Hawaiian cultural reawakening.<sup>118</sup>

The people, the *kānaka*, “made and remade their identities through the re-membling and retelling of their *mo‘olelo*.” Hawaiians identify themselves through their families, their *‘ohana* (families), which their *nā mo‘olelo* (stories) are tied to. Identity is genealogical; it is “who we were and who we are.” *Mo‘okū‘auhau* (genealogy) together with *mo‘olelo* are not just lists and stories, they give us identity and tie us into the continuum of culture. They connect us to Hāloa, the first Hawaiian, and to the *‘āina*, (the land).<sup>119</sup> *Nā mo‘olelo* have life. *Nā mo‘olelo* live through us, on our tongues and in our bodies. *‘Ōlelo* (words) even have *mo‘okū‘auhau* of their own. *‘Ōlelo* are given power by the circulation within communities, the repetition, the belief, and the intention. Since *‘ōlelo* have *mana* (spiritual power), it is our *kuleana* (responsibility) to keep them alive. Again, they live through us and to allow them to do so we must celebrate, preserve, honor, and retell them. These acts will then mold us through our beliefs, our perceptions, our values, and our world, which are necessary in finding our purpose. They give us both identity and purpose; it is shown that *mo‘olelo* give us life when we do the same for them.<sup>120</sup>

What Eco defined as a code, McDougall refers to as a Hawaiian aesthetic system. According to McDougall, there are multiple Hawaiian aesthetic systems, all of which are “culturally and experientially bound and Indigenous land and water specific.” Just as we are descendants of our ancestors, these systems have descended from ancestral aesthetic systems most of which have been cast out and dominated by colonial aesthetic systems. As a result, this system also functions as an embodiment of our sovereignty and “aesthetic resistance”. Aesthetic systems that are purely indigenous are often misused in many ways. An example is to claim to celebrate the culture of an indigenous people group while actually doing so for one’s own gain. Another example is to write off indigenous cultural activities as merely recreational, masking the

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<sup>117</sup> Referring to Native Hawaiians who have experienced the Hawaiian Renaissance and after

<sup>118</sup> (McDougall 2016); meaning the Hawaiian Renaissance

<sup>119</sup> Hāloa is the first Native Hawaiian.

<sup>120</sup> (McDougall 2016)

truth. McDougall stresses, “Indigenous aesthetic systems must be recognized, and indigenous artist-scholars must continue to voice their distinctiveness and continuity.”<sup>121</sup>

McDougall provides the necessary cultural backing and logic for Hawaiian aesthetic systems, which is a notable feat. She does not define or quantify these aesthetic systems; as noted earlier, uncovering a Native Hawaiian perspective on all things in life would take a lifetime. She defines aesthetics as “an articulation of culturally and locationally situated values that inform perceptions and experiences of beauty and pleasure.” Again, she does not define this articulation. With her definition tied to culture, every ethnicity should have and define their own aesthetic standards. McDougall quotes Hawaiian poet and essayist Mahealani Dudoit who writes, “by continuing to develop our own standards of beauty and pleasure, the American aesthetic systems’ colonizing forces will weaken their stronghold on our people” giving the Hawaiian culture its own identity in the discussion of aesthetics.<sup>122</sup>

One of the challenges inherent in the discussion of Hawaiian culture in the English language is the loss of meaning in translation. Hawaiian words often have several meanings. Some words, McDougall offers, that may come close to the word aesthetic in Hawaiian is *pono* meaning “excellence” and “goodness”, *nani* meaning “beauty,” and *ho’onani* meaning “to adorn.”<sup>123</sup> When discussing Hawaiian aesthetics, knowing these terms allow us to stay culturally grounded and connected.

“Perhaps most important to all discussions of Hawaiian aesthetics is the emphasis that is placed on function,” writes Dudoit. She proposes that Hawaiian sensibilities not only prioritize beauty but also function in some way, whether secular or sacred, because “the beautiful must work.” Georganne Nordstrom, author of *Stealing the Piko: (Re)placing Kanaka Maoli at Disney’s Aulani Resort*, also featured in McDougall’s writing, works in touristic spaces examining the use, misuse, and misplacement of Hawaiian cultural items. According to Nordstrom, Items with specific functions are often haphazardly placed with no explanation attached. She writes that the representation of Hawaiian culture in tourism is unpeopled and simulated with a high colonial

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<sup>121</sup> (McDougall 2016)

<sup>122</sup> (McDougall 2016)

<sup>123</sup> (McDougall 2016)



influence. Nordstrom recommends “returning functionality and people to our material and practiced culture.”<sup>124</sup>

As we learned from Eco, with aesthetic function comes a sign vehicle. For Hawaiians, some vehicles of communication include: ‘ōlelo no‘eau, mo‘olelo, and mo‘okū‘auhau, all of which have *kaona* (a deeper meaning) embedded within them. In this case, the primary function of these vehicles is written or spoken communication. Secondary functions include: the teaching of customary mannerisms when interacting with others or the ‘āina, service as a connection with the *na‘auao* (wisdom) of our kūpuna, the voicing of political and cultural claims to Hawaiian lands, and a form of sovereignty. What Eco defines as secondary functions can here be thought of as the process of *kaona* in the Hawaiian aesthetic system. The practice and definition of *kaona* are the same: finding a hidden or deeper meaning. *Kaona* is “an action and an enactment,” a “means of practice and study;” *kaona* provides connections to our kūpuna and ‘āina.<sup>125</sup>

“Hawaiian aesthetics have been and may be articulated beyond the visual or heard.” How can beauty and pleasure be assessed by physical senses other than sight and hearing? Imaikalani Kalahale, Hawaiian artist-scholar referenced in McDougall’s work, describes taste-related beauty as the “‘ono of artwork.” In this case, the word ‘*ono* means delicious. Ku‘ualoha Ho‘omanawanui, another poet McDougall quotes, also uses words to express beauty in relation to taste such as *li‘u* meaning “well-seasoned or skillful,” which was inspired by an ‘ōlelo no‘eau. Smells are powerful and can be beautiful by triggering happy memories. *He inoa ‘ala* meaning “a fragrant name,” was used in early times to describe an *ali‘i* (chief) and the way his effect lingered within the people’s memories.<sup>126</sup>

How will a set of aesthetic standards then successfully communicate the community’s intentions? How can “[c]ontemporary indigenous arts ‘not only convey culturally inflected meaning but also produce culturally coded aesthetic pleasure that producers and audience recognize as “beauty”?’” writes Chadwick Allen, another author whose work McDougall examines. Allen also asserts that aesthetic standards should “‘actively construct meaning making with audiences and incite pleasure through sensory appeals and intellectual challenges.’” According to this reasoning, beauty may be crafted. McDougall adds that an aesthetic standard

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<sup>124</sup> (McDougall 2016)

<sup>125</sup> (McDougall 2016)

<sup>126</sup> (McDougall 2016)

should act as a “reinforcement of ancestral knowledge and the contemporary application of that knowledge, in turn, [should] provide a foundation to guide us within contemporary colonial context.” One Hawaiian aesthetic standard should be that the work contains genealogized layers of meaning, both historical and metaphorical. Also, the work should offer “exclusivity that is unifying,” especially regarding aesthetics that have multiple perspectives, ethnicities, and opportunities for subjectivity.<sup>127</sup>

Creating an identity has become one of the bonds that hold the Native Hawaiian community together. An identity aids in announcing our presence to the world and allows us to feel united, Hawaiians and Hawaiians. McDougall quotes Chi’XapKaid who writes, “there can be no sovereignty for Native People when there is no cultural distinctiveness.” In this way, developing a community identity is a step we must take in order to move towards an independent nation. Here McDougal quotes Holt who writes, “there is no longer a Hawaiian nation.” According to Hold, then, I cannot be Hawaiian through my nationality; rather “I am Hawaiian by the ‘collection of feelings fused by the connecting links of elements that go deep into the past.’”<sup>128</sup>

“Contemporary Hawaiian literature is a product of an evolving consciousness of Hawaiian ancestry unique to Hawaiians,” says Richard Hamasaki, another Hawaiian author McDougall quotes. Many k naka writers publish their writing in an effort to reach other k naka and to offer spiritual healing. Just as writers have taken up this kuleana to create innovations that contribute to a better future, k naka in other fields are surely doing the same. Even so, change may take time because there are so few Native Hawaiians and because “kanaka authors are the only authors in Hawaii who can voice the true depth of Hawaii’s history,” says Monica Kaiwi. In this quote, authors can be interchanged with any occupation and the words are still true. The connection to Hawaiian culture is significantly greater when one is directly connected to the history that accompanies it allowing one to maintain “a uniquely K naka Maoli worldview”<sup>129</sup> no matter the outside influences.

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<sup>127</sup> (McDougall 2016)

<sup>128</sup> (McDougall 2016)

<sup>129</sup> (McDougall 2016)

## Hawaiian Cultural Practices

### ***Kākau Ka Uhi***

Tattooing was a common practice in many parts of Polynesia. The word tattoo originates from the Tahitian word *tatau* meaning “to mark the skin with color.” The Hawaiian language does not have the letter *t*; in this case, it is replaced with the letter *k*, and tattoo becomes *kākau*. For Polynesians, a tattoo is a wearable expression of culture. Hawaiian tattoos, different from those of other Polynesian cultures, do not generally cover the body as extensively. The tattoos were primarily composed of geometric designs formed into varied and artistic patterns. These specific patterns also made them identifiable as Hawaiian.<sup>130</sup>

Hawaiian pre-contact designs were comprised of simple geometric shapes made into intricate repetitive patterns. In most areas of Polynesia, a tattoo was applied following a certain protocol; for example, it might be a ritual or ceremony accompanied by a chant done in a house dedicated for tattooing and applied by a priest. One may assume that in the Hawaiian culture, a *kahuna* (a priest or expert in any profession) would have been in charge of tattooing, but with no written records or oral histories to confirm this, we cannot know for certain.<sup>131</sup>



*Figure 18: Pre-contact tattoo examples - (Kwiatkowski 2012)*

The earliest record of Hawaiian tattoos are sketches and lithographs done by early visitors to the islands. However, in his book *The Hawaiian Tattoo*, P.F. Kwiatkowski warns, “if one wishes to be fairly accurate in the search of pre-contact Hawaiian tattoo designs, then no great emphasis should be placed on the accuracy of the designs depicted in the engravings, unless substantiated by other evidence.” Kwiatkowski writes that there is a high possibility that the artists made alterations during the lithograph process. He recommends relying only on original sketches, graphic descriptions, and physical evidence. As a general rule, pre-contact tattoos consisted of

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130 (Kwiatkowski 2012)

131 (Kwiatkowski 2012)

geometric designs and post-contact of pictorial themes such as goats, guns, names, and dates. Other early records used as proof are chants but these do not speak of tattoos.<sup>132</sup>



*Figure 19: Post-contact tattoo example - (Kwiatkowski 2012)*

In the Andrews-Parker dictionary, *kākau* is defined as “a mark left by dye on the body or on *tapa*.”<sup>133</sup> The mark itself is referred to as *uhi*. The two essential tools used to apply an *uhi* are the *mōlī* and the *hahau*. The *mōlī* is a sharp tool which breaks the skin and inserts the ink, defined in the dictionary as “bone made into a tattooing needle.” *Mōlī* is also the name used for straight lines that separate designs within a tattoo as well as the bird from which the needle bones are fashioned. *Hahau* is the hitting stick; the word literally means “to strike.” The ink used in *kākau* is referred to as *pa’u*, a strong ink that dyes anything it comes into contact with. *Pa’u* is made from the burnt remains and soot of the *kukui* nut and results in an intense black color. The logs of Western visitors tells us that tattoo dye was combined with coconut and sugar juices probably to give it a thicker consistency so that ink would not move after entering the skin. Kwiatkowski shares knowledge on *kākau* he received from Papa Henry Auwae, a kahuna *la’au lapa’au* (herbal healer). Kahuna Auwae says fish bones were also used to make needles and dye. The ash of the root of the *neneleau* (commonly, Hawaiian sumac) was also used to make dye. Beaks and claws of certain Hawaiian birds were also used as needles. I have not yet found any research specifying whether there were specific reasons or preferences regarding which bones or dyes were used. Kwiatkowski tells us, “much information has been lost regarding the names by which they were called and whether or not different needle materials caused the needles to be called by different names.”

During application, the bird bone needles allowed circular patterns to be created. Wide linear needles afforded ease of uniformity as the width, or number, of teeth could dictate a

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<sup>132</sup> (Kwiatkowski 2012)

<sup>133</sup> (Kwiatkowski 2012)

consistent length and therefore a consistent shape or pattern. The tattooer holds the hahau in one hand and the mōlī in the other. A pillow is used to support the hand holding the mōlī and to steady the stick. When all is properly position, the tattooer uses the hahau to tap the stick of the mōlī with quick, repeating taps.<sup>134</sup>



*Figure 20: Customary Hawaiian tattoo tools - (Kwiatkowski 2012)*

“One of the first things I realized while researching Hawaiian tattoo designs, is that there really is not much information regarding the names of many of the designs.”

Aside from easily identifiable shapes and symbols, Kwiatkowski says that information on the names of Hawaiian tattoo designs is limited. Easily identifiable designs can be thought of as universal, or designs consisting of basic geometric shapes like straight lines, circles, semicircles, rhombs, squares, triangles, bars, and crescents. He offers a short list of known names, which are:

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<sup>134</sup> (Kwiatkowski 2012)

- Koa'e
- Alanui o Kamehameha – road to Kamehameha
- Mā'oi'oi – zigzag
- Kiko – tattoo with dots on the forehead
- Kikiko – to tattoo with dots and spots
- Pa'ele – solid black tattooing without design
- Pa'ele kulani – solid black tattoo, but on one side of the body only
- Hikoni – tattoo brand on the forehead of the kauwā or slaves (also the mark of the seducer of a chief's wife)
- Maka uhi – tattoo on the inner eyelid (a defeated warrior tattooed this way as an insult so that, waking or sleeping, he would always be reminded of his defeat)



Figure 21: pattern known as Alanui o Kamehameha (left) koa'e birds (right) - (Kwiatkowski 2012)



Figure 22: Niho manō variation - (Kwiatkowski 2012)



Figure 23: Niho manō pyramid style - (Kwiatkowski 2012)



Figure 24: Niho manō linear without border - (Kwiatkowski 2012)



Figure 25: Niho manō pattern single strand - (Kwiatkowski 2012)

Because there are few resources on Hawaiian tattoo names and designs, Kwiatkowski writes that “it is far easier to look elsewhere for motifs whose names have been recorded in other areas of Hawaiian art, craft or custom.” Because of the “striking similarities in the geometric patterns

on tapa stamps and their counterparts in tattooing,”<sup>135</sup> kapa is the first practice that Kwiatkowski examines. In some cases, tattoo patterns were directly taken from patterns on kapa stamps or beaters. Kwiatkowski refers to this method of research as looking to tattoo’s relatives. Kapa names that have also been used for tattoo include the following:

- Ko’eau – moving worm (gently waving parallel lines)
- Niho manō – shark teeth
- Kapua’i koloa – resembling duck tracks
- Ānueue – a scallop-like design
- Niho wili hemo – zigzag stripes
- ‘Upena – a net pattern
- Kōnane – checkerboard pattern
- Lei hala – a design like blunted spear points connected to base point



Figure 26: Ānueue pattern - (Kwiatkowski 2012)



Figure 27: Wave or scallop pattern - (Kwiatkowski 2012)

The next cultural practice Kwiatkowski looks to for tattoo names are the *makaloa* mats. These mats were made out of the makaloa plant, a type of sedge, and weaved into various patterns. Makaloa design names include:

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<sup>135</sup> (Kwiatkowski 2012)

- Nene – paired triangles stacked base to point and resembling geese in flight
- Puakala – triangles in a row, bases and tips touching
- Humuniki – squares joined at their points in a row
- Kahanu or kuhanu – paired rows of triangles facing each other and touching at the tips



*Figure 28: Makaloa mat - (Kwiatkowski 2012)*



*Figure 29: Puakala (left) puhala (middle) kuhanu or kahanu (right) - (Kwiatkowski 2012)*



*Figure 30: Nene (left) Humuniki (right) - (Kwiatkowski 2012)*





Figure 31: Hale - (Kwiatkowski 2012)



Figure 32: Papalua - (Kwiatkowski 2012)

Other relatives that may give us insight into tattoo design and names are the designs that appear on *‘umeke* (Hawaiian containers) and *ipu hoehoe* (whistles).

Tattoo designs connected to *‘aumākua* (personal god) have been confirmed through oral histories. An *‘aumakua* is a family or personal god. Today, many Hawaiian families maintain their belief in their *‘aumākua* by recognizing and paying homage to them. The attention paid to one’s *‘aumākua* determined the side of power one fell on. When relationship was maintained, an *‘aumakua* was caring, generous, and protecting. When forgotten, however, an *‘aumakua* could be destructive and mischievous. If one did not have an *‘aumakua*, offerings and prayers were made to a desired god in order to please them and gain acceptance. *‘Aumākua* are not just guardians or protectors, they also provided mana to the kahuna who practiced sorcery. *‘Aumākua* can take many forms; it might appear as a spirit, an animal, an inanimate object (e.g., a stone or gourd), or an ethereal thing (e.g., thunder). “The very concept of *‘aumākua* is not easy to explain although a parallel might be seen in the use of certain American Indian totems.”<sup>136</sup>

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<sup>136</sup> (Kwiatkowski 2012)

Due to the lack of Hawaiian sources, Kwiatkowski informs us, “I don’t believe a complete list of all the ‘aumākua could ever be made.” However, he lists some of the known forms of ‘aumākua. These are:

- Manō – *shark*
- Honu – *turtle*
- Lanalana – *spider*
- Mo’o – *lizard*
- ‘Io – *hawk*
- Pueo – *owl*
- ‘Alalā – *crow*
- He’e – *octopus*
- Loli – *sea cucumber*
- ‘Ope‘ape‘a – *bat*
- ‘Enuhe – *caterpillar*
- ‘Opihi – *limpet*
- Pinao – *dragonfly*
- Lā‘au – *tree (certain ones only)*
- Ipu – *gourd*
- Hekikili – *thunder*
- Uila – *lightning*
- Pōhaku – *stone (specific ones, either carved or found in nature)*

Tattoos corresponding with one’s ‘aumakua do not necessarily need to depict one of the forms of the ‘aumakua. Following is a mo’olelo about a manō ‘aumakua that explains this:

One day, a woman went swimming and got bitten by a manō. That manō happened to be her ‘aumakua. Recognizing him, she cried out his name. He let go and said, “I will not make that mistake again, for I will see the marks on your ankle.”<sup>137</sup> With that, a row of dots around the ankle became the tattoo of people with a manō ‘aumakua.

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<sup>137</sup> (Kwiatkowski 2012)



Figure 33: Illustration of giving thanks to an 'aumakua – ([http://dlnr.hawaii.gov/sharks/files/2014/06/img\\_aumakua-300x178.jpg](http://dlnr.hawaii.gov/sharks/files/2014/06/img_aumakua-300x178.jpg))

Some Hawaiians know a particular manō is their 'aumakua and rare individuals can call their manō to them, similar to how one would call a puppy to be pet or fed. It is of note here that only certain species of manō are 'aumakua. For example, other species were known as *niuhi* (man-eaters) and were hunted for sport and harvested for their skin and teeth. Famous 'aumākua have names themselves, which leads us to believe their corresponding tattoos could possibly have similar names. Here are a few examples of the names of well-known 'aumākua listed with their animal forms:

- Manō — Kamohoali'i, Ka'ahupahau, and Ka'ehuikimanooPu'uloa
- Mo'o — Mo'oinanea, Kihawahine, and Kihanuilulumoku
- Pueo — Kukauakahi and Pueokahi

There was no strict protocol for the placement of tattoos. However, some preferences can be deduced. For example, a sense of symmetry was desired so, if one side of the lower body was marked then the upper body would be marked on the opposite side. Also, tattoos on the face were placed in areas where they could be clearly displayed such as on the brow bridge, the cheek, the cheekbone, and the chin. Tattoos were not placed on the back, possibly because Hawaiians considered it rude to turn the back on someone. Women tended to have tattoos on their hands, fingers, wrists, ankles, and calves. It was typical for the whole calf to be covered with a band around the ankle. Band designs were also common on wrists and sometimes tied into a hand or finger design. The hand that was tattooed was the hand that beat the *pahu* (drum) or held the ipu when dancing hula.<sup>138</sup>

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<sup>138</sup> (Kwiatkowski 2012)



*Figure 34: Palm tattoo example (left) finger tattoo example (right) - (Kwiatkowski 2012)*



*Figure 35: Calf and ankle tattoo example (left) hand tattoo example (right) - (Kwiatkowski 2012)*



*Figure 36: Hand tattoo examples - (Kwiatkowski 2012)*



*Figure 37: Tattooed officer showing symmetry with right chest/shoulder tattoo and left thigh tattoo - (Kwiatkowski 2012)*



*Figure 38: Calf and ankle tattoo examples - (Kwiatkowski 2012)*

Because of the logic inherent in the placement of the tattoos, it appears that the custom was practiced with purpose. Unfortunately, not all purposes were joyful ones. As a sign of grief when a dear one passed, Hawaiians would tattoo their tongues. The permanent mark was a sign of true affection and loyalty. In addition, the tongue was said to be one of the most painful areas to be tattooed; therefore, the endurance of pain reflected the degree of affection and loyalty. Queen Kamāmalu, when tattooing her tongue for Kamehameha the great, famously explained that the pain is great but her affection is still greater.<sup>139</sup>

Another purpose for a tattoo was the marking of *kauwā* (slaves). Owned by a chief from birth, *kauwā* were marked with a tattoo on the face to prevent them from running off and starting a new life. A typical *kauwā* tattoo was a round spot in the middle of the forehead, a curved line arched over the base of the nose, or a curved line on each side of the face next to the eyes (like brackets). *Kauwā* tattoos were undesirable tattoo since the wearer had no choice. Another example of an undesirable tattoo is a *maka uhi*. As mentioned earlier, the *maka uhi* is given to a defeated warrior by the victor to be a constant reminder of his loss.<sup>140</sup>



*Figure 39: Kauwā tattoo examples - (Kwiatkowski 2012)*

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<sup>139</sup> (Kwiatkowski 2012)

<sup>140</sup> (Kwiatkowski 2012)

Despite the existence of unfavorable purposes for tattoos, there were many more joyful and numerous reasons for obtaining them. First and foremost, tattoo was a visual display of connection to Hawaiian roots. Whether the tattoo shows ties to mo'okū'auhau, 'aumākua, or events of spiritual significance, it is a physical manifestation of culture that a person keeps with them at all times. A tattoo provides one with a permanent connection to the culture and a constant reminder of its values. A tattoo is also a subtle sign of strength and endurance. "Only a person who has felt the pain of the tattoo needle can truly appreciate what another has gone through to obtain a tattoo. It certainly is a test of one's ability to block out or absorb pain of varying degrees, depending on the body part to be tattooed and the amount of skin covered by the tattoo." In Samoa, a person with a knee-to-abdomen tattoo is treated as a wounded warrior and is acknowledged for his strength in completing such a painful test. Many times the purpose of a tattoo is personal, holding a deeper spiritual meaning, or kaona. "In the days when tattooing was widely practiced in old Hawai'i, the kaona of many designs was known to only a select group of individuals or kept within the family." In other words, kaona of tattoo were kept secret and only meant for certain people, which all Hawaiians understood and practiced.<sup>141</sup>



*Figure 40: Tattoo detail of "Death of Captain Cook" - (Kwiatkowski 2012)*



*Figure 41: Tattoo examples - (Kwiatkowski 2012)*

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<sup>141</sup> (Kwiatkowski 2012)



*Figure 42: tattoo on dancer (left) bar design (middle) Liholiho pattern (right) - (Kwiatkowski 2012)*



*Figure 43: Bird and triangle design (left) niho manō variation (right) - (Kwiatkowski 2012)*



*Figure 44: Niho manō variations - (Kwiatkowski 2012)*



*Figure 45: Detail of "Interieur" - (Kwiatkowski 2012)*

Today, the purposes of tattoo stem from fancy, a renewed interest in Hawaiian culture, a sense of pride in one's ancestry, and symbol of being Hawaiian. A connection to culture, cultural

values, mo'okū'auhau, 'aumākua, and kaona are still present but are no longer the primary reason for tattoo. Instead, the primary reason to get a customary Hawaiian tattoo today is to recreate and perpetuate a part of Hawaiian culture.<sup>142</sup>

To lose any part of a culture is to never fully understand or appreciate that culture. It does not mean that we must shed the ways of the modern world and live in the past. What it really means is that we must take note of, and attempt to understand as much of, the aspects of our culture that make us unique in the world, and yet re-affirms the bond we have with our Polynesian cousins throughout the Pacific. We need this knowledge to understand where we came from and where we, as a people and culture, are going. A person without a beginning is like a story with no beginning, it is not clear and has no foundation. For this reason, we must perpetuate this and other aspects of the Hawaiian culture so future generations of Hawaiians will be able to do the same.<sup>143</sup>

### *Keone Nunes*



*Figure 46: Tattoos by Keone Nunes – ([http://honoluluuseum.org/12749-tattoo\\_honolulu](http://honoluluuseum.org/12749-tattoo_honolulu))*

“Through your hands, your ancestors live.”

Keone Nunes is a well-known Native Hawaiian kākau practitioner in Hawai‘i and throughout Polynesia. Nunes grew up with his grandfather in Wai‘anae on the island of O‘ahu. Because his grandfather spoke Hawaiian, Nunes learned to speak Hawaiian before English. He graduated from the University of Hawai‘i at Mānoa with a degree in Anthropology. He has worked at many culturally-connected places such as Hilo community college, Bishop Museum, Kamehameha Schools, the Office of Hawaiian Affairs, and ACO Incorporated (the largest Native American corporation). He is also a kumu hula (hula teacher).<sup>144</sup>

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<sup>142</sup> (Kwiatkowski 2012)

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<sup>144</sup> (Hawaii)





*Figure 47: Keone Nunes (left) Keone practicing tattoo (right) – ([https://ab976f528c498801423d-2376439231beb5d718e8f49fe25fed31.ssl.cf1.rackcdn.com/uploads/media/media/8362/featured\\_exhib\\_nunes.jpg](https://ab976f528c498801423d-2376439231beb5d718e8f49fe25fed31.ssl.cf1.rackcdn.com/uploads/media/media/8362/featured_exhib_nunes.jpg)) (<http://www.hawaiimagazine.com/sites/default/files/field/image/Photo%20Olive%20Koning.png>)*

With the aid of many mentors, Nunes has rekindled cultural “tapping.” He started tattooing in 1996 and officially converted to customary cultural tools in 2000. Most of his mana’o (knowledge) come from several kūpuna. He says, “A lot of the kūpuna didn’t want to just give the information out to everyone. They wanted to give their information out to someone that they felt would appreciate what was being told to them. And I did appreciate things. I didn’t have full comprehension of it, but I did appreciate every second that I sat on the foot of all of these kūpuna.” Through kūpuna he learned the protocol of kākau, the names of uhi, the shapes of uhi, the different family uhi, and more. Whenever one speaks with kūpuna, everything that they share with you is something special and when shared, becomes your responsibility. Kūpuna are the root of a Hawaiian perspective.<sup>145</sup> From a Samoan named Paulo Suluape, Nunes learned how to make kākau tools. Today, Nunes is training two apprentices to kākau. He says it may be only a handful of people but “it is way too important for us as a culture, for it to be lost.” So, he is passing it on.<sup>146</sup>



*Figure 48: Customary kākau tools – (<https://www.olukai.com/keone-nunes.html>)*

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<sup>145</sup> (TV 2014)

<sup>146</sup> (Hawaii)



*Figure 49: Close up of kākau – (<http://www.hawaiimagazine.com/content/what-you-should-know-about-traditional-hawaiian-art-tattoo>)*

In his interview, Nunes tells us that not everyone had tattoos in early Hawai'i; possibly a majority of people did but not all. He explains that certain people had to work and farm during the day and did not have the time to relax and heal properly. Therefore, it was often people of higher status that had more tattoos. Nunes says, "All of the intricate extensive tattoos were primarily for the people of the upper echelons because they could afford to have it done... they were people that didn't need to go out."<sup>147</sup>

A tattoo is identification. The tattoo that Nunes has was designed by one of his mentors, Auntie Muriel, and is something she thought was appropriate for him. Mentors have taught Nunes that it is not always the wearer of the tattoo that gets to decide what the tattoo will look like. He explains, "I'm not a tattooist, I'm a practitioner. And ... as a practitioner, I have certain responsibilities. And if I know that a design is not appropriate for you, I'm not going to do it, because it's my responsibility to give you something that is appropriate." In so doing, Nunes is able to catch tattoos that may be inappropriate because they belong to someone else. For example, he says, "If I wouldn't want someone walking around with patterns that belong to my family, then what makes it right for me to appropriate patterns from another culture, that may belong to someone else's family?" Although it requires a good amount of knowledge of Hawaiian culture, other practitioners and tattoo artists should also determine the appropriateness of reproducing or creating Hawaiian tattoos. This can also help prevent the perpetuation of false meanings.

Nunes does listen to client requests but often creates the design himself. In each case, his design is based on an interview with the client prior to the tapping session in which Nunes finds out exactly who the person is. Nunes does not tell the person what the design will be ahead of

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<sup>147</sup> (Hawaii)

time; he prefers it this way, which is similar to way it was done in early Hawai'i. Because of his reputation and numerous works, many people trust his judgement.<sup>148</sup>

Nunes also explains the amount of control a kahuna kā uhi (tattoo master) had in pre-contact times. First of all, kahuna kā uhi was the only class of people that could spill the blood of the ali'i without being killed. With the trust of the ali'i, the kahuna kā uhi controlled all protocols. The tattoo practitioner controlled where the tattoo would be applied, at what time, for how long, who could watch, and all other details.<sup>149</sup>

Nunes notes that although we share certain designs with other Polynesians, it is the only the design elements that are the same while the meanings are different. "Triangles mean one thing, but not all triangles have the same meaning," he says. He explains that the same design will not always mean the same thing twice. The design may only have been appropriate within the particular context and moment in which it was initially presented.<sup>150</sup>

As far as specific shapes, Nunes notes that Hawaiians never used curvilinear designs. Circles and semi-circles were the exception. Also, he informs us of *noa* designs, which are designs that do not belong to anyone and are thus appropriate for anyone. A noa design, for example, can signify certain aspects of life. He does not, however, mention any corresponding shapes.<sup>151</sup>

A tattoo, an uhi, is a visual identifier of one's roots in the Pacific, one's family, and one's ancestors and enables these go with you no matter where you go. Nunes considers any kind of family design a protection design as well because ancestors are the ultimate protection. He says, "When you have that foundation, that protocol, that understanding, this is no longer just another tattoo;" it becomes something essential for you in understanding who you are as an individual and a reminder of who you are as a Hawaiian. He advises that it is not about how much a person already knows about his or her culture, it is rather about the intention or desire to know. The mana'o he shares, he says, is not important just for him but for all of us because it is a foundation. Nunes is considered a master of ancestral ink because he guides his clients "down a path of self-discovery revealing life lessons of who they are and where they come from."

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<sup>148</sup> (Hawaii)

<sup>149</sup> (Hawaii)

<sup>150</sup> (TV 2014)

<sup>151</sup> (Hawaii)

Whether his tattoos are true to the customs in early Hawai'i or are a reflection of them, the tattoos clearly go deeper. He leaves us with the following question:

“How are you going to answer to your ancestors when it is time for all of us to meet them?  
Will they be happy with what you have done?” <sup>152</sup>



Figure 50: Keone Nunes work: leg tattoo (left) hand tattoo (middle) whole body tattoo (right) -  
(<https://yosotattoo.files.wordpress.com/2008/12/072507keone2.jpg>)  
(<https://yosotattoo.files.wordpress.com/2008/12/072507keone3.jpg?w=575>)  
(<http://www.hawaiiimagazine.com/sites/default/files/field/image/KelTAT.jpg>)



Figure 51: Keone with his “skin stretchers” – (<https://s-media-cache-ak0.pinimg.com/736x/cc/b1/e8/ccb1e837cab965f078dfbe34f3328c54.jpg>)



Figure 52: Tattoo by Keone Nunes –  
([https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=0ahUKEwjKhdK5vNTSAhVE2mMKHU37BocQjBwIBA&url=http%3A%2F%2Fstatic.pechakucha.org%2Fpechakucha%2Fuploads%2Fslide%2Fimage%2F5345fe764f5c2916640000f%2Ffull\\_10\\_10.jpg&psig=AFQjCNHc--wTBHwjS22kSH9zSE63PB3cAA&ust=1489526791603326](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=0ahUKEwjKhdK5vNTSAhVE2mMKHU37BocQjBwIBA&url=http%3A%2F%2Fstatic.pechakucha.org%2Fpechakucha%2Fuploads%2Fslide%2Fimage%2F5345fe764f5c2916640000f%2Ffull_10_10.jpg&psig=AFQjCNHc--wTBHwjS22kSH9zSE63PB3cAA&ust=1489526791603326))

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<sup>152</sup> (TV 2014)

### *Hana Ke Kapa*

“Ho‘onani means to beautify.

Ho‘onani means all things beautiful.

Ho‘onani reflects man’s continuing effort to create things of beauty, and his desire to be motivated by stimuli from his natural environment and his cultural heritage. Through study and creation of art works such as paintings, pottery, weaving, sculpture and other art forms, man cultivates his senses to become more aware of all things beautiful so that he can function more effectively as a consumer, critic, and creator.”<sup>153</sup>

The quote above exemplifies the multiplicity and depth of meaning within one Hawaiian word. The quote tells us that by studying and creating art we are able to develop our sense of beauty and in this way have a great impact as an artist. In other words, each encounter with art allows a deeper understanding of beauty to grow and to broaden one’s perspective on what is visually pleasing.<sup>154</sup>

The art of kapa (bark cloth) is common throughout Polynesia but the kapa from Hawai‘i is generally considered the finest. Hawaiian kapa offers the greatest variety of textures, colors, and designs executed by exclusive local methods. Kapa was the cloth made for clothing, bed covers, gifts, and exchange items. Kapa was to daily life what ornament is to architecture. Kapa was an essential tool in daily life and thus more than a mere art.<sup>155</sup>



Figure 53: Kapa-making – ([http://www.kumukahi.org/images/1301/kapa7\\_\\_medium.jpg](http://www.kumukahi.org/images/1301/kapa7__medium.jpg))

The kapa-making process began with cultivation of the material. *Wauke* (paper mulberry) was the preferred source as it produced the best quality kapa. Other plants that were used include *māmakei*, *‘oloa* or *ma‘aloa*, *‘akala*, and *‘ulu*. Men cultivated wauke in lowland plantations and gardens. The cultivation and care of wauke required great attention in order to protect the

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<sup>153</sup> (Rose 1971)

<sup>154</sup> (Rose 1971)

<sup>155</sup> (Rose 1971)

wauke from other plants and to produce straight, undamaged stalks. The desired point of maturation was between one and two years. At this point, suitable saplings were harvested.<sup>156</sup>



Figure 54: Wauke plant - ([http://www.ehoiili.com/uploads/1/7/9/6/17965961/8431806\\_orig.jpg](http://www.ehoiili.com/uploads/1/7/9/6/17965961/8431806_orig.jpg))

The first step, as with all Hawaiian art, is finding suitable materials. For kapa, this is the soft inner bark of young shrubs or trees. Men, again, located and cut fitting branches, about ten feet long and one inch in diameter. Next, both men and women used sharp tools to split the outer bark from the inner and remove it. The bark was then unrolled, flattened, and re-rolled in the opposite direction into small coils with inner surfaces facing outward. These coils were then placed into containers of sea water to soak for about a week. After soaking, the outer layer of bark was scraped off with a shell or turtle bone. A second soaking and scrape followed to ensure all outer bark was removed. At this point, the inner bark was ready for processing.<sup>157</sup>

The processing stage of kapa-making was comprised of two beating stages. The objective of the first stage was to break apart the fibers of the inner bark. Strips, called *mo'omo'o*, were 6 to 12 inches wide. Women used a *hohoa* or *hoahoa* (hard wooden mallet) about 14 to 15 inches long, cylindrical, and either *mole* (smooth) or *nao* (slightly grooved parallel ridges) to beat the kapa. Strips were beaten on smooth wood or smooth stone. The first stage was complete when the kapa had a uniform thickness. *Mo'omo'o* were then either bleached and left in the sun or wrapped in *kī* (ti) leaves.<sup>158</sup>

*Mo'omo'o* was softened briefly in water before the next stage. Several sheets of *mo'omo'o* were then combined to make one large sheet. The combination process is called felting. The women then beat the *mo'omo'o* with *hoahoa* that had faces containing deep grooves and wide ridges to break up bast fibers. As the process continued, the women would *ho'opa'i* (gradually switch to faces with smaller and smaller grooves and ridges). Then, they switched to *ho'oki* (beaters with patterned faces) until the kapa was smooth. Edges were then trimmed with a

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<sup>156</sup> (Rose 1971)

<sup>157</sup> (Rose 1971)

<sup>158</sup> (Rose 1971)

bamboo knife. The final step was to spread the kapa over moss and leave it for several days where it dried and was bleached in the sun and could intake the night's dew to become as "shiny as linen." According to Samuel Kamakau, Hawaiian historian and scholar, a determined woman could make about two kapa a day or ten in a week.<sup>159</sup>



Figure 55 : Strips of wauke – (<https://kapakulture.files.wordpress.com/2013/01/3491.jpg>)

The second stage took place in a *hale kuku*, a special house for making and decorating kapa, in which only women were allowed. The necessary tools for the second stage are a mallet, a bamboo knife for trimming, and water in case the kapa gets too dry. Instead of the hoahoa, a special mallet called *i'e kuku* was used. The *i'e kuku* is similar to the hoahoa in size but square in shape. Also, each of the four faces of the *i'e kuku* was carved with sharks teeth in different patterns. Patterns varied from fine parallel grooves (on at least one face), squares, triangles, circles, zigzag lines, or a combination of these. In the same manner as before, the kapa was further beaten. For this stage, the kapa was beat on a *kua*. A *kua* is a hardwood smooth beam about five feet long and three to six inches wide. *Kua* have tapered ends and a hollow bottom. The combination of the *i'e kuku* and the *kua* produced beater marks. These were the indented patterns of the particular *i'e kuku* used embedded into the kapa. These marks added beauty, appeal, and distinction.<sup>160</sup>

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<sup>159</sup> (Rose 1971)

<sup>160</sup> (Rose 1971)



Figure 56: kapa beaters - (<https://s-media-cache-ak0.pinimg.com/1200x/66/9e/47/669e4706300e7b591d72ade32754edb2.jpg>)



Figure 57: Kapa showing beater marks – ([http://tapa.gla.ac.uk/images/webimages/translight%20\(4\).jpg](http://tapa.gla.ac.uk/images/webimages/translight%20(4).jpg))



Figure 58: Kapa showing beater marks – (<http://mauimagazine.net/beauty-in-the-bark/>)

The decorating of kapa also took place in the hale kuku. “Hawaiians excelled in their sense of color and design in decorating bark cloth.” Color combinations that westerners might call harsh or glaring were not employed. Instead, subtle colors were used. The base color of the kapa was either white, buff, or soft yellow. The design placed on it was typically made of only one or two colors.<sup>161</sup>

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<sup>161</sup> (Rose 1971)





Figure 59: Kapa being stored – (<https://aeimke.files.wordpress.com/2015/01/storing.jpg?w=648>)



Figure 60: Kapa designs by Kalani Tanahy - ([https://honolulumuseum.org/learn/classes/textiles\\_fiber/14156-the\\_arts\\_of\\_hawaiian\\_kapa\\_making\\_64](https://honolulumuseum.org/learn/classes/textiles_fiber/14156-the_arts_of_hawaiian_kapa_making_64))



Figure 61: Finished kapa - (<http://mauimagazine.net/beauty-in-the-bark/>)



Figure 62: Finished kapa - (<http://britishmuseum.tumblr.com/post/113056006632/the-%C3%B6mie-people-of-papua-new-guinea-are-a-small/embed>)

Hawaiians made their own dyes for decorating the kapa using nature’s resources. Most dyes were plant-based and exemplified the Hawaiian’s thorough understanding of the

environment. Dyes were “prepared fresh by men for women to use as needed” and stored in coconut shells or gourds.<sup>162</sup>

DYES MADE FROM PLANTS	
RED	‘ama‘uma‘u fern leaves, kōlea bark, kou leaves, kukui bark, pala‘a fern
YELLOW	Hōlei bark, nānū fruit pulp, ‘olena (turmeric), noni roots
GREEN	Pounded ma‘o (cotton leaves)
PALE BLUE	‘uki‘uki (mountain lily berries)
LAVENDER	Boiled ripe ‘ūlei seeds
PINK	‘akala (raspberries)
BROWN	Crushed kou leaves, ‘a‘ali‘i seed capsules roots or bark
BLACK	Kukui nut rinds and roots
DYES MADE FROM OTHER SOURCES	
RED	‘alea (ocher) powder
YELLOW	‘alea powder
LAVENDER OR PURPLE	‘ina (sea urchin)
BLACK	Powdered charcoal

Figure 63: Table of Dyes – (Rose 1971)



Figure 64: Colors of dyes made from natural sources – (<http://www.kapahawaii.com/hawaiian-kapa-designs-and-patterns.html>)

Hawaiians developed several techniques for dyeing but ultimately chose the technique that gave them the most control over the final result. When dyeing a whole sheet one color, the kapa was *ho‘olu‘u* (immersed) into a container of liquid dye. When coloring one side at a time, dye was brushed lightly with a dye-soaked cotton swab or small pack of charcoal. Another method used to dye kapa with different colored sides is overlaying. Overlaying was achieved by beating together two pieces of bark cloth that have already been dyed. One of the favorite color sets to overlap was red and white; this is called *pa‘i‘ula*.<sup>163</sup>

<sup>162</sup> (Rose 1971)

<sup>163</sup> (Rose 1971)

With the same dyes, the women decorated the kapa with geometric and abstract designs. The designs were repeated patterns of simple elements. The method for decorating the kapa called for an *'ohe kāpala* (bamboo stamp). The stamps were made out of bamboo slivers, eleven to nineteen inches long and under an inch wide. Shapes were carved into these slivers with a shark tooth. This relief printing method was convenient and efficient for decorating large fields of cloth. If desired, small *hala* (pandanus) brushes were used, when needed, to fill in stamps.



Figure 65: *'Ohe kapala* - (<http://kamahawaii.blogspot.com/2011/10/weekend-update-october-6-8-2011.html>)

Common designs for the shapes carved into stamps included small notches, excised triangles, chevrons, oblique (angled) and vertical lines, vertical and horizontal bars, circles, ornate (elaborate) triangles, lozenges (diamond), and any combinations of these. Hawaiians combined such simple shapes into complex designs. Stamping location varied but, a common placement was in bands across of kapa. As mentioned before, only one or two colors were used to decorate each kapa. Red and black were the most common.<sup>164</sup>

Making straight lines on kapa was done with a special tool called *tapa* liners. A *tapa* liner was also a bamboo stamp. These stamps, instead of a carved pattern along the flat sides, had a fork-like cuts on one end of the bamboo stick. Another method of making straight lines that can also be considered a pattern is *kaula kākau* (cord snapping). In *kaula kākau*, a cord is dipped in dye and snapped onto the kapa. Unlike the *tapa* liners, *kaula kākau* also showed the twists and textures of the cord.<sup>165</sup>

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<sup>164</sup> (Rose 1971)

<sup>165</sup> (Rose 1971)



Figure 66: Kapa liners - ([http://data.bishopmuseum.org/ethnobotanydb/images/ohe\\_kapa\\_liners.jpg](http://data.bishopmuseum.org/ethnobotanydb/images/ohe_kapa_liners.jpg))

In addition to the beater marks, kapa was given even more texture by a process called *kua 'ula*. *Kua 'ula* was a technique used exclusively by Hawaiians where kapa was ribbed with three simple tools. Instead of a *kua*, a *papa hole* (thin board with fine parallel grooves) was used. The *papa hole*, three feet by seven inches, was placed beneath the kapa. With a bamboo ruler as a guide, a wooden blade was used to press damp kapa into the grooves on the board creating a series of folds. After *kua 'ula*, the kapa was typically dyed red and used for skirts and loincloths.<sup>166</sup>

There were many types of kapa and just as many uses for it. It is likely that “each type had its own special name and use.” Use depended on the characteristics offered by the particular cloth. Thicker kapa, which were more durable, were used for bed mats and door flaps. Coarse type kapa were used for decorative streamers on *Makahiki* images, coverings for oracle towers, and *heiau* images. While more research is required to identify exact names and other types of kapa, other uses have been identified. These include: coverings for kapu sticks, Kahuna clothing (white), *kapu* (forbidden) area markers, wicks for lamps, bandages, wrappings, kites, knee pads, baby blankets, wraps for burying bones. Out of the numerous uses of kapa, the most common uses were bedcovers and clothing.<sup>167</sup>



Figure 67: Kapa assortment – (<https://kapakulture.files.wordpress.com/2013/02/kapa-assortment.jpg>)

The making of *kapa moe* (bedcovers) was another art in itself. The pieces used were nine to twelve feet square and four or five of these pieces were needed. The *kapa moe* was

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<sup>166</sup> (Rose 1971)

<sup>167</sup> (Rose 1971)

constructed with *iho* (plain uncolored sheets) and a *kilohana* (decorated top sheet). A good example of a kilohana is the kapa made by overlaying, the pa'í'ula explained earlier.<sup>168</sup>



Figure 68: Kapa assortment – (<https://www.hawaii.com/discover/always-stylish-alo-ha-shirts/>)

All clothing made and worn by Hawaiians was made from kapa, in early Hawai'i. A man wore a *malo* (loincloth). A malo was a piece of long cloth, nine to twelve feet in length and nine to twelve inches in width. The long pieces were wrapped and folded around the waist and usually decorated with red and black patterns. A woman wore a *pā'ū* (skirt). Kapa for pa'u were six to nine feet long and 3 feet wide, shorter and wider than the malo cloth because a different wrapping technique was used. After wrapping, pā'ū needed to be fastened with a small stone or kukui nut. Some elaborate pā'ū were made with several layers of kapa that hung at different lengths.<sup>169</sup>



Figure 69: Kapa clothing - ([http://paieaprojects.com/blog/?category\\_name=design](http://paieaprojects.com/blog/?category_name=design))  
(<http://mauiNOW.com/2014/01/14/macc-presents-new-hula-work-kapa-symposium/>)

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<sup>168</sup> (Rose 1971)

<sup>169</sup> (Rose 1971)



Figure 70: Kapa pā'ū – (<http://www.bishopmuseum.org/hulia-ano/>)

A covering worn in addition to the malo and pā'ū is the *kīhei* (shawl or cloak). A piece three to six feet square was centered under one arm and knotted over the opposite shoulder. Kīhei often had the most complex designs. Some special clothing was made out of different materials like ti leaf, cord sandals, and feather adornments for the ali'i. Another way kapa could be considered special, especially when used for clothing, was the incorporation of scent. Either placed in the dye or between sheets, plants were applied to the making process in order to capture their pleasant scents.<sup>170</sup>



Figure 71: Kapa kīhei (shawl) - (<https://s-media-cache-ak0.pinimg.com/originals/6d/c5/f8/6dc5f8a1cf0450a3fccc55a675de644f.jpg>)

After Europeans brought woven cloth to the islands, the manufacture of kapa gradually declined. However, a great appreciation and interest in kapa is still alive today.<sup>171</sup>

### ***Hana Ka 'Ahu 'Ula***

“Among all of the Polynesian cultures,  
the Hawaiians developed featherwork to its highest level of accomplishment”

“the function of featherwork to beautify, exalt, and glorify the chief is at least as equally important as  
that of protecting him or her”<sup>172</sup>

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<sup>170</sup> (Rose 1971)

<sup>171</sup> (Rose 1971)

<sup>172</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

‘Ahu ‘ula is a customary Hawaiian practice consisting of cord and feathers. There are several techniques used in the execution of this art, each with the purpose of holding feathers. The first step in the featherwork process, as in all forms of traditional Hawaiian art, was the gathering of materials. *Hulu* (feathers) were collected by a *kia manu* (skilled bird catcher). Nā *kia manu* needed to be bird experts in order to achieve this difficult task without killing any birds and with minimal disturbance. When harvesting feathers, birds were captured, the *kia manu* gathered a few feathers and then released the bird back into its habitat. The capturing part of this process required immense knowledge. A *kia manu* had to understand bird behavior, bird environments, and the specific techniques needed for attracting and catching the bird. Bird feathers were gathered from both upland and coastal species. The main species used were the upland Hawaiian honeycreepers because of their vibrant colors. Some sea birds were significantly larger than most birds and as a result were also used as a food source. After collection, feathers were tied into bundles called ‘*uo* and stored in covered containers to avoid loss and to protect from damage.<sup>173</sup>



Figure 72: Various Hawaiian birds used for feathers - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

The feathers, obovate or ovate in shape, were cleaned and rarely trimmed. Large flight feathers were sometimes split into two to make more material, however, most feather work required tens of thousands of feathers. The application of feathers was done in four ways: *nāki’i*, *wili*, *humu*, and *pipili*. Generally, only one technique was used in an art piece. All four techniques fixed feathers in a way that could hold a specific shape, orientation, and arrangement. Also, all of them used cord, probably from the *olonā* plant, as a base and to secure the feathers.

The first method is *nāki’i*, the tying method. Feather bundles were tied to a netted backing with a fine cord. The size of the netting was determined by the size of the feathers. Holes within the net had to be smaller than the length of the feathers. The *Nāki’i* method was used for ‘*ahu’ula* (capets), *akua hulu* (feathered images), and *mahiolo* (helmets). The second method is *wili*,

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<sup>173</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

the wrapping method. In this method, feathers are wound around a core that is either rigid or supple. Multiple *pe'a* (rigid core) could be tied together to make a *ko'o* (brace) for the backing of the feathers. Typically, the wili method was used for *lei* (garland) and *kāhili* (royal standard). Also, on 'ahu'ula, the wili method was used around the neckline to give a finished look. Unlike the 'ahu'ula and mahiole, kāhili were wrapped with gaps that showed an equal amount of cordage and feathers. The negative space was considered just as striking as the feathers. The third method is humu, the stitching method. Feathers were stitched on to a base material using an awl or needle. Humu was used to make lei *humupapa* (feather hatbands). The final method is pipili, the gluing method. Feathers were attached to a base with plant based adhesives. Pipili was the most common method used because it was ideal for attaching very tiny feathers.<sup>174</sup>



Figure 73: 'Uo (feather bundle) - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

The main colors of featherwork included dark green, olive green, yellow, scarlet, red, and black. Colors that were occasionally used included beige, brown, and white. A study of ancient Hawaiian divinity designates three major gods to colors. Kū, the god of governance and welfare, was identified with the color red. Kāne, the god of life and creation, was identified with the color yellow. Lono, the god of fertility and counter balance of Kū, was identified with black. The designation of these colors was probably based on the colors of the available birds. A majority of the Hawaiian honeycreepers were a combination of these three colors. When used, colors were expressed in a splendid array. The use of a single color was highly unusual. Each art piece, like the birds, was unique and distinctive, possibly representing an individual or a specific clan.<sup>175</sup>

MAIN HAWAIIAN BIRD SPECIES			
Hawaiian Name	Genus and Species/ Family	Feather Colors	Current Status
'o'o	Moho spp./mohoidae	yellow, black	probably extinct

<sup>174</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

<sup>175</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)



mamo	Drepanis pacifica/Fringillidae	yellow, black	extinct
‘i‘iwi	Vestiaria coccinea/Fringillidae	scarlet	uncommon, declining
‘o‘u	Psittirostra psittacea/Fringillidae	dark green	endangered, possibly extinct
‘amakahi	Hemignathus spp. /Fringillidae	olive green	still common
‘apapane	Himatione sanguinea/Fringillidae	red	declining

Figure 74: Table of Main Hawaiian Bird Species – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

Designs used on ‘ahu‘ula were bold geometric patterns. The “symbology of featherwork motifs are not explicitly clear” but, they are thought to be “fundamental statements” about genealogy, ‘aumākua, and mana. Ali‘i were expected to display bird-like behavior, to be boisterous, territorial, and aggressive, and thus their garments were decorated with bird-inspired designs. The honeycreepers’ upland forest habitat located among the highest elevations of the islands symbolized the *ofor wao akua* (realm of the gods). The birds themselves were seen as symbolic of divinity because of their ability to fly up to the *akua* (gods). Similarly, another symbolic pattern used on the ‘ahu‘ula was the rainbow. Rainbows were also a symbol of divinity and the manifestation of the akua.

In addition to adding beauty and distinction, patterns could also show how the ‘ahu‘ula may have been worn. Some types of cloaks, such as those with trapezoidal or rectangular shapes containing ‘iwa (great frigate bird) or koa‘e (tropicbird) feathers, were speculated to have identified noble genealogies or religious specialists.<sup>176</sup>



Figure 75: ‘Ahu ‘Ula (feather cape) - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

Featherwork was only used for chiefly clothing and certain cultural activity items. As such, feathers became a prized resource. The original purpose of feather garments was to identify ali‘i. When dressed in various feather garments, nā akua would be able to spot ali‘i within the *wao kanaka* (realm of the people) from the *wao akua*. Then, nā akua would give spiritual protection

<sup>176</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

and mana to ali'i via the feather adornment which would then be transferred from the ali'i to the *maka'ainana* (commoners). Naturally, feather garments became an expression of royalty.<sup>177</sup>

“The function of featherwork to beautify, exalt, and glorify the chief is at least as equally important as that of protecting him or her.”<sup>178</sup>

Throughout time, the purposes of feather garments evolved and grew in number. However, its one enduring purpose was expression of status. When the chief wore feather garments in battle, it was found to provide distraction and slight protection from stones. The feather garments also allowed the chief's warriors to spot him quickly and determine if he was still standing. At the conclusion of the battle, the surviving ali'i would take the competitor's battle cloak as a sign of his victory. During Makahiki season, feathers were used as tax payment for lands, showing the extent of a chief's control of land and labor. Extensive use of feathers from land dwelling birds was also a symbol of the control of lands or chiefdoms. “The garments and some kähili denoted different aspects of chiefly status and authority, namely temporal power and sacred power.” Kähili were always displayed in an ali'i's presence, even when sleeping, to provide spiritual protection. As foreigners arrived, feather garments served as a symbol of indigenous authority and “shaped spaces of engagement” for foreign interaction. This probably led to the custom of the wearing of feather garments at all politically important events. With the death of Kamehameha I, feather garments were worn to commemorate him and to honor Kamehameha II as he ascended to the throne. As the original wearers passed, garments were either buried or passed down as an indicator of legitimacy of lineage. During and after the 1820s, feather garments “marked the enduring, permanent birthright of an ali'i nui.” As a sign of friendship, feather garments were gifted to foreigners (leaders and esteemed guests) or between ali'i. Lei was another common gift given to visitors to build friendly relationships.<sup>179</sup>

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<sup>177</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

<sup>178</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

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*Fir Various 'ahu 'ula – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)*



*Figure 77: Various 'ahu 'ula – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)*



*Figure 78: Various 'ahu 'ula – (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)*



*Figure 79: Various 'ahu 'ula - (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)*

By the end of the twentieth century, foreign bird diseases and human encroachment left the Native Hawaiian bird population mostly extinct. Currently, only a small amount of information can be found on the kia manu, their techniques, and their wide knowledge of birds. Information must be gathered from practitioners and kūpuna. Modern featherwork practitioners must rely on outside sources for materials.<sup>180</sup>

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<sup>180</sup> (Fine Arts Museums of San Francisco and Bernice Pauahi Bishop Museum 2015)

## Chapter 4. Case Studies

In order to achieve a greater understanding of Hawaiian design, I will analyze case studies of significant Hawaiian architecture in order to catalogue the materials, techniques, and various other elements that comprised Hawaiian design. Carefully selected case studies that have a significance within Hawaiian history will demonstrate the evolution of Hawaiian design through time. The case studies included are Hawaiian Vernacular Architecture, Kawaiaha'o Church, and 'Iolani Palace. Then, I examine modern case studies striving to achieve a Native Hawaiian aesthetic. The two modern case studies are of Ānuenue School and the Honolulu rail.

### Hawai'i's Architectural Case Studies

#### ***Indigenous Architecture***

Hawaiians did not have a written language until the mid-1800s. William Brigham, in his essay "The Ancient Hawaiian House," discusses the writings of Rev. William Ellis on the subject of early Hawaiian vernacular architecture, which started as just a roof. With an increasing desire for comfort, Hawaiians elevated their roofs and created the *hale* (dwelling). The basic functions of a *hale* were to provide protection from the wind and rain and to provide storage for personal belongings. General living occurred in the open air outside of the *hale*. The size and quality of dwelling varies depending on the owner's rank. A poor family may have had an eight-foot-long *hale* while an *ali'i* could have had a seventy-foot *hale*. *Ali'i* had their *hale* made for them. An *ali'i* *hale* could be constructed in two days with up to one hundred men working together on the construction. Commoners, on the other hand, together with their families, built their own *hale*. Though it took a massive amount of work, building one's own *hale* gave it a unique distinction. No matter who built the *hale*, the corners and doorways were entrusted to the *kuene hale*. The *kuene hale* was a person with great knowledge of *hale* building. Because of this, similarities can be seen in the scores of *hale* throughout Hawai'i. Friends or neighbors often helped with thatching, a tedious, and time-consuming job. One consistent feature of both *ali'i* and *maka'ainana hale*, no matter the size, was that each had only one room and one floor.<sup>181</sup>

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<sup>181</sup> (Brigham 1908)



Figure 80: Different hale forms - (Brigham 1908)

Brigham includes the translated steps of how to produce a hale by Native Hawaiian historian David Malo. First, Malo writes, men must travel up the mountain to cut down timber and carry it to the selected site. This was an immense feat because each man built houses for both himself and his wives. In addition, multiple houses were needed per family as the kapu system was in place at the time. Under the kapu system, each hale had a designated program, since certain activities or genders were customarily segregated. One essential protocol of the building of a *hale noho* (family dwellings) was the necessity of receiving a blessing from the kahuna before it could be inhabited. Kahuna said a prayer within the hale to prevent evil spirits from entering. To signal that this protocol was complete, the kahuna would cut the *kuwā*, or bunch of grass left hanging over the doorway, and then owners could enter and settle in. Malo notes that *pono* (right-living) people sought out this ceremony before entering the house, foolish did not. The kahuna blessing ceremony was the start of a respectable living.<sup>182</sup>



Figure 81: Honolulu in 1822 - (Brigham 1908)

Most of the information Brigham includes from Malo is his translation of the detailed steps used to build a hale. Because it is a translation, the careful descriptions are not always easy to understand and some information may be lost, but this is unavoidable. Malo's steps, as quoted by Brigham verbatim, are as follows:

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<sup>182</sup> (Brigham 1908)

- The house timber includes: kukuna (posts) on the sides of the pou hana (ridge post), grow shorter as they approach the corner, ridge pole dictating the length of the house, kua iole (upper ridge pole) is the same length as the ridge pole, the halakea are interior posts, and aho are small sticks that serve as the structure for the thatching.
- Cut a notch on every post. “On the front of the post a projection is cut and back of this a job in which rests the plate and the rafter which has the end filed into two prongs which ride astride the projection on the post.” All posts and rafters also need notches to hold the lashings.
- Firstly, corner posts are made then ropes are tied to them at both top and bottom to align them all. Posts should then be set with a foundation. Plates are to be put on the posts in the cut grooves.
- The posts and plate should be tied together. The pou hana (ridge posts) should be tied to the ends of the kauhuhu (ridge-pole) and halakea put into place. With the main structure together, rafters are to be measured and marked where need to be cut off. After cutting the length, cut a neck and head on the upper end of the rafter.
- Lash rafters together and to the kua iole (upper ridge pole). Both should also be fastened to the kauhuhu (main ridge pole).
- The last step for the structure of the house is to draw all members together tightly with ropes. Next, aho should be tied on all over the house. Then thatching should be placed on top.
- Thatch the kauhuhu (main ridge pole) and door.
- Cut rabbet piece for top and bottom of door with a hole made in middle of both pieces. Fit boards into rabbets. Drill, with human bone, through both vertical and cross pieces, fasten with wooden pegs, and string cords through the central holes to bind the end strips together. A few more sticks may be added for support. The door should swing.
- Build a fence about the house.<sup>183</sup>

Generally these hale last from three to five years. The two most common hale were the hale noho and the *hālau* (long building). All hale were generally framed the same way but differed in size and thatching material. Frame posts ranged from 3 to 14 feet high and 6 to 8 inches in diameter. Most posts were smooth, but some were shaped with a stone adze. The posts used for the chief’s hale were round, straight, and smooth but still contained its bark. Posts were placed 3 to 4 feet apart. The installation started with one side of the posts fixed in place then other side made parallel. A small but smart detail added to these posts were “chins” cut to hold latching.<sup>184</sup>

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<sup>183</sup> (Brigham 1908)

<sup>184</sup> (Brigham 1908)



Figure 82: End of rafter with "chin" for lashings - (Brigham 1908)

*Hau, kou, 'ulu,* and *niu* trees were abundant within the settlements but none were suited for house building. All hardwood trees were located at higher elevations in the mountains. The settlements closest to timber were still three to four miles away. Some may posit that it was the difficulty of timber transportation that prevented waste. Whether this is true or not, records show that Hawaiians made a constant effort to use all parts of all resources, to waste nothing. The best houses were made of *naio, uhiuhi, kauila, māmane, kamani, koa, 'ōhi'a,* and *lama*. However, *lama* (Hawaiian ebony) wood was used only for *heiau* or *luakini* (temples). Typically, all sap was removed before use.<sup>185</sup>

To construct the walls of a *hale*, small members of wood were laid horizontally and tied with *'ie* (fibrous roots). Poles were fastened with stronger and bigger cord made of *'ie* or coconut husk. Coconut husk cords ranked between grass cord and *olonā* cord in terms of strength. *Olonā* was the strongest cord because of its wood-like quality. The different strengths and sizes of each cord type determined the size of thatching to be used.<sup>186</sup>



Figure 83: Polynesian cord – (Brigham 1908)

Historically, the first *ako* (thatching, any material) was made of palm leaves. However, due to the plant's scarcity and inadequate nature when dried, its use was short-lived. *Puhala* (pandanus) on the other hand was abundant. *Puhala* leaves became the new thatch material but

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<sup>185</sup> (Brigham 1908)

<sup>186</sup> (Brigham 1908)



required more labor when thatching. While *lauhala* (puhala leaves) was not the neatest or most elegant material, it was the most durable. Upon completion, heavy nets were thrown over the thatching for several days to force leaves to dry evenly and not curl up.<sup>187</sup>



*Figure 84: Hale with netting over thatching – (Brigham 1908)*

Although less common, thatching was also done with grass, *ki* leaf, and sugar cane leaf. No matter which material was chosen, the roof and sides of the hale were thatched with the same material. Corners and seams were sometimes covered with fern leaves and bonneted with fern stems and fronds in order to stop water from entering. The addition of ferns was especially important for hipped roofs. The leaves surrounding the doorway were braided to protect it and to allow people to comfortably pass through. An additional layer of interior shingles were sometimes added between the exterior thatching and wooden structure to give a neater appearance. For this interior wall lining, leaves used include *kī*, dried banana stalk, sugar cane leaf, or *lauhala*. It is said that walls of banana leaf shimmered like silk. The exterior side walls under the roof were treated similarly. Materials for this include plantain leaf stalk, *ti*, or *lauhala*. In each case, the finish product looked like coarse mat.<sup>188</sup>



*Figure 85: Hale showing thorough thatching - (Brigham 1908)*

Actual mats were used as flooring. After the ground was leveled, a layer of grass was spread and a *lauhala* mat placed on top. Some people built up their floors with small pebbles or

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<sup>187</sup> (Brigham 1908)

<sup>188</sup> (Brigham 1908)

small fragments of lava instead of leveling the earth. The addition of a stone platform kept the interior dry and prevented house creatures from entering.<sup>189</sup>



*Figure 86: Example of Hawaiian hale - (Brigham 1908)*

As mentioned before, hale lasted from three to five years. A stone platform may have helped prevent creatures from entering but, did it not keep them out indefinitely. The grass and matted floors were easily infested by and provided a home to mice, fleas, and cockroaches. Also, though great efforts were made to keep these out, wind, dust, and rain still managed to enter the hale. The small door, a decision designed to keep out the forces of nature, did not allow much light to enter. The inside of a typical hale was dark. As a result, interior finishes were not a priority.<sup>190</sup>



*Figure 87: Example of hale with small doors - (Brigham 1908)*

Foreigners brought both tools and ideas. While their ways were not immediately popular, it did not take long for Hawaiians to begin to incorporate these foreign ideas into their hale. Changes that resulted from the presence of foreigners include larger doors, the addition of windows and the addition of glass to those windows, wooden floors, and partitions within the hale. These ideas were adopted but not necessarily executed in the typical western way. For example, *puka makani* (windows) were not placed symmetrically on both sides of the dwelling. Instead, their placement depended on the location of the lauhala mats within the hale, the places

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<sup>189</sup> (Brigham 1908)

<sup>190</sup> (Brigham 1908)

designated for sitting. Hawaiians did have an early version of a lānai. At first, the lānai was a separate open hale placed flush with the door. Being adjacent to each other, the two hale were considered as one and the lānai was thought of as the best place in the house. With foreign influences, the lānai was attached to the hale with a border of railing similar to a verandah.<sup>191</sup>



Figure 88: Hawaiian hale with lānai - (Brigham 1908)

### ***Kawaiahaʻo Church***

Kawaiahaʻo translates to “the fresh water pool of Haʻo,” the name given to the sacred spring that Haʻo, the queen of Oʻahu, bathed in once a year. To look upon Haʻo was highly kapu, so commoners could only speak of her visit. As a result, the surrounding lands were named Ka Wai A Haʻo, or Kawaiahaʻo. A sacred stone from this pool once laid within the enclosing wall of the church but has now been moved to a pond next to the church. The Hawaiians first called it Ka Hale Pule (the house of prayer) or Ka Hale Hālāwai (the meeting house). Over time, it was given still more names, including King’s Chapel and The Native Church. After the dedication of the church in 1842, it was referred to as The Stone Church. Finally, in 1863 when Henry Parker became the new pastor, the church became known as Kawaiahaʻo and is still called this today.<sup>192</sup>

The series of names given the church probably reflected the numerous iterations of the building itself. As the first church in Hawaiʻi, it was a curiosity for Hawaiians who were drawn to learn more about the new religion and the building’s role within the faith. Before missionaries had arrived, in 1819, under the leadership of King Kamehameha II, the old kapu system (religious system of law) was abolished and chiefs together with the people in Hawaiʻi overturned their idols, places of worship, and the laws that came with them. Ethel Damon traces the building’s history in his book *The Stone Church at Kawaiahaʻo*.<sup>193</sup>

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<sup>191</sup> (Brigham 1908)

<sup>192</sup> (Damon 1945)

<sup>193</sup> (Damon 1945)

With the overturn of the kapu system, Hawaiians began dismantling and repurposing places of worship. The Kawaiaha'o site once included a house of worship which was later converted into a burial ground. In 1822, after his arrival, missionary and architect Hiram Bingham sought to establish the first Christian church in Hawai'i. At first, meetings were held in existing hale or the Bingham hale. "Hawaiians attended, partly out of curiosity, partly from a desire to learn." Then, the curiosity of the Hawaiian people became interest, interest became attachment, and attachment devotion.<sup>194</sup>



*Figure 89: Bingham hale - (Damon 1945)*

In 1822, the first church building was erected. Bingham wanted the first church "to be built in the native style, thatched with grass and lined with mats, furnished with glass windows, doors, a pulpit, and some furnishings." The building was fifty-five feet by twenty-two feet. The framework consisted of over a thousand feet of lumber, mostly mahogany, but also small amounts of other woods. Wall paneling was limited to rough boards of one thickness. Paper was then offered to wallpaper the entire house. Other donations were offered, mainly from captains, one of which was a church bell.<sup>195</sup>



*Figure 90: First church in Honolulu 1822 - (Damon 1945)*

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<sup>194</sup> (Damon 1945)

<sup>195</sup> (Damon 1945)

Within a year, Bingham could preach in Hawaiian and each Sunday held three services in ‘Ōlelo Hawai‘i and one in English. The Hawaiian congregation grew from one hundred to four hundred, which necessitated an enlargement of the space to accommodate everyone. Bingham created “a temple for the worship of the living God. It will not, to be sure, compare with the houses of worship in America, but it will answer a valuable purpose in this land till a better can be made to take its place.”<sup>196</sup> Four years later, Kawaiaha‘o had become a spiritual center highly valued by the community. The church soon extended its function to hold funerals. In 1823, “the influence of new customs was so pronounced that a public crier was sent round to proclaim the new Sabbath law.” The great influence could also be seen by the presence of both *mō‘ī* (king) and *ali‘i* at the Sabbath.<sup>197</sup>

Sadly in 1824, the first church was burned down. Damon quotes a mission chronicler of his arrival to Hawai‘i and first visit to the church before it was burned: “though of the simplest and rudest construction... it was lovely in our eyes... I can never forget the excitement with which I entered its lowly roof, trod the matted ground, its only floor, and looked at its unbarked posts and rafters, and coarse thatch of grass... I felt that it was a house of God, and one of the happy gates of heaven.”<sup>198</sup>

Kalanimoku gave orders to rebuild the church at public expense while chiefs willingly united to help and even donated hewn timbers meant for their own dwellings. Kalanimoku transferred carpenters from the building of his house to hang doors, set in windows, and fit up seats in the new church. He hoped to one day build the chapel out of stone. In the end, a sizable amount of Hawaiians came to work on the meeting house.<sup>199</sup>

The second thatched church was erected in 1824. The dimensions of the church were seventy feet by twenty-five feet, larger than the previous, to fit bigger congregations. The same materials and techniques were used as in the original, native laths to lay across rafters, posts, posts laden with bundles of pili grass, and others with balls of cord from *olonā* fibre. The same components of the building were used including doors, a pulpit, and a belfry. The only additional feature was a one hundred and twenty-five by one hundred and fifty-five foot fence. The building

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<sup>196</sup> (Damon 1945)

<sup>197</sup> (Damon 1945)

<sup>198</sup> (Damon 1945)

<sup>199</sup> (Damon 1945)

was designed to accommodate six hundred people but the congregation quickly grew to three thousand people.<sup>200</sup>

In 1825, as the devotion to Christianity and the church grew, ali'i desired to make a full declaration of discipleship to Christ. Ali'i were baptized and given English Christian names. Being a monument testament, only the privileged were allowed to touch the page containing the baptized ali'i's signatures.<sup>201</sup>

Kalanimoku was eager to build a church made of stone. He marked out an area across from the newly-built church for the stone church. He planned to include American materials which he would have imported and to donate money for a bell. He also planned to use coral rock formed on the shore which was cut into pieces. He intended to use the usual timber, cord, and thatching for the structure's frame but, wanted a frame which included beams. Lastly, Kalanimoku desired bananas, sugarcane, and melons to be planted within the stone chapel fence.<sup>202</sup>

Unfortunately, the second building was severely damaged in a storm and a third church had to be built. At this point, Kalanimoku succumbed to a sickness he had and had Ka'ahumanu assume the planning for the new meeting house. A stone building was still not feasible at the time, so the third church was more of a temporary shelter. In the meantime, Ka'ahumanu gave the Bingham the lands of Punahou to provide the pastor with a better means of living while the new church was being constructed. She had grass houses on Punahou land erected for both the Bingham and herself.<sup>203</sup>

In 1828, construction began on the fourth meeting house and was finished about a year later. Many details were changed in this new building. Rafters were locked together and braced with bolted knees at the foot like ships. Posts were larger at eight to twelve inches in diameter and sixteen feet long. Foundations were set five feet below grade. Each foundation was packed with stones set around posts. The ceiling inclined inward to resist the lateral pressure of the roof. The roof was upheld by forty-four pillars in three ranks. A window was added at the back. There

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<sup>200</sup> (Damon 1945)

<sup>201</sup> (Damon 1945)

<sup>202</sup> (Damon 1945)

<sup>203</sup> (Damon 1945)

were four doors on each side, two large doors at each end surmounted by glass panels. The capacity grew to four thousand five hundred people.<sup>204</sup>

Another change to the building was the addition of ornamentation. The pulpit was made of Lebanon cedar, a special wood at the time. The “ceiling ornamented with a tapestry of crimson satin hung with festoons (garland of flowers) and the window of green.”<sup>205</sup> Even the cushions were crimson to match the tapestry that hung from the ceiling. Hymn books were in Hawaiian and were covered in turtle shells. The Ten Commandments were printed on *hainaka*, a handkerchief-like square cloth. Twelve thousand three hundred square feet of clean mats were produced for seats. Lastly, a new church bell was added as an element distinguishing it from a mere meeting house.<sup>206</sup>



*Figure 91: The fourth church – (Damon 1945)*

Planning for the fifth building for the Hawaiian church began as soon as stone construction became feasible. The year 1837 marked the actual beginning of the gathering of local materials for the first stone church. The collection of stones, an extremely difficult task, took an extensive period of time to gather. Stones needed to be cut from the reef at low tide, then dragged with ropes to the construction site, a grueling process that required six to eight pairs of “partly-clad stalwart Hawaiians.” The actual hauling was executed while chanting. The reef rocks weighed over twelve hundred pounds each and the first layer of the wall used one hundred thirty-two stones. The whole structure would require thirteen thousand nine hundred and eighty stones, an obvious contribution to the infeasibility of a stone church prior to this time.<sup>207</sup>

After a year of collecting stones, the excavation for the foundation six feet below grade commenced. Excavating allowed foundations to lay on bedrock instead of soil or sand. Stone

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<sup>204</sup> (Damon 1945)

<sup>205</sup> (Damon 1945)

<sup>206</sup> (Damon 1945)

<sup>207</sup> (Damon 1945)

moving was difficult but there was still much more work to be done. Other processes needed to be completed before building could start; these included carting sand from the seashore, moving materials from other parts of the island by raft or canoe, digging lime out of the premises, constructing kilns on site, burning lime in kilns, constructing a fire pit, firing soft coral lumps in fire pit, creating a pile for solid firing, collecting 'ōhi'a wood for kindling, acquiring logs for runners to draw the rocks over them, laying stake rocks with sand, smoothing rock, mixing sand and lime for mortar, and ordering and receiving building materials from America. A range of products and equipment were needed including additional lumber, nails, glass, paints, oil, shingles, boards, sashes, a hoisting machine for rocks, a cart, a sled, plank wheels, and rope and pulley cranes. Bingham acquired these for easier stone placing and for safety. Luckily, there were no casualties in the construction of the church.<sup>208</sup>

Some ali'i that helped with the church, such as Kalanimoku, passed away before the stone building was completed. However, the construction of Bingham's design continued. The stone church was set to be one hundred forty-four feet by seventy feet and included a twelve-foot high basement. The stone retaining wall started at forty-four inches thick, gradually tapering to the top. As usual, the mō'i and ali'i volunteered revenue, cash, property, and labor to the project. The new design also planned for galleries, or elevated seating, within the church to seat more people but ali'i were against the idea because the shadow of commoners would then fall upon the king or other high ali'i. Interestingly, the king did not see it that way so and the galleries were built.<sup>209</sup>



*Figure 92: An example of a gallery – (Damon 1945)*

The installation of the long ridgepole of the roof was most difficult as it was over one hundred feet long. Eighty-foot trusses were added to the structure on top of the usual rafters,

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<sup>208</sup> (Damon 1945)

<sup>209</sup> (Damon 1945)



posts, and beams. The ridge was upheld by “sturdy king posts” and rafters by “attendant queen posts.” The timber was mostly taken from O’ahu forests, with the possible exception of some spruce, pine, cedar or cypress. The church was enclosed with a wall of stones and mortar and surrounded by trees. The church included an outstation which was well-framed, of stone, and had a shingle roof.<sup>210</sup>



*Figure 93: The fifth church – (Damon 1945)*

As far as the interior, it was “vastly improved, and made to assume a modern style of architecture.” Detail pieces were added such as patterned stones for pillars and fine grain sandstone; a timber and iron bell was added in 1850. Embellishments such as lei of fern and garlanded *maile* were hung and flowers massed below the pulpit.<sup>211</sup>



*Figure 94: Church interior – (Damon 1945)*

People witnessed the progression from the previous churches to this new church made of coral. The building was considered “an ornament that served the town.” There was also a sense of pride that came with sitting in such a house, made by the congregation around you. Captains of ships said, it is the “first object of art the eye rests upon in coming into port.” To bring the church to an even higher standard, Princess Bernice Pauahi Bishop donated money for the addition of a stone steeple. The contributions of the princess and other ali’i throughout the

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<sup>210</sup> (Damon 1945)

<sup>211</sup> (Damon 1945)

process may have led to its designation as “the king’s chapel” and “church of the ali’i.” Over the years, this had become such a strong religious center that missionaries, instead of being sent to Hawai’i to preach, were sent from Hawai’i to other places. This great building which displays ancient stone from the pool of Ha’o, in 1856, held the wedding of Kamehameha IV.<sup>212</sup>



*Figure 95: Church with the added steeple – (Damon 1945)*



*Figure 96: Ka wai a ha’o memorial pool – (Damon 1945)*

About sixty years later, the church was in need of some repair. The ceiling had become unsafe due to termites need and the need for electric lights became pressing. So, renovations were made; the old ceiling wood was replaced with redwood and fir. Another renovation was the lowering of the stone wall surrounding the church, a change required by the new laws of the territory of Hawai’i.<sup>213</sup>

In 1926, a second restoration of the church was needed. Termites had destroyed the structure to a critical condition and sparrows constantly pecked salt from coral stones. Thankfully, people were willing to help. This was around the time the church started being referred to as a historic monument. Redwood, a termite proof wood, was used to restore the wooden structure; kauila wood was used to restore doors; and the coral stone walls were sprayed with cement.<sup>214</sup>

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<sup>212</sup> (Damon 1945)

<sup>213</sup> (Damon 1945)

<sup>214</sup> (Damon 1945)

Memorials that hung from the church walls were taken down and rehung after the restorations were complete. These memorials, marble and bronze plaques framed in koa wood, were dedicated to Bingham, Kaahumnau, Bernice Pauahi Bishop, and other major contributors to the church. A plaque made for Kamehameha III was also marble but was surmounted by a marble crown.<sup>215</sup>

In 1927, the church received a new altar. The new pulpit stairs were broad and made of 'ōhi'a *lehua* timbers. Kauila lintels from old doors were made into a communion table and altar railing. The church also added a large white cross, placed on the southeast end wall. The church's adjacent burial ground entry was embellished with an arched gateway of coral stones. The property's landscaping also received attention. Plumeria, tamarind, and mango trees were replaced with 'ōhai (monkey pod) and palms; original coconut palms were kept as well as *kiawe* (algarroba) which served as shade trees.<sup>216</sup>



Figure 97: Memorial gateway - (Damon 1945)

While the building has undergone great changes from its original humble form, today Kawaiaha'ō is still considered a sacred place and used to further Hawaiian knowledge.<sup>217</sup>

### ***'Iolani Palace***

'Iolani palace was built over a four-year period, from 1879 to 1882, under the direction of King David Kalākaua. This building replaced the previous palace built in 1844. The palace served as the monarchical seat for King David Kalākaua and his sister and successor, Queen Lydia Lili'uokalani. The building was designed by Australian architect Robert Lishman in the American Florentine, American Composite, and French Rococo styles. Kalākaua had great say in the design

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<sup>215</sup> (Damon 1945)

<sup>216</sup> (Damon 1945)

<sup>217</sup> (Damon 1945)

and his desire was to match the grand elegance of the royal courts he visited in 1881. As Honolulu was no longer a small city, he wanted a building that “speaks [of] distinctiveness and commonality, and the power of individual agency to create meaning and enable action through art and architecture.” The final architectural design was referred to as the “ornament to our capital city.” In her book *‘Iolani Palace: Spaces of Kingship in Late Nineteenth-Century Hawai‘i*, scholar and author Stacy Kamehiro gives us insight into the power the palace has.<sup>218</sup>



*Figure 98: The first palace - ([https://www.nps.gov//subjects/teachingwithhistoricplaces/images/iolani-palace\\_firstpalacejpg.jpg](https://www.nps.gov//subjects/teachingwithhistoricplaces/images/iolani-palace_firstpalacejpg.jpg))*

The palace functioned not only as a building but as a symbol with countless meanings. ‘Iolani Palace was and still is “an emblem of Hawaiian history and political authority.” More specifically, the palace symbolizes Hawaiian culture and, as a site for dedicated to sovereignty events, commemorates Hawaiian royalty. The palace served as a symbol of chiefly and the sacred rule of the king. Through the building, Kalākaua was presented as a political and religious leader of the highest stature. The palace articulated the success of the kingdom and constituted the political center of Hawai‘i. Through the design, location, purpose, embellishments, and technological innovations of the palace, Hawai‘i was projected as a successful, modern, independent nation. As Kalākaua intended, ‘Iolani Palace became a symbol of cosmopolitanism of great national importance and attracted international attention.<sup>219</sup>



*Figure 99: The new palace – (Iolani Palace Restoration Project. and Moore 1970)*

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<sup>218</sup> (Kamehiro 2006)

<sup>219</sup> (Kamehiro 2009)

‘Iolani Palace was one of the king’s “nation building projects.” Kalākaua initiated this architectural commission as king of the independent Hawaiian nation in order to instill cultural and national pride within the population and to preserve Hawai‘i as an independent nation by making his efforts visible to all. His actions were driven by his belief of Hawai‘i’s right to join the international community of nations. Hawai‘i’s modernity was exemplified through this building. The king’s goal was to become internationally recognized by creating a political center for the nation comparable to those of other states. Kamehiro writes that his efforts “synthesized Hawaiian definitions of rulership and internationalist conceptions of modern nationhood” for both people within and outside of Hawai‘i. In addition, the palace acted as a visual representation to objectors and opponents within Hawai‘i of Kalākaua’s qualifications, suitability, and worthiness.<sup>220</sup>

During this period, there was a “cultural change and exchange” between Hawai‘i and the West, which led to the westernization of Hawai‘i. Westernization did not happen suddenly. Kalākaua recognized the slowly growing changes and hoped the palace would become his “vision of himself” and counter any colonial threats to Hawaiian sovereignty. Unfortunately, western critics called the palace extravagant and an imitation of those of Western rulers. Kalākaua was fully aware of these opinions but was not threatened. Only when colonizing powers began to make definitive territory claims did the Native Hawaiian leaders grow uneasy.<sup>221</sup>

The building is rectangular in form, one hundred and forty feet by one hundred and twenty feet. Parts that make up the building include: four sixty-foot towers, two eighty-foot entrance towers, a square campanile (bell tower) at the top of each tower, Corinthian columns on the first and second floors, deep verandas, a basement, a six-foot wide trench (moat) surrounding the building providing light and air for the basement, and mansard roofs. All components are encompassed by an eight-foot high coral block wall.<sup>222</sup>

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<sup>220</sup> (Kamehiro 2006)

<sup>221</sup> (Kamehiro 2006)

<sup>222</sup> (Kamehiro 2006)



Figure 100: The palace in 1922 -  
([https://upload.wikimedia.org/wikipedia/commons/6/62/Iolani\\_Palace%2C\\_ca.\\_1922.jpg](https://upload.wikimedia.org/wikipedia/commons/6/62/Iolani_Palace%2C_ca._1922.jpg))

The palace functioned in a similar manner to a functional early Hawaiian hale. Early Hawaiian functional buildings include: *heiau* (temple), *hale mua* (men's eating house), *hale 'aina* (women's eating house), *hale moe* (sleeping house), *hale pea* (menstrual house), *hale hoahu* or *hale papa'a* (storage), and *hale kuku* (work house). Specifically, the palace adapted the roles of a *hale mua*. *Hale mua* displayed a chief's rank by its size (height and width),<sup>223</sup> usage as an audience chamber, and marking by *pūlo'ulo'u* (sticks surmounted by a kapa-covered ball that warned passersby of a kapu space). 'Iolani Palace was the tallest ali'i hale ever made, symbolizing a chiefly structure and declaring Kalākaua's monarchy status. The palace was mainly used and designated for entertaining foreign visitors. The *pūlo'ulo'u*, designed by Kalākaua himself, are located in several places around the palace. The second-story iron railing caps are shaped like *pūlo'ulo'u*; the cast iron lamps at the bases of stairways have *pūlo'ulo'u* round glass globes at the tops and *pūlo'ulo'u* motifs on the shafts.

Since the palace was intended for public use, Kalākaua and Kapi'olani lived in a smaller house, the Hale 'Ākala, also located on the palace grounds. This reinforced the idea that the palace was specifically a *hale mua*, as it was not a place for sleeping. Other buildings, small wood hale pili housing other chiefs and retainers, were located on site as well. The cluster of buildings, each with its own function, resembled a *kauhale*, or a chiefly residential building complex surrounded by a fence or wall. Many believe the palace was built over a *heiau*, specifically the Ka'ahaimauli *heiau*, giving it a connection to a kapu ali'i space. In this way, the palace became a modern translation of a *heiau po'o kanaka*, a temple built on a previous temple site, which was believed to enhance the health, population, and success of the area situated between the mountains and the sea.<sup>224</sup>

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<sup>223</sup> The height of a chief's *hale mua* was 18 feet; the *ohana* of a person of lower rank was 6 feet.

<sup>224</sup> (Kamehiro 2006)



Figure 101: Pūlo'ulo'u marking the palace - (<https://s-media-cache-ak0.pinimg.com/736x/6a/74/5b/6a745befdf7cfbd8368fed4451a26530.jpg>)

Many different types of ornamentation were used throughout all the palace. Native woods such as koa, kou, kamani, and 'ōhi'a were used and shown off by a simple stain and seal finish. American walnut and white cedar, finished in the same way, were also used. The general materials used for the palace itself were plastered brick and iron with concrete trimmings; the use of concrete blocks was an innovation at the time. Sheet glass was used on windows and doors. Kalākaua also used a unique form of concrete for the foundation. He brought in hewn stones from Kūki'i heiau, a heiau built by 'Umi, his famous ancestor.<sup>225</sup>

Imagery is an embellishment typical of monarch dwellings. Royalty traded portraits with other rulers as a sign of friendly relations. In the palace, portraits of royalty from all over the world are hung in first floor rooms, juxtaposed with portraits of ali'i in the grand hall. Imagery was also designed on the arched etched sheet-crystal panels used for transom portals. The images are of *kalo* (taro) and the national seal of Hawai'i. These objects represent royal lineage. In Hawaiian culture, *kalo* is considered the "staff of life," the *kalo* leaf signified the chief as a source of life, and the *kalo* motif represented the ali'i's descent from the gods. Together these three images represent "the ali'i's divine ancestry (hoaka) necessary to maintain the prosperity of the land and people (taro.)"<sup>226</sup>



Figure 102: Palace interior - (<https://everywhereonce.files.wordpress.com/2013/09/iolani-palace-grand-hall-staircase-honolulu-hawaii.jpg>)

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<sup>225</sup> (Kamehiro 2006)

<sup>226</sup> (Kamehiro 2006)

The gateways and entryways were decorated for special occasions with *hoaka*, an arch held up by two vertical posts. Hoaka resembled the doorways of early contact ali'i hale. Hoaka had meaning in both Hawaiian verbal and visual language. Verbally, the word meant "glory," "bright," and "splendid." Visually it represented a rainbow, a symbol of royal genealogy. Rainbows signified the highest ranking ali'i that produced even higher ranking offspring. Some believe that cloaks were inverted rainbows used to identify ali'i from all others as the rainbow was "the sign of the ali'i's magnetism, power, and sacredness." The same applied for arch motifs on the cloaks. During festivities, the palace was decorated with markers of red and white drapery hung from the colonnades, the king's monogram placed on each pillar, and the national coat of arms placed on the stairway.<sup>227</sup>

'Iolani Palace is an important building in Hawai'i's history. The name 'Iolani was originally given by Kamehameha V. 'Io is a species of hawk native to the island, Hawai'i, the homeland of ali'i, and as a result is a symbol of ali'i. Hawks, with the ability to soar high, were believed to be all-seeing and able to engage the realm of the gods. 'Iolani was also the name Kamehameha the Great gave to Kamehameha II as well as one of Kamehameha IV's Hawaiian names. The name is a symbol of the gradient from maka'āinana to ali'i to akua and ties the bearer to the Kamehameha bloodline, all in all giving the name a spiritual identity.<sup>228</sup>



Figure 103: The throne room - (<https://s-media-cache-ak0.pinimg.com/736x/6f/f7/a4/6ff7a43ffbc4b20e48c57be9b8214b68.jpg>)

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<sup>227</sup> (Kamehiro 2006)

<sup>228</sup> (Kamehiro 2006)





Figure 104: (left) The music room - (<https://s-media-cache-ak0.pinimg.com/236x/fd/0d/6f/fd0d6fb304ea8c81ded67fd6d79ece06.jpg>)

Figure 105: (right) The blue room – (<https://s-media-cache-ak0.pinimg.com/originals/1b/36/a6/1b36a69658396869b752347530ea5839.jpg>)



Figure 106: The dining room - (<http://www.explorationhawaii.com/wp-content/uploads/2011/09/diningroom.jpeg>)



Figure 107: Palace front gate - ([http://oldhousehistory.com/files/2010/04/march-2010\\_img\\_24.jpg](http://oldhousehistory.com/files/2010/04/march-2010_img_24.jpg))

### Modern Case Studies

#### ***Ke Kula Kaiapuni ‘O Ānuenue – UH Architecture Students – Rollin Ritter & Michael Honyak***

The first modern case study I will analyze is the design of a new gymnasium for Ke Kula Kaiapuni ‘o Ānuenue. Ke Kula Kaiapuni ‘O Ānuenue is one of the Hawai‘i State Department of Education's Hawaiian Language Immersion Schools. Students come from all over the island. Ānuenue School teaches the students in Hawaiian in all subject areas; English is not introduced

until fifth grade.<sup>229</sup> Through the Hawaiian language and the lens of the Hawaiian culture, students are taught to value their heritage and personal wellbeing. The campus is located deep in Palolo Valley above Waikīkī. Pukele Stream, part of the Ala Wai Watershed, provides students, staff, and visitors a firsthand experience with native agriculture, Hawaiian culture, and the Hawaiian language — an official state language.<sup>230</sup> Kalo patches and aquaculture tanks complement the environment and curriculum. The school has two important missions. The first is to help the students learn to the best of their abilities. The second is to preserve and pass on the Hawaiian language and culture and to maintain those things that make Hawai'i, Hawai'i.<sup>231</sup> The school is also very active in a variety of athletic events such as football, volleyball, and basketball through the school's membership in the O'ahu Interscholastic Association (O.I.A.).<sup>232</sup> Being a member in the OIA, the school recognizes athletics as an integral part of the educational program.



*Figure 108: Aerial photo of school - (Ritter and Honyak 2016)*

The design process begins with a thorough study of the school, the current needs of the school, the students (the future users), and the site. Ānuenuenu, although one of many immersion schools, is the only public immersion school. The school has a large enrollment of over four hundred students and currently occupies a campus unable to accommodate all of spaces needed for the students. Specifically, there is no space for the sports activities the school participates in as a member of the O.I.A. To combat this issue, the Department of Education (D.O.E.) teamed up with the University of Hawai'i School of Architecture in order to develop a concept for the planning and designing of a gymnasium for Ānuenuenu. A gymnasium will not only meet the school's physical education and athletic needs, but will also provide a venue for assemblies or

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<sup>229</sup> <http://www.hawaiipublicschools.org/ParentsAndStudents/EnrollingInSchool/SchoolFinder/Pages/Kula-Kaiapuni-O-Anuenue.aspx>

<sup>230</sup> <http://www.hawaiipublicschools.org/ParentsAndStudents/EnrollingInSchool/SchoolFinder/Pages/Kula-Kaiapuni-O-Anuenue.aspx>

<sup>231</sup> <http://www.hawaiischoolguide.com/public-schools/Anuenue>

<sup>232</sup> <http://www.hawaiipublicschools.org/ParentsAndStudents/EnrollingInSchool/SchoolFinder/Pages/Kula-Kaiapuni-O-Anuenue.aspx>

even community gathering events. Under the direction of Cathi Ho Schar, Assistant Professor and Partner/Co-founder of Collaborative Studio LLC, a class of architecture graduate students took on this great opportunity.

The research needed for this project was done as a class. A thorough investigation was done covering various areas of study such as: the history of Native Hawaiians and their culture, the political history of Hawai'i, the history of Hawaiian language, the history of the site, the history of the school, programming of the campus and surrounding neighborhoods, existing available gyms closest to the campus, related mo'olelo, historical land division and use, solar situation on site, wind situation on site, hydrology of site, vegetation of site, and more. Also, I am sure the class went to the site to do a physical investigation and meet with representatives of the school to find out the school's exact needs and desires for the building. With all the information needed, students came up with design proposals in groups of two. The D.O.E. chose the winning design created by Rollin Ritter and Michael Honyak.

The design by Ritter and Honyak, first of all, is of course based off of the classes' extensive research giving them a more culturally enhanced perspective when designing. The design uses innovative material called resysta; a durable and recyclable composite material made of rice husk. The design proposes a water collection system. Water is collected from the roof and used for the landscape and building toilets, an appropriate system for the weather in Palolo. The design also proposes a simple ventilation system. Louvered north and south façades allow ventilation to flow throughout the building and create a stack effect for the heat. The north façade is comprised of horizontal louvers, representing Hina, angled downward to prevent rain from entering the building. The south façade is comprised of vertical louvers, representing Kū, cut off at different lengths to create various masses and voids. The two facades together represent balance, an important quality to have according to Hawaiian culture. The louvers, due to the orientation of the building, allow occupants a view of the lo'i (taro patch) while still inside the building. Also due to the building's orientation, is the creation of a piko (spiritual center). The building is positioned strategically so that it may form a piko with the adjacent buildings. To make clear, the piko is not at the center of the gym. Although, through clever design, the center of the gym is in line with the piko. In line with the balance of Hina and Kū, a piko gives spiritual balance to the building.

Not only the gymnasium but the exterior field is multipurpose as large area for outside activities and events. Immediately next to and on the exterior of the building is a timber trellis structure. The structure branches off of the main beams of the gymnasium to the ground creating a large empty frame. The trellis frame provides cultural education opportunities like: hale structure, thatching techniques, and etc.



*Figure 109: Presentation slide: Material Callout - (Ritter and Honyak 2016)*



*Figure 110: Presentation slide: Rainwater Collection (top) Natural Ventilation (bottom) - (Ritter and Honyak 2016)*



*Figure 111: Presentation Slide: Trellis - (Ritter and Honyak 2016)*

The structure of the gymnasium was inspired by an early Hawaiian hale. The structure is mainly made of timber and glulam beams. Although wood is not a typical material for large structures such as this, wood is the appropriate material for a hale. Few concrete walls are used but are not prominent in the design. As such, the massive wooden structure is a unique

innovation that serves as the cultural significance and identity of the building. All of the necessary components for a Hawaiian hale frame are executed in the same way as a hale for the roof support system of the gymnasium.



*Figure 112: Presentation Slide: Culturally Derived Structure - (Ritter and Honyak 2016)*

Because the design is based primarily on early Hawaiian hale structures, one of the sources used, and possibly the most important, was the Revised Ordinances of Honolulu (ROH), specifically Article 16a12 which concerns indigenous Hawaiian architecture. The ROH are a set of laws put together for the City and County of Honolulu and “includes all ordinances of a general and permanent nature for the City. Statewide, national, and international codes are incorporated into the ROH by reference. Some examples are the International Building Code, the Uniform Plumbing Code, and the State Fire Code.”<sup>233</sup> According to the Honolulu city website,

This code shall be administered with due consideration given to the policy of the city that indigenous Hawaiian architecture furthers the city’s compelling interest in cultural, environmental, and historic preservation; energy efficiency; economic development; aesthetic beauty; and public safety. For purposes of this article, indigenous Hawaiian architecture includes any of the predominant architectural practices, customs, styles, and techniques historically employed by the native residents of the Hawaiian Islands, including structures comprised of either rock walls or wood frames for the bottom portion of structures and thatch of different native grasses and leaves for the roof.<sup>234</sup>

The code defines key terms to provide the public with a clear understanding and a higher success rate for creating projects that follow the code. The terms of concern here are: Certified Hale Builder, Group of Structures, and Indigenous Hawaiian Architecture or Hale. A Certified Hale Builder is “a person who has obtained a certificate of completion for satisfactorily completing a course in Hawaiian hale construction from the University of Hawai’i, or any of its community colleges, or as approved by the Building Official.” A Group of Structures is “a group of indigenous

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<sup>233</sup> <https://www.honolulu.gov/ocs/roh>

<sup>234</sup> <https://www.honolulu.gov/ocs/roh>

Hawaiian architecture structures that are in close proximity to each other and have an aggregate floor area of 1,800 sqft or less.” And, Indigenous Hawaiian Architecture or Hale is “a structure that is consistent with the design, construction methods and uses of structures built by Hawaiians in the 1800’s, which uses natural materials found in the Hawaiian Islands, and complies with this article and references.”<sup>235</sup>

In order to comply with this definition of an Indigenous Hawaiian Hale and to build according to early Hawaiian cultural practices, only certain materials may be used. First and foremost, hale must be constructed using only materials grown and harvested in the state of Hawai‘i. Wood framing members shall be out of unmilled sections of the following species: ironwood, kiawe, eucalyptus, strawberry guava, ‘ōhi‘a, and mangrove. One exception is inkberry which may be used for roof purlins. Roofing and siding can be any grass or leaf material grown and harvested in the state of Hawai‘i. Materials include but are not be limited to: *pili*, *kualohia*, *pueo*, *kāwelu*, *kō* leaves, and *kī* leaves. Cordage for the hale can be natural or synthetic cord used for lashing structural members of the hale. All cord must pass the 400-pound test and be a shade of green, tan, brown, or black. The use of anything metal is prohibited on a hale.<sup>236</sup>

There are different hale types that may be built, and corresponding programs to go with each. Per the code, four types of hale are allowed; these are *hale hālāwai*, *hale kū‘ai*, *hale noa*, and *hale wa‘a*. Hale hālāwai is a meeting house to eat, assemble, and retail. The ends of hale halawai may be open or thatched and may be altered by adding a roof hip. There are three typical foundation types for this hale: *kahua* (pedestal), *pa pōhaku* (vertical post or diagonal post), and *pou kanu* (buried post). The construction sequence for the structure of hale from the bottom up would be: foundation (any of 3), *pou kīhi* (corner post), *pou kukuna/kaha* (wall post), *lohelau* or *lohelau kua* (wall plate), *pouomanu* (center post) and *pou hana* (ridge post), *kauhuhu* (main ridge pole), *o‘a* (rafters), *kua‘iole* (upper ridge pole), *ilio* (spandrel), and *holo* (diagonal brace).<sup>237</sup>

Hale kū‘ai is an eating house used for eating, assembling, retailing, and storage. The hale kū‘ai can be constructed in two ways, shed style and gable style. The shed style has the same structure sequence as a hale hālāwai but instead of an ilio, a *kalapau* (end collar beam) is used. The gable style has the same structure sequence as the shed type but with additional *lohelau alo*

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<sup>235</sup> <https://www.honolulu.gov/ocs/roh>

<sup>236</sup> <https://www.honolulu.gov/ocs/roh>

<sup>237</sup> <https://www.honolulu.gov/ocs/roh>

(front plate). Hale noa is a house free of kapu, or restrictions, used for sleeping. The hale must have at least two openings; one must be at least three feet by five feet and the other two feet by three feet. The hale noa structure sequence is the same as a hale halawai except for the foundation. Out of the three foundation types, a hale noa can only use pa pōhaku foundation or must be set on a *paepae* (house platform). Hale wa'a is a canoe house used for eating, assembling, retailing, and storage (of the canoe). Hale wa'a contains the least number of structural components. The sequence of structure, from the bottom to the top, would be: pa pōhaku (foundation), o'a (rafters), kauhuhu (main ridge pole), kua'iole (upper ridge pole), kalapau (gable end tie), *kukuna li'i* (upper wall post), *kupono* (gable ridge pole) and holo (diagonal brace). Unlike the other hale, a hale wa'a has prohibited program in or near the hale which includes cooking or acting as a food establishment. Items that are prohibited in or near the hale include: open flames, generators, extension cords, electrical switches, fixtures, outlets, plumbing faucets, fixtures, drains, power tools, screen, mesh, and plastic. For safety purposes, an exception is made for fire protection for a "class B" hale (NFPA 13).<sup>238</sup>

The structure examples were estimated based on no wind loads; therefore, all thatching materials should be detachable. Lashing and thatching methods must comply with illustrations found in "Arts and Crafts of Hawaii" or "The Hawaiian Grass House in Bishop Museum." Every hale except hale noa must have at least two sides completely open. The mortar recipe to be used for foundations or house platforms should be one part Portland cement, four parts clean sand, and sufficient fresh water.<sup>239</sup>



Figure 113: Hale hālāwai (meeting house) - (left) open end style (right) thatched end style - (Honolulu 2017)

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<sup>238</sup> <https://www.honolulu.gov/ocs/roh>

<sup>239</sup> <https://www.honolulu.gov/ocs/roh>



*Figure 114: Hale hālāwai framing - (Honolulu 2017)*



*Figure 115: Three foundation types (top left) pou kanu (top right) kahua (bottom left) pa pōhaku - (Honolulu 2017)*



*Figure 116: Hale ku'ai or eating house (left) shed style (left bottom) shed style framing (right) gable style (right bottom) gable style framing - (Honolulu 2017)*



*Figure 117: Hale noa or house free of restrictions (top left) framing (top right) foundation (bottom left) section (bottom right) – (Honolulu 2017)*





*Figure 118: Hale wa'a or canoe house (top left framing (top right) foundation (bottom) – (Honolulu 2017)*

All in all, from the start of the project, cultural context was a major design consideration. The class did extensive research on the site, the school, Hawaiian culture building practices, and of course the needs of the students. The project acts as an example of the growing incorporation of Hawaiian culture in architecture. Throughout the process, Hawaiian cultural values are manifested through design. The use of natural ventilation, the use of a natural material, the strategic placement on site, the orientation to the lo'i, the addition of a trellis to pass on other cultural practices, the theme of balance, the theme of Hawaiian hale, and the injection of spiritual meaning can all be tied to Hawaiian cultural values. The building will definitely enhance the Hawaiian culture aspect in education for all of the students. Also, the class of future architects are now able to take that knowledge with them into the professional world and hopefully put these same design methods into use on more projects.



*Figure 119: Exterior renderings of gym design - (Ritter and Honyak 2016)*



*Figure 120: Exterior renderings of the gym design - (Ritter and Honyak 2016)*



*Figure 121: Interior renderings of the gym design - (Ritter and Honyak 2016)*

### ***Honolulu High-Capacity Transit Corridor Project – Honolulu Rail – WCIT Architecture***

The second modern case study included here is a project by WCIT Architecture, a local firm with a “proven track record of delivering successful projects that create environments that embody our culture and lifestyle in Hawai’i.”<sup>240</sup> The firm’s work provides valuable case studies that help to define Hawaiian architecture today. Although they have completed many notable projects, the firm’s work for the ornament of the Honolulu Rail captures the essence of a Native Hawaiian aesthetic.



*Figure 122: WCIT Architecture logo -  
([https://pbs.twimg.com/profile\\_images/1084786371/logo\\_square\\_300x300\\_400x400.jpg](https://pbs.twimg.com/profile_images/1084786371/logo_square_300x300_400x400.jpg))*

The goals WCIT aimed to accomplish with this project mainly revolve around satisfying the surrounding communities. According to their presentation, they wanted their design to

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<sup>240</sup> (WCIT 2010)

celebrate the uniqueness of each community by including not only the pre-contact history of the place but also the history of each specific community. By creating this connection, an opportunity for participation and ownership is offered to the people. Furthermore, an “equal inter relationship” between people, place, and project is also created.<sup>241</sup>

“Our approach must come from a deep respect and awareness of the past.”

WCIT’s design method is referred to as *‘ōlelo* which means “to speak” in Hawaiian. In this case, *‘ōlelo* means telling a story through design. Written text did not exist in pre-contact Hawai‘i so history, lineage, and legend were all passed down and remembered orally. As such, obtaining the cooperation of *kūpuna*, cultural leaders, and community groups is necessary for such a project because they are the source of passed-down knowledge. By continuing to pass down stories of our history we are preserving a unique aspect of our culture.<sup>242</sup>

In conjunction with this design method, the firm practices certain strategies to ensure success on all of their projects. For example, they set up direct community consultation sessions in order to determine a design direction and any community concerns. They recommend forming a cultural advisory group to ensure the appropriate use of language, practices, and customs in design. They also reach out to cultural groups and supportive associations, beneficial sources of knowledge. These various efforts are steps taken to respect and fulfill the needs of the community and win their hearts. If the firm is able to win the hearts of the community, they may be able to win their trust as well. If the community can trust the firm to make the best design decisions on the project, this is a great accomplishment which shows successful community awareness and may lead to trust on future projects.<sup>243</sup>

Building trust with the community is a typical design protocol of the firm. A protocol, unlike a design method, is an expectation that a firm sets for itself. To be in line with Hawaiian values and to acknowledge the reasons for these unique design methods is the fundamental protocol of any Hawaiian practice; this is to be *pono*.<sup>244</sup> In this case, *pono* means “to do a project correctly, honestly, and to the best of one’s ability.” These unique strategies and protocols are

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<sup>241</sup> (WCIT 2010)

<sup>242</sup> (WCIT 2010)

<sup>243</sup> (WCIT 2010)

<sup>244</sup> (WCIT 2010)

indispensable for this project because the rail is no small project. By the end of this project, “twenty-one miles of cultural landscape will be forever altered.” It is not surprising that most communities are concerned about how their lives will be transformed by this project. Impeccable understanding and sensitivity must be priority. WCIT claims that “many years of experience in Hawai‘i makes us sensitive to the public sentiment towards all development and the abiding tension that shadows any large development proposal.”<sup>245</sup>

A short summary of WCIT’s design process for this project serves as a demonstration of the firm’s sensitivity to public sentiment. First, design direction is extracted from community workshop quotes. With the design direction, research is done and historical and cultural clues are collected from community and culture focus groups. Next, cultural concepts are proposed through “thoughtful interaction with the community.” A theme that captures the essence of a place, its people, and its elements is set which is then used as the vehicle for unique elements of design. Following the theme, which is site-specific, various components which embody the site are chosen. These items of representation are laid out in storyboard fashion. An architecture team then works to develop physical representations and multiple design ideas.<sup>246</sup>

In line with the firm’s desire to ‘ōlelo, the rail’s ornament design concept began with the Kumulipo, “the greatest mo‘olelo told.” The Kumulipo describes the creation of the three *papa*, or the layers that combine to make the universe. These layers are Papahulilani, Papahānaumoku, and Papahulihonua. Papahulilani consists of the elements of the sky and heavens. Papahānaumoku consists of the elements that are born into the world. Papahulihonua consists of the elements of the earth and sea. As each community has its own story, so does the corresponding *ahupua‘a*. An *ahupua‘a* is a Hawaiian term for a division of land that extended up the mountain and down to the shoreline. A list of cities within the project scope are listed together with their corresponding *ahupua‘a*. So, chosen elements will be present in both the designated *papa* and *ahupua‘a*.<sup>247</sup>

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<sup>245</sup> (WCIT 2010)

<sup>246</sup> (WCIT 2010)

<sup>247</sup> (WCIT 2010)



*Figure 123: Firm’s presentation of the explanation of the 3 papa - (WCIT 2010)*



*Figure 124: Firms presentation of: list of ahupua’a that rail will go through (top) and explanation of the 3 papa for the Waipahū Station (bottom) - (WCIT 2010)*

For clarification, I will expand on one of the final design outcomes. The final outcomes are station markers which identify the location of each future rail station. The future Waipahū Transit Center rail station will be located between the Waikele and Waipi’o ahupua’a. Waipahū is a highly multicultural community as a result of the numerous residential villages that grew up around the ‘Ewa Mill. Before this, the area was used for agriculture and the villages largely housed the sugar cane plantation workers. Consequently, Waipahū became one of O’ahu’s major suburban growth centers. “This station celebrates the agriculture and the past immigrant workers of the sugar industry. Waipahū, means gushing or bursting waters. Royalty would often go there

to enjoy the fresh water from the natural springs. Waipahū was also considered the capital of O‘ahu prior to western contact. It was also the site of the Oahu Sugar Company sugar mill.”<sup>248</sup>

“Express plantation heritage.” - Waipahū rail station community workshop

The station marker is essentially a nine foot high storyboard. The board is broken up into three bands representing the three papa. The top band of the Waipahū marker, Papahulilani, depicts the night sky with whispering smoke and embers from the sugar mill. The middle band, Papahānaumoku, depicts a sugar cane worker in the field cutting stalks with his machete. The lower band, Papahulihonua, depicts Waipahū, or gushing water, as natural springs and the resulting fertile soil.<sup>249</sup>

These markers are applied to the base of the station columns. With adjacent columns with the same design, panels will be rotated ninety degrees at every column so different aspects of the images can be experienced and “a sense of movement is established.” The placement height is to be determined by the final station design.<sup>250</sup>



*Figure 125: Final design of Waipahū station marker - (WCIT 2010)*

What do these station markers do? Or what are they for, what is their purpose? From an architectural viewpoint, these markers are indeed ornament which re-present basic columns as works of art. They display elements of the site and the people within it. They offer a sense of experience to the space, making the space more pleasing and unique. From a Native Hawaiian aesthetic perspective, these markers display the history of the place and the connection the surrounding community has with the land. They are a form of a community identity which may

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<sup>248</sup> (WCIT 2010)

<sup>249</sup> (WCIT 2010)

<sup>250</sup> (WCIT 2010)

then be transferred to the future station within that space. Their purpose is to bring awareness to the place called Waipahū, rich in culture and history.<sup>251</sup>



*Figure 126: Another example of WCIT work - (WCIT 2010)*

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<sup>251</sup> (WCIT 2010)

## Chapter 5. Conclusion & Design

Native Hawaiian cultural awareness should be a concern for all professions doing work in Hawai'i. Architecture is one of the many professions in Hawai'i that must develop a greater Native Hawaiian consciousness. The greater our cultural awareness is, the greater our chance of achieving a Native Hawaiian aesthetic.

Through my research, I have concluded that the first step towards a Hawaiian aesthetic is to abandon any bias opinions. Aesthetic must be based on feeling and place. Feeling is indisputable unlike opinions. We cannot tell another how they are feeling. Depending on where one is, a perspective of the residing culture must be taken in order to fully understand, recognize, and appreciate the corresponding environment. Knowing how to achieve a different cultural perspective when designing is the job of an architect. A cultural perspective can also be seen as a familiarity with the patterns of relationships or the timeless qualities within a culture that maintain a certain feeling. "We are able to recognize the quality when it occurs in buildings because we know how the quality feels when [it is] within ourselves."<sup>252</sup> These particular patterns are considered "alive" because they evoke a feeling. Therefore, it is safe to say that people of the same culture will get the same feeling from a certain pattern. As such, a follower of the Hawaiian culture will have an easier time achieving a Native Hawaiian aesthetic as opposed to one who just learns about the culture. Alexander supports this by writing, "people from the same culture do to a remarkable extent agree about the way that different patterns make them feel."<sup>253</sup>

Alexander also tells us that "these patterns are the source of all genuine comfort and well-being."<sup>254</sup> Hawaiian aesthetics would not only articulate beauty but also induce bodily and intellectual pleasure, it is beyond the visual. Through my various case studies it can be seen that the design is based on people whether to satisfy their needs, represent their values, or give them a feeling of comfort.

Also seen within my case studies and my investigation on different cultural practices, is the development of a hearth. A hearth or a spiritual center gives purpose to a building. In ornament, spiritual meaning is needed to consider the ornament as whole. Currently ornament is

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<sup>252</sup> (Alexander 1979)

<sup>253</sup> (Alexander 1981)

<sup>254</sup> (Alexander 1981)



imbalanced between the physical and metaphysical. Native Hawaiian Aesthetic, in line with Hawaiian culture, calls for a rich spiritual representation and a balanced quality.

Deep spiritual meaning is known as kaona. Kaona, through ornament, becomes the “more” added to a building to elevate it to architecture. How does one inject kaona into a design? Kaona is accumulated through process. Process comes in many forms. Exemplified through the various cultural practices, process can be: making an item the same way your ancestors did it; or like in the case studies, process could be a series of community meetings.

Within the building, also containing spiritual significance, is ornament. Ornament denotes the status of the building. It makes the building appropriate in character, time, place, and location. In other words, having the proper ornament is a form of respect to the people of a place. Without it, a tension would arise that will result in an uncomfortable environment. Ornament is the equipment needed for the building to be considered complete. With this, ornament is no small part of architecture.

Ornament is a key factor when transforming uninhabitable places into hospitable environments. In architecture, we refer to this act as placemaking. This transformation takes place with the help of Re-Presentation. “The way of transforming something familiar into an aesthetic object is quite literally to re-present it by carrying it into a new environment.”<sup>255</sup> A Native Hawaiian aesthetic calls for a Re-Presentation of cultural practices into modern and beautiful design to capture the attention of people passing by. Cultural practices are used because, like ornament, their products are both functional and symbolic.

A Native Hawaiian aesthetic will begin to define a unique building language only known to Hawai‘i. Spaces will be shaped by a new aesthetic system which will function “to teach, transmit and commit sacred stories, songs, and chants to memory.”<sup>256</sup> A unique aesthetic will distinguish a Hawaiian identity within design. Mo‘olelo, mo‘okū‘auhau, etc. are not just aspects of our culture. They tell us who we are and who we are meant to be. A culturally enhanced environment will help people to switch from looking through a westernized lens to looking through the eyes of our kūpuna. Kaona rich design will radiate a feeling of belonging and familiarity. John Dominis Holt says, “there is no longer a Hawaiian nation. Therefore, I cannot be

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<sup>255</sup> (Harries 1988)

<sup>256</sup> (McDougall 2016)

Hawaiian through my “nationality.” I am Hawaiian by the collection of feelings fused by the connecting links of elements that go deep into the past.”<sup>257</sup>

My goal for this dissertation was to develop a contemporary aesthetic based on Native Hawaiian design and art that can be applied to today’s architecture in Hawai’i. Through my research I have found that my goal is actually to develop an exclusive and unifying code that allows one to feel the true depth of meaning of an environment through a kānaka perspective. Unfortunately, this task is too great to be easily solved and would require many more years of research and study. However, what I have done is created the foundation of logic and taken the first steps toward a Native Hawaiian aesthetic. I have opened the conversation so that other scholars can take part in this kuleana. Ultimately, the desired end result is an ideal architecture that draws on “both past architecture and on the then firmly established understanding of the spiritual significance of things to create metaphors of what transcends all our building and dwelling.”<sup>258</sup>

For now, I offer this project as aesthetic sovereignty and spiritual healing. I hope that after reading this piece, people feel open-minded to the thought of connecting with one’s ancestors, to developing a Hawaiian perspective, and the possibility of honest Hawaiian culture rich ornament.

### Guidelines

Based on my research I have compiled a table of guidelines that correspond to the seven elements of ornament that I have addressed. These guidelines are not rules but rather a list of my findings. These “guidelines” should be seen as the patterns of relationships identified by a series of authors that successfully radiate a feeling of Hawaiian culture sensitivity. Again, Alexander tells us, “their beauty as created things” comes from pattern languages through “the touching grace of ornaments.”<sup>259</sup> These general guidelines and swatches together can be considered the first steps toward a Native Hawaiian aesthetic.

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<sup>257</sup> (McDougall 2016)

<sup>258</sup> (Harries 1988)

<sup>259</sup> (Alexander 1979)

## COLOR

- Principles that affect color compositions
  - Dominance, contrast, and repetition
- Should reinforce the designer's intent
- Always chosen at the site
- A substitute for feeling
- A force of nature
- Determined by the material available
- Should take climate and light into account
- Color code: cultural understanding of color
- Grays provide areas of relief for eyes to rest
- Color harmony – balance of color
  - Balance important to the Hawaiian world view (pono)
- 3 colors of main akua
  - Red - Kū, yellow - Kāne, black - Lono
- Highly unusual to use a single color
  - Use of at least one subtle color
- Subtle colors
- Kapa initial colors
  - White, buff, soft yellow
- Kapa design
  - Red and black
- Lashings
  - Green, tan, brown, black
- Pa'ī'ula – red overlayed on white
- Moeloloa – red strips on white to show through
- NO GEM TONES; NO "HARSH" OR "GLARING" COMBINATIONS
- Dyes
  - Black (intense black)
    - Burnt remains and soot of the kukui nut
  - Yellow
    - Hōlei bark, nānū fruit pulp, 'olena (turmeric), noni roots
  - Red
    - 'ama'uma'u fern leaves, kōlea bark, kou leaves, kukui bark, pala'a fern leaves
  - Blue (pale)
    - 'uki'uki (mountain lily berries)
  - Green
    - Pounded ma'o (cotton leaves)
  - Black
    - Kukui nut rinds and roots
  - Lavender
    - Boiled ripe 'ūlei seeds
  - Pink
    - 'akala (raspberries)
  - Brown
    - Crushed kou leaves, 'a'ali'i seed capsules roots or bark
  - Other source of dyes
    - 'ina (sea urchin) – lavender or purple
    - Powdered charcoal – black
    - Red 'alea (ocher) powder – red
    - Yellow 'alea powder – yellow

## SYMBOL

- ALL THINGS MUST HAVE A DEEPER MEANING, A SPIRIT, A CONNECTION TO THE METAPHYSICAL
- Vehicle to receive mana
- Kaona
  - Layered
  - Kinolau
  - 'Ōlelo no'eau
  - Balance
    - Kū and Hina = kaona = balance and duality
      - Ku
        - Male
        - Hard
        - The rising sun
        - East, the sun, to stand erect, vertical
      - Hina
        - Female
        - Soft
        - The setting sun
        - West, the moon, to recline, horizontal
  - Understanding of who one is as a person
  - Spiritual protection
  - 'Aumakua/Family
  - Identity and name
  - Connection to ancestors that is always with you
  - Remember an important event
- Communication
  - Reflect/perpetuate the customary culture
  - Indicate values of the culture
  - Show Hawaiian understanding of the environment
  - Denotion of power
  - Intention of friendly relationships
  - Expression of affection or loyalty
  - Site/Location
    - The context in which it is presented is appropriate in that moment at that space; things will not mean the same thing all the time
  - Reflection and reminder of roots in Hawai'i
  - Interpret the functions of the architecture into communication
  - Puloulou – kapu
  - Hoaka, red and yellow, ahu ula, kahili, rainbow, hawk- alii

PATTERN  
“nature’s  
rhythms”

- Begin to establish a visual code
- Each one unique and distinctive
- Source of genuine comfort
- Physical manifestation of meaning
- Geometric and abstract
  - Typically pre-contact
  - Sort into pre and post contact groups
- Few “freestyle” elements
- Bands of patterns
- Four faced patterns
  - At least one with parallel lines
- Alternating black and white
- Repetitious/Modular
- Symmetrical (design or placement)
- Noa pattern
  - Not owned by anyone (ex. signify certain aspect of life)
- Simple shapes / “universal” designs
  - Squares, circles, triangles, diamonds, chevrons, semi circles, rhombs, bars and crescents
  - Lines
    - Zigzag, oblique, vertical, horizontal, parallel
  - Rainbow
    - Symbol of divinity; manifestation of akua
  - NO curvilinear except for circles and semi-circles
- Beatermarks (Indentions)

MATERIAL

- Displayed with honesty – real in its presentation
- Found and produced locally
- From animals
  - Hulu (Bird feathers)
    - Yellow feather with brown shaft (interesting)
    - Red (or scarlet) & yellow, black accent, occasional green (olive or dark)
    - White, beige, brown
  - ‘iwi manu (bird bones) beaks and claws
  - ‘iwi i’a (fish bones)
  - Niho manō (shark teeth)
  - ‘ina (sea urchin)
- From plants
  - Olonā, wauke, ‘ohe , māmaki, ‘oloa, ma’aloa, ‘akala, ‘ulu, hōlei, nānū, ‘olena, noni, ‘ama’uma’u, kōlea, kou, kukui, pala’a, ‘uki’uki, ma’o, ‘ūlei, ‘a’ali’i, ‘alea, makaloa, kiawe, ‘ōhi’a, pili, kualohia, pueo, kāwelu, kō, kī, mamane
  - Charcoal
  - Brushes
    - Hala seed, cotton swab, bag of charcoal
  - For smell
    - dried fruits of mokihana, branches and leaves of maile, ‘iliahi (sandalwood), powdered rhizome (similar to stem) of ‘awapuhi
- Stone
  - Lava rock, smooth pebbles, sand
- NO METAL

TEXTURE	<ul style="list-style-type: none"> <li>• Cordage</li> <li>• Netting</li> <li>• Feather cloak</li> <li>• Feathers vs cord (kāhili)</li> <li>• Feather vs hat</li> <li>• Nao – slightly grooved parallel ridges (hoahoa)</li> <li>• Pepehi – deep grooves and wide ridges (hoahoa)</li> <li>• Kapa with beater indentations</li> <li>• Texture of materials themselves</li> <li>• Carved out notches</li> <li>• Extrusion of a pattern</li> <li>• Ribbed</li> <li>• Patterned stones</li> </ul>
TECHNIQUE	<ul style="list-style-type: none"> <li>• Make constant effort to view from a Hawaiian perspective</li> <li>• Ethical <ul style="list-style-type: none"> <li>○ INSPIRATION BEGINS WITH THE PEOPLE OF THE PLACE</li> <li>○ TELLING A STORY <ul style="list-style-type: none"> <li>▪ Story of place, people, culture</li> <li>▪ Pre-contact Hawai'i written text did not exist therefore history, lineage and legend were told</li> <li>▪ Necessitates working with kūpuna, cultural leaders, community groups</li> </ul> </li> <li>○ Equal inter relationship between PEOPLE – PLACE – PROJECT</li> <li>○ Direct community consultation for design direction</li> <li>○ Emerges out of community workshop quotes</li> <li>○ Historical and cultural clues come from community and cultural focus groups</li> <li>○ Theme to capture essence of a place, its people, and its elements is set <ul style="list-style-type: none"> <li>▪ Become the vehicle for unique elements of design</li> </ul> </li> <li>○ Cultural concepts proposed through “thoughtful interaction with the community</li> <li>○ Team to develop physical representations; multiple ideas</li> <li>○ Outreach to cultural groups and associations</li> <li>○ Have a cultural advisor <ul style="list-style-type: none"> <li>▪ To give input on appropriate language, practices, and customs</li> </ul> </li> <li>○ Be pono <ul style="list-style-type: none"> <li>▪ Do it honestly and correctly; only use what is appropriate</li> </ul> </li> <li>○ PRODUCTION AND PROTECTION OF MANA</li> <li>○ Process where artist guides subject down a path of self-discovery, revealing life lessons of who they are and where they come from</li> <li>○ Minimal disturbance to nature</li> </ul> </li> <li>• Feather affix methods – possible to use multiple but general one technique dominant <ul style="list-style-type: none"> <li>○ Nākiʻi – tying: includes netted backing</li> <li>○ Wili – wrapping: “finished look”; kāhili = feathers and cordage shown equally</li> <li>○ Humu – stitching</li> <li>○ Pipili – gluing; used for tiny feathers</li> </ul> </li> <li>• Specific orientation/arrangement</li> <li>• Molded into a shape</li> <li>• Rigid or supple core</li> </ul>

- Feathers on weapons used to conceal shark teeth
- Wauke stripped of outer bark
- Wauke inner bark unraveled
- Has to be grown! Cultivated!
- Soaked in sea water
- Scrap with shell or turtle bone
- Hoahoa on hua (beat on smooth beam) until flattened
- Left in sun
- Wrapped in kī leaves
- Carved with shark tooth
- Felting
- Kākau
- Overlaying
- Ho'opa'i – gradation to smoother surfaces
- Bleached “shiny as linen” – laid on moss
- Bamboo stamping
- Ho'olu'u – to immerse (in dye)
- Brushed (painted) with bag of charcoal, swab of cotton, or hala brushes
- Kaula Kākau – cord snapping
- Malo folding
- Pā'ū folding & securing with small stone or kukui nut
- Layers of different lengths
- Finishing at areas of human contact
- Positive space (material) and negative space
- Certain placement/location (to ensure a proper display)(never on back)
- Done with an accompanied ritual or ceremony
- Done in a designated place
- Done by a kahuna (ideally to be the architect)
- Rock cutting during low tide, hauling with ropes, and smoothing
- Laying stake rocks with sand
- Log runner to move rocks
- Several people to achieve one task
- Chanting while building
- Floated on raft or canoe
- Tapering of structures (reduce top heaviness)
- Manifest through surface or volume

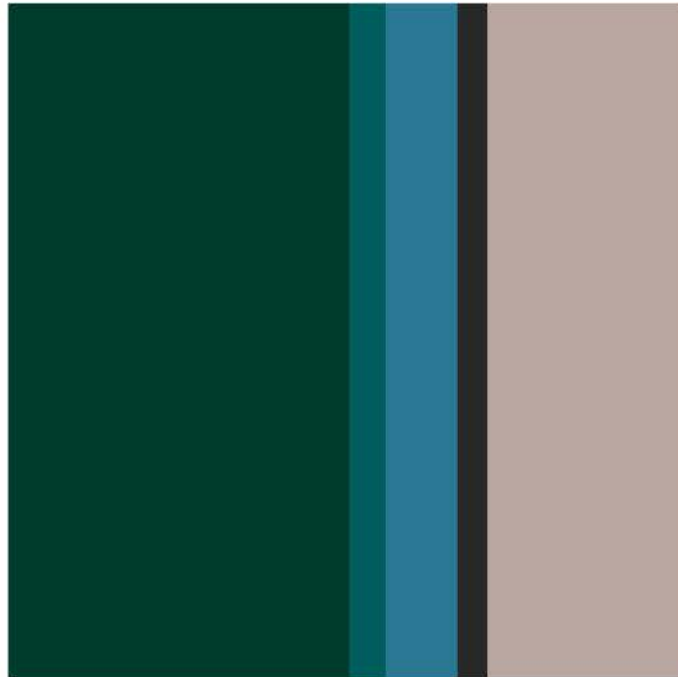
## IMAGERY

- Customary
  - Akua hulu – feathered images
  - Alternating between dark and light
  - Kīhei
  - Earliest recorded evidence
  - Post contact (goats, guns, names, and dates)
- Image created within the mind by the ornament?
- Modern
  - Portraits of other rulers
  - Portraits of royal lineage
- Etched glass (kalo – chief is source of life, chief decent from the gods, “the staff of life, hoaka)

# 00 SCHEME

S.O.A.

51%  
6%  
10%  
4%  
29%



<http://manoa.hawaii.edu/media/wp-content/uploads/2011/04/arch1.jpg>



**SCHOOL** - A GROUP OF PEOPLE, PARTICULARLY WRITERS, ARTISTS, OR PHILOSOPHERS, SHARING THE SAME OR SIMILAR IDEAS.

-----  
**ANALOGOUS PLUS NEUTRALS** COLOR HARMONY

-----  
**COOL COLOR SCHEME** SYMBOLIZING THE RAINY FERTILE LANDS OF MANOA

-----  
**'OLELO NO'EAU:** HOOKAHI WAI O KA LIKE.  
**ALL OF ONE COLOR.** ALL THE SAME; HARMONIOUS; IN UNITY.



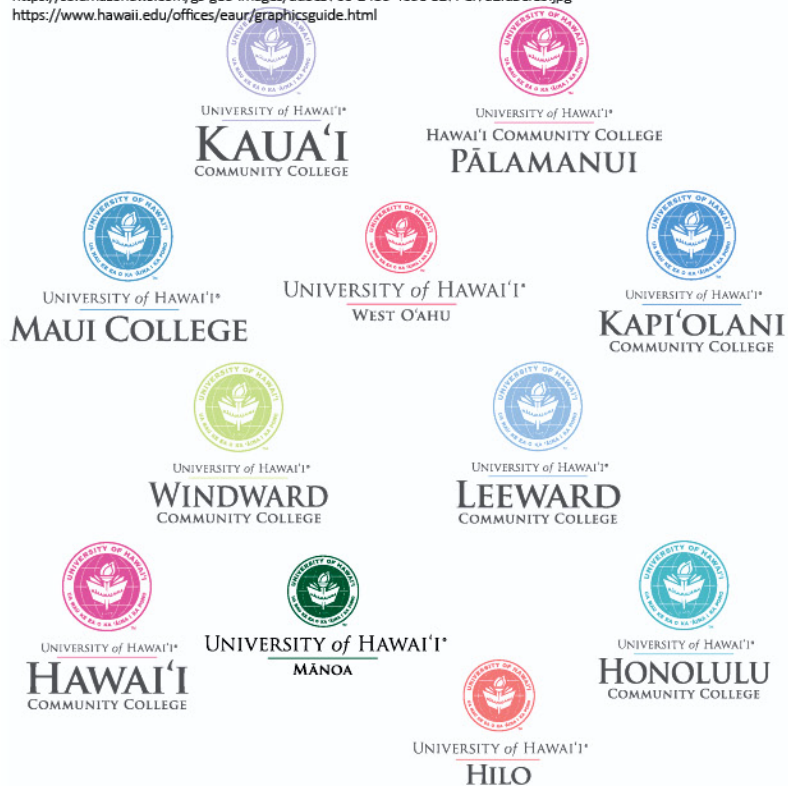
# 01 COLOR

## MĀNOA

C 100  
M 35  
Y 78  
K 64



<https://s3.amazonaws.com/gs-geo-images/dd3c5760-2480-409c-827f-ef7a2fd5cfe3.jpg>  
<https://www.hawaii.edu/offices/ear/graphicsguide.html>



GREEN REPRESENTS  
THE SITE, THE  
LOCATION ON  
THE ISLAND, AND  
DISTINCTION WITHIN  
THE UH SYSTEM

WELINA MANOA.  
**GREETINGS TO YOU,  
MANOA**  
USED BY PEOPLE  
TIED TO MANOA  
TO INTRODUCE  
THEMSELVES TO  
OTHERS.

MANOA LITERALLY  
MEANING THICK,  
SOLID, VAST, DEPTH  
AREA CHARACTERIZED  
BY LUSH AND  
EXTENSIVE GREENERY

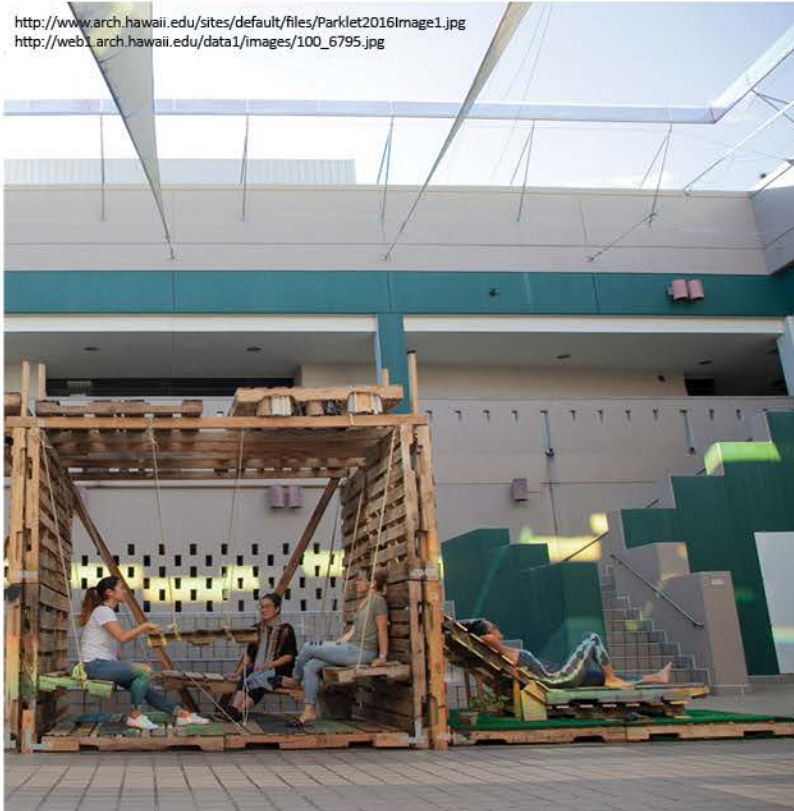
# 02 COLOR

## HĀLĀWAI

C 99  
M 21  
Y 47  
K 45



<http://www.arch.hawaii.edu/sites/default/files/Parklet2016Image1.jpg>  
[http://web1.arch.hawaii.edu/data1/images/100\\_6795.jpg](http://web1.arch.hawaii.edu/data1/images/100_6795.jpg)



BLUE-GREEN  
REPRESENTS  
**COMMUNICATION  
AND INVENTION.**

-----  
**THE COURTYARD  
IS THE MEETING  
(HALAWAI) PLACE  
TO COME TOGETHER  
TO EXCHANGE  
KNOWLEDGE AND  
IDEAS.**

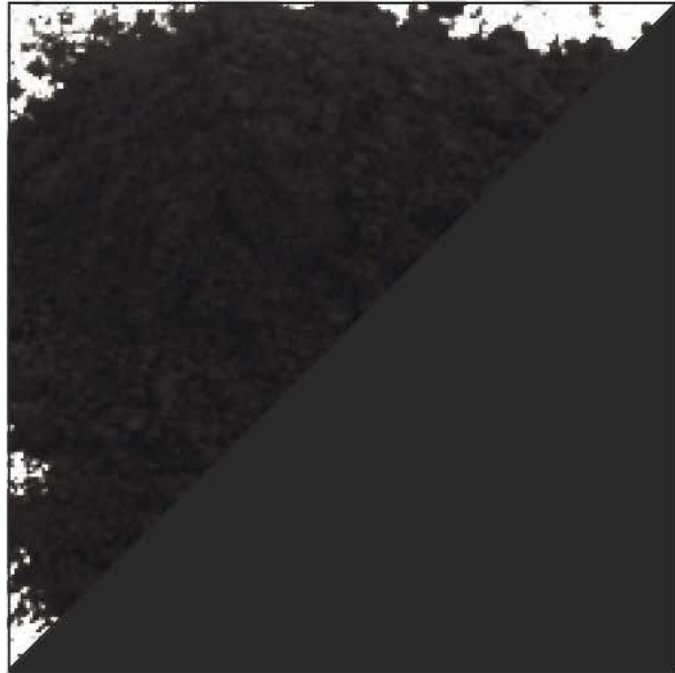
-----  
**“GROUNDING”  
SCHEME BY HAVING  
A CONNECTION TO  
EXISTING COLORS OF  
THE MEETING PLACE.**

-----  
**‘OLELO NO‘EAU:  
PUPUKAHI I  
HOLOMUA.  
UNITE IN ORDER TO  
PROGRESS.**

# 04 COLOR

## KUKUI

C	0
M	0
Y	0
K	95



<http://1.bp.blogspot.com/-sf7fCNwjT3M/Tb9YZtDcw/AAAAAAAAAIw/Y47C9ztfKM/s1600/CD03-04-09227-DC.jpg>



**BLACK DYE WAS  
ACHIEVED BY USING  
THE SOOT OF BURNT  
KUKUI NUT RINDS  
AND ROOTS**

-----  
KUKUI NUT USED  
BY OUR ANCESTORS  
TO MAKE OIL FOR  
LAMPS, THE KUKUI IS  
NOW A SYMBOL OF  
ENLIGHTENMENT

-----  
**KINOLAU OF LONO**

-----  
**'OLELO NO'EAU:  
UA LILO I KE KOLI  
KUKUI A MALUHI.  
GONE LAMP  
TRIMMING UNTIL  
TIRED.**

SAID OF ONE WHO AS  
GONE ON AN ALL-  
NIGHT SPREE.

# 05 COLOR

## 'A'ALI'I

C 29  
M 33  
Y 32  
K 0



COLORFUL FLOWERS  
AND FRUIT BUT THE  
DESIRED COLOR DOES  
NOT COME FROM  
THEM

-----  
BROWN DYE WAS  
ACHIEVED BY USING  
THE SEED CAPSULES,  
ROOTS, OR BARK

-----  
BROWN REPRESENTS  
STABILITY AND  
DURABILITY

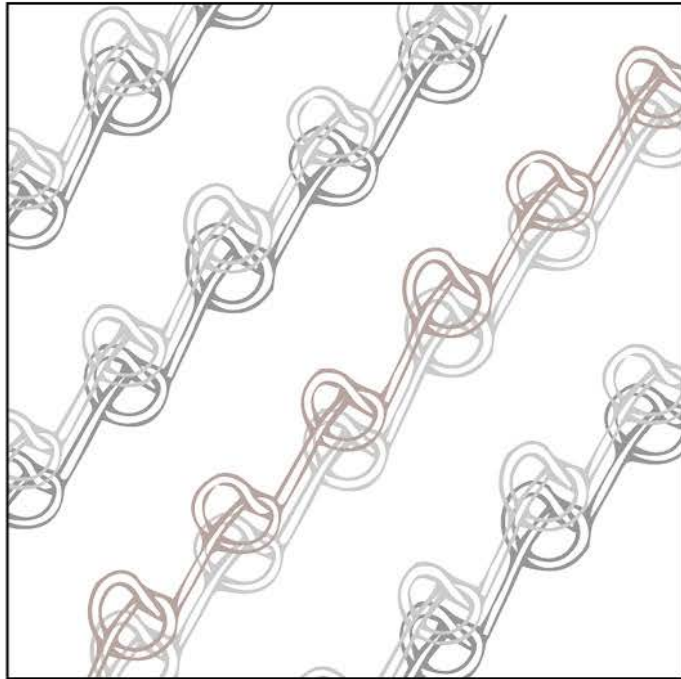
-----  
**'OLELO NO'EAU:**  
HE AALII AU, AOHE  
MAKANI E HINA AI  
**I AM AN AALII SHRUB,  
NO WIND CAN PUSH  
ME OVER.**

EMBODIMENT OF  
THE RESILIENCE OF  
AN ARCHITECTURE  
STUDENT.

# 06 PATTERN

## THE TIE

C 0  
M 0  
Y 0  
K 95



**BLACK DYE WAS  
ACHIEVED BY USING  
THE SOOT OF BURNT  
KUKUI NUT RINDS  
AND ROOTS**

-----  
KUKUI NUT USED  
BY OUR ANCESTORS  
TO MAKE OIL FOR  
LAMPS, THE KUKUI IS  
NOW A SYMBOL OF  
ENLIGHTENMENT

-----  
**KINOLAU OF LONO**

-----  
**'OLELO NO'EAU:  
UA LILO I KE KOLI  
KUKUI A MALUHI.  
GONE LAMP  
TRIMMING UNTIL  
TIRED.  
SAID OF ONE WHO AS  
GONE ON AN ALL-  
NIGHT SPREE.**

# 07 PATTERN

KA MAKAU

THE  
FISHHOOK



<http://honolulu-magazine-images.dashdigital.com/Honolulu-Magazine/March-2004/Makau-Hawaiian-Fishhooks/fishhook1a.jpg?ver=1264454767>



A FISHHOOK IS  
A SYMBOL FOR  
**THE PROCESS OF  
ATTEMPTING TO  
OBTAIN BEAUTY.** ONE  
MAY HAVE TO THROW  
THE LINE OUT MANY  
TIMES BEFORE A FISH  
IS CAUGHT.

-----  
LIKE FISHHOOKS  
CAPTURE FISH, THE  
BEAUTIFUL CAPTURE  
**OUR ATTENTION.**

-----  
**'OLELO NO'EAU:**  
HE MAKAU HALA OLE.  
**THE FISHHOOK THAT  
NEVER FAILS TO  
CATCH.**

A BOAST OF A PERSON  
WHO ATTRACTS THE  
OPPOSITE SEX AND  
HOLDS HIS OR HER  
ATTENTION.







# 13 MATERIAL

## LAUHULU

DRIED  
BANANA  
LEAF



**BLACK DYE WAS  
ACHIEVED BY USING  
THE SOOT OF BURNT  
KUKUI NUT RINDS  
AND ROOTS**

-----  
KUKUI NUT USED  
BY OUR ANCESTORS  
TO MAKE OIL FOR  
LAMPS, THE KUKUI IS  
NOW A SYMBOL OF  
ENLIGHTENMENT

-----  
**KINOLAU OF LONO**

-----  
**'OLELO NO'EAU:  
UA LILO I KE KOLI  
KUKUI A MALUHI.  
*GONE LAMP  
TRIMMING UNTIL  
TIRED.***

SAID OF ONE WHO AS  
GONE ON AN ALL-  
NIGHT SPREE.

## Glossary

All definitions without footnotes were taken from <http://wehewehe.org/>.

**‘a‘ali‘i:** Plant dye. n. Native hardwood shrubs or trees (*Dodonaea*, all species), 30 cm to 10 m high, more or less sticky at branch tips; leaves narrow, 2 to 10 cm long; flowers small; fruit a yellow, red, or brown papery capsule about 1 cm long and with two to four wings. Fruit clusters are made into leis with their own leaves or ferns and worn in the hair. A boast of the people of Ka‘ū, is: He ‘a‘ali‘i au, ‘a‘ohe makani e hina ai, I am an ‘a‘ali‘i shrub, no wind can push me over.

**‘aho:** n. Thatch purlin. Also ‘a‘aho. See ‘ahohui, ‘aho-kele, ‘ahopi‘o kuahui, ‘ahopueo. ‘Aho ‘ai ‘ole, a thatch purlin that is too short. hō.‘aho To tie ‘aho to the frame of the roof.

**‘ahu ‘ula:** n. Feather cloak or cape made of the feathers of the ‘ō‘ō, ‘i‘iwi and other birds, usually red or yellow trimmed with black or green, formerly worn by high chiefs and kings. Today about 160 have been located in museums and collections of the world, the largest being in the Bishop Museum, Honolulu. Imitation cloaks of plush, felt, paper, or dyed feathers (rare) are worn today in pageants and by members of Hawaiian societies. Lit., royal cloak.

**‘āina:** n. Land, earth. Cf. ‘ai, to eat; ‘aina, kama‘āina. Kō nā ‘āina like ‘ole, belonging to foreign lands, foreign, international. ‘Āina ho‘oilina, inherited property or estate. Ua mau ke ea o ka ‘āina i ka pono (motto of Hawai‘i), the life of the land is preserved in righteousness. (PEP kaainga.)

**‘akala:** Plant dye. 1. vs. Pink. 2. n. Two endemic raspberries (*Rubus hawaiiensis* and *R. macraei*); and the thimbleberry (*R. rosaefolius*), from southeastern Asia. (Neal 390–1.) Also ‘ākalakala, ‘ōla‘a. 3. n. Dye made from ‘ākala juice. 4. n. A pink tapa.

**‘alae‘a:** n. 1. Water-soluble colloidal ochreous earth, used for coloring salt, for medicine, for dye, and formally in the purification ceremony called hi‘uwai; any red coloring matter; according to Dr. Frank Tabrah (Kam. 76:149), brick-red soil containing hematite. See ‘i‘o‘alaea, kuhi ‘alaea. Ua ‘alaea (For. 4:399), red rain [red of the rainbow]. (PCP kalaea.) 3. Annatto dye plant (*Bixa orellana*), a tropical American shrub or small tree, bearing fruit with scarlet seeds, used for dyeing. Sometimes called ‘alaea lā‘au to distinguish from the earth; locally also called lipstick plant. (Neal 589.) Also kūmauna.

**‘alalā:** Form of an ‘aumakua. 2. n. Hawaiian crow (*Corvus tropicus*), named for its caw; endangered. He ‘alalā, he manu leo nui, a crow, a bird with much talk [a talkative person].

**‘alea:** Also ma‘alaea. Plant dye. nvs. Red color, red ochre color; stained red, as with ochreous earth; red, as earth.

**‘ama‘uma‘u:** Plant dye. n. Young ‘ama‘u ferns; many ‘ama‘u ferns, ferny, abounding in ‘ama‘u ferns; a covering of ‘ama‘u ferns.

**‘aumakua:** 1. nvt. Family or personal gods, deified ancestors who might assume the shape of sharks (all islands except Kaua‘i), owls (as at Mānoa, O‘ahu and Ka‘ū and Puna, Hawai‘i), hawks (Hawai‘i), ‘elepaio, ‘iwi, mudhens, octopuses, eels, mice, rats, dogs, caterpillars, rocks, cowries, clouds, or plants. A symbiotic relationship existed; mortals did not harm or eat ‘aumākua (they fed sharks), and ‘aumākua warned and reprimanded mortals in dreams, visions, and calls. (Beckwith, 1970, pp. 124–43, 559; Nānā 38.) Fig., a trustworthy person. (Probably lit., ‘au 4, group, + makua, parent.) See pulapula 2. hō.‘au.makua To acquire or contact ‘aumākua. 2. vt. To offer grace to ‘aumākua before eating; to bless in the name of ‘aumākua. ‘Auhea ‘oe, ē ke kanaka o ke akua, eia kā kāua wahi ‘ai, ua loa‘a maila mai ka pō mai ka pō mai; no laila nāu e ‘aumakua mai i ka ‘ai a kāua (prayer), hearken, O man who serves the god, here is food for you [lit., our food], received from the night, so bless our food in the name of the ‘aumakua. Plural (‘aumākua).

**‘enuhe:** Form of an ‘aumakua. n. Caterpillar, as of hawk or sphinx moths (*Sphingidae*). Fig., a rapacious person. Also ‘anuhe, nuhe.

**‘ie:** 1. n. Aerial root of the ‘ie‘ie vine; the vine itself. Pua ka ‘ie, the ‘ie vine blossoms [royalty is born]. (PPN kie.) 2. n. A woven basket. 3. nvs. A flat, plaited braid as used in hats; braided. Kāma‘a ‘ie, braided shoes. Mahiole ‘ie (Laie 479), plaited feather helmet. 4. nvs. Wicker. He noho ‘ie, a wicker chair.

**‘ina:** Dye. n.1. Small sea urchin (wana), as *Echinometra* spp. Qualifying terms are ‘ele‘ele or uli, kea or ke‘oke‘o, and ‘ula or ‘ula‘ula. Some of these are listed below. (PPN kina.)

**‘io:** Form of an ‘aumakua. 1. n. Hawaiian hawk (*Buteo solitarius*), an endemic and endangered hawk with dark and light color phases, confined to forests on the island of Hawai‘i, where it is regarded by some as an ‘aumakua. The ‘io signified royalty because of its lofty flight, and hence occurs in such names as ‘Io-lani, royal hawk. Cf. ‘io mea, ‘io uli, māpumāpu, mio 1. Kaha ka ‘io i ka mālie, the ‘io hawk poises in the calm [admiration of a handsome person]. (PPN kio.)

**‘Iolani:** n. Name of the Palace and of a school in Honolulu; also the names of Ka-mehameha II and IV: see Pukui, Elbert, and Mookini, 1974. Lit., royal hawk (the high flight of the hawk symbolized royalty).

**‘iwa:** n. 1. Frigate or man-of-war bird (*Fregata minor palmerstoni*); it has a wing span of 12 m. Fig., thief, so called because it steals food by forcing other birds to disgorge; also used figuratively for a handsome person, as follows: Kīkaha ka ‘iwa, he lā makani, poises the frigate bird, a windy day [of a handsome person who draws attention, as does the ‘iwa bird poised aloft]. Ka ‘iwa ālai maka, the frigate bird that fascinates the eye [an attractive person]. He iwa ka hoa e like ai (Kel. 134), just like one's friend the ‘iwa bird (of one dressed up in finery). See ex., ma‘oha; see sayings, ‘ānai, haehae 2. (PCP kiwa.) 2. A native fern (*Asplenium horridum*) with narrow, feather-shaped fronds 45 to 95 cm long, their dark stems bearing dark-brown hairs and scales. The stems were formerly used for making hats. Also ‘alae. (PCP kiwa.)

**‘ōhai:** 1. n. Monkeypod or rain tree (*Samanea saman*), a large leguminous tree from tropical America, grown in Hawai‘i for shade and street planting; flowers pink, tufted. (Neal 401–3.) See saying, luhea. (PCP koofai.) 2. n. A native legume (*Sesbania tomentosa*), a low to prostrate shrub with hairy, pale leaves and red or orange flowers about 2.5 cm long. (Neal 450.) (PCP koofai.) White monkeypod (*Albizia lebbek*) on Ni‘ihau. Cf. Neal 403.

**‘ohana:** 1. nvs. Family, relative, kin group; related. ‘Ohana holo‘oko‘a, ‘ohana nui, extended family, clan. 2. vi. To gather for family prayers (short for pule ‘ohana).

**‘ohe kāpala:** n. Piece of bamboo carved for printing tapa; bamboo stamp. Lit., printing bamboo.

**‘ōhi‘a:** 1. n. Two kinds of trees: see ‘ōhi‘a ‘ai and ‘ōhi‘a lehua. (PCP k(a,o)(f,s)ika.)

**‘ōlelo:** nvt. Language, speech, word, quotation, statement, utterance, term, tidings; to speak, say, state, talk, mention, quote, converse, tell; oral, verbatim, verbal, motion (in early House of Nobles regulations). Cf. ho‘onui ‘ōlelo, hua ‘ōlelo, ku‘u ‘ōlelo, luna ‘ōlelo, mahele ‘ōlelo, pili‘ōlelo, uwea ‘ōlelo. ‘Ōlelo a nā hō‘ike, evidence, as in court; lit., word of the witnesses. ‘O John Owen i ‘ōlelo ‘ia, the aforesaid [or alleged] John Owen. I kekahi manawa i ‘ōlelo ‘ia, at a specified time. ‘A‘ohe ‘ōlelo ‘ana, not worth mentioning. ‘Ōlelo mai nā kūpuna mai, tradition, traditional lore. ‘Ōlelo ‘ia maluna a‘e, above-mentioned. Inā ‘oe e makemake i ke kō, ‘a‘ohe ‘ōlelo ‘ana, na‘u e ki‘i, if you want some sugar cane, don't say anything about it; I'll get some. (PEP koolelo.)

**‘ōlelo Hawai‘i:** Hawaiian language

**‘ōlelo no‘eau:** n. Proverb, wise saying, traditional saying.

**‘olena:** 1. n. The turmeric (*Curcuma domestica*, also incorrectly called *C. longa*), a kind of ginger distributed from India into Polynesia, widely used as a spice and dye in foods, to color cloth and tapa, and medicinally for earache and lung trouble. A cluster of large leaves rises from thick, yellow underground stems, which are the useful part of the plant, either raw or cooked. (Neal 255–6.) (PPN renga.)

**‘oloa:** 1. Same as ma‘aloa, ma‘oloa, a shrub. 2. nvt. Fine white tapa, said to have been placed over an image during prayers (Laie 467); perhaps a verb to make ‘oloa tapa (For. 6:444). (PPN koloa.)

**‘ono:** nvt. Delicious, tasty, savory; to relish, crave; deliciousness, flavor, savor. Cf. mea ‘ono. ‘Ono ka pu‘u, tasty to the palate; lit., the throat craves. He ‘ono ‘i‘o nō (song), how delicious. Ho‘omanawanui i ka ‘ono, wait patiently and you’ll have what you crave. Hana ‘ia maila ka wai ā ‘ono (Puk. 15.25), the waters were made sweet. hō.‘ono To tempt the appetite; to make tasty, season. (PCP kono.)

**‘ope‘ape‘a:** Form of an ‘aumakua. n.1. General name for starfish. 2. Bat. Lele ‘ōpe‘ape‘a, to fly like a bat, i.e., to flutter wings, as would a frightened bird.

**‘opihi:** Form of an ‘aumakua. n.1. Limpets, Hawaiians recognize three kinds: kō‘ele (Cellana talcosa, the largest), ‘ālinalina (C. sandwicensis), makaiauli (C. exarata). Scientists also recognize C. melanostoma. (Kay 43–46.) Also kā‘ala. For some persons, ‘opihi are an ‘aumakua. Cf. maka‘opihi. 3. Design for tapa and mats consisting of small triangles, probably named for the limpet.

**‘uki‘uki:** Plant dye. n. Dianella sandwicensis, a native member of the lily family, with a short stem and long, narrow leaves, from among which arises a cluster of white or bluish flowers. The attractive fruits are blue, long-persistent berries formerly used to dye tapa. (Neal 191–2.)

**‘ūlei:** Plant dye. n.1. A native spreading shrub (Osteomeles anthyllidifolia), closely allied to other species found on some other islands of the Pacific. It has compound leaves, small white roseline flowers, small round white fruits. The wood is tough and formerly was used for digging sticks, fish spears, and the ‘ūkēkē (musical bow). (Neal 387.) Also eluehe.

**‘ulu.** n.1. The breadfruit (Artocarpus altilis), a tree perhaps originating in Malaysia and distributed through tropical Asia and Polynesia. It belongs to the fig family, and is grown for its edible fruits, sometimes for ornament. The leaves are large, oblong, more or less lobed; fruits are round or oblong, weighing up to 4.5 kilos, when cooked tasting something like sweet potatoes. (Neal 302–4.) See ex., pakī, and saying ule 1. ‘Ulu hua i ka hāpapa, breadfruit that bears fruit on the flats [of the famous Ni‘ihau breadfruit growing in the sand dunes]. (PPN kulu.)

**‘umeke:** n. Bowl, calabash, circular vessel, as of wood or gourd. ‘Umeke kā‘eo, a well-filled calabash [a well-filled mind]. ‘Umeke pala ‘ole, calabash without a dab [empty bowl, empty mind]. ho‘o.‘umeke, hō.‘umeke To assume the shape of a bowl; to assume the shape of fruit, to bear fruit. Fig., to have enough to eat. E pua ana ka ‘ōhi‘a ‘ai a hō‘umeke i ka malama o Hinaia‘ele‘ele (Kep. 93), the mountain apple blooms and fruits form in the month of Hinaia‘ele‘ele. (PPN kumete.)

**‘uo:** 1. nvt. A group of feathers tied together in a small bunch, to be made into a feather lei or cloak; to tie thus; to tie into a lei; to string on a needle; to splice, interweave, as strands of a rope; seizing turns in lashing. Ke ‘uo lā i ka mānai (PH 191), threading [flowers] on the needle. ‘Uo ‘ia i ka mānai ho‘okahi, strung on the same lei needle [married]. (PCP kuo.) 2. Same as ‘uo‘uo

**‘upena:** Uhi pattern: fishing net pattern. n. Fishing net, net, web. Fig., trap. (PPN kupenga.)

**ahupua‘a:** n.1. Land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (pua‘a), or because a pig or other tribute was laid on the altar as tax to the chief. The landlord or owner of an ahupua‘a might be a konohiki. 2. The altar on which the pig was laid as payment to the chief for use of the ahupua‘a land.

**ako:** nvt. Thatching; to thatch. Mea ako hale, thatcher. Ako ‘ia ko hale, the house is thatched [if during an emergency it was impossible to erect a temple, the priest merely gestured that the house was completed and thatched]. (PPN ‘ato.)

**akua:** 1. vs. God, goddess, spirit, ghost, devil, image, idol, corpse; divine, supernatural, godly. Akua might mate with humans and give birth to normal humans, mo‘o, or kupua (Na\_na\_23). Children of Kamehameha by Ke-opu-o-lani were sometimes referred to as akua because of their high rank. Kauā, or outcasts, were sometimes called akua because they were despised as ghosts. Kona akua, his god. Akua nō kona ‘ike, his knowledge is indeed divine. ‘Ai akua, to have a prodigious appetite, as though possessed of gods [as youthful heroes in legends]. Nāna nō i hā‘awi i ke akua, through her given to the god [death by sorcery, cursed]. ho‘ā.kua To deify, make a god of; godlike, supernatural, extraordinary, divine. Cf. hoa kua.

Ho'ākua noho'ī kāna hana, his deeds are marvelous. Ho'ākua ke kai, a dangerous sea (PPN'atua.) 2. (Cap.) n. God (Christian).

**akua hulu:** n. Feather image (li 39)

**alanui o Kamehameha:** Uhi pattern: road to Kamehameha.

**ali'i:** nvs. Chief, chiefess, officer, ruler, monarch, peer, headman, noble, aristocrat, king, queen, commander; royal, regal, aristocratic, kingly; to rule or act as a chief, govern, reign; to become a chief. Fig., kind (see na'au ali'i, 'ōpū ali'i). Ali'i nui, high chief. Kāna ali'i, his chief (controlled directly or raised by him). Kona ali'i, his hereditary chief; his chieftainship. Ali'i kū'oko'a, independent chief, autocrat. Ua lilo ia i ali'i no Kaua'i ia wā, ā malalo mai ona nā kānaka o Kaua'i, pēlā i ali'i ai 'o Makali'i (FS 233), he then became chief of Kaua'i, with the people of Kaua'i beneath him, thus Makali'i became chief. ho'ā.li'i To make a chief, establish royalty in office; to imitate royalty; to treat as royalty; regal, royal, kingly; to be made an officer, be commissioned. Ua ho'āli'i aku 'oia i kāna kāne, she treats her husband like a king. (PPN 'ariki.)

**ali'i nui:** high chief

**ānuenuē:** Uhi pattern: a scallop like design. 1. nvi. Rainbow. E wai ānuenuē ana nā wāwae o nā koa, the feet of the soldiers form a rainbow pattern [of marching soldiers in colored uniforms]. (PNP nuanua.) 2. n. Scallop-like design on tapa and tapa beater.

**Ha'o:** Queen of O'ahu

**hahau:** Tattoo hitting stick. 1. nvt. To strike, hit, whip, beat, switch, smite, wield, thrash; to throw down, as a playing card with force; to trump; to play, as a card or kōnane pebble; to insert; whip, lash, stroke; to bat, as a ball; a blow. Hahau ikaika, to lambaste, wallop. Pepa hahau, playing cards. (PPN sasau.)

**hainaka:** n. Handkerchief, napkin (rare). Eng.

**hala:** Plant brushes. 3. n. The pandanus or screw pine (*Pandanus odoratissimus*), native from southern Asia east to Hawai'i, growing at low altitudes, both cultivated and wild. It is a tree with many branches, which are tipped with spiral tufts of long narrow, spine-edged leaves; its base is supported by a clump of slanting aerial roots. The pineapple-shaped fruits are borne on female trees whereas the spikes of fragrant, pollenbearing flowers are borne separately on male trees. Many uses: leaves (lau hala) for mats, baskets, hats; the yellow to red fruit sections for leis, brushes; male flowers to scent tapa, their leaflike bracts to plait mats (see hīnano). (Neal 51.) The aerial root (uleule) tip is a good source of vitamin B and cooked in ti leaves was used medicinally, although unpleasant tasting. The tree is called pū hala. The hala lei is much liked today but formerly was not worn on important ventures because hala also means failure. For the same reason some persons will not compose songs about hala. Types of hala are listed below. Pineapples are hala plus qualifier. See ex., pō 2. Puna paia 'ala i ka hala, Puna, its walls fragrant with pandanus [fragrant flowers were placed indoors in house thatching and under mats]. (PPN fara.)

**halake'a:** Interior posts. n. Temporary support or prop in the middle of the house ridgepole.

**hālau:** Type of hale. 1. n. Long house, as for canoes or hula instruction; meeting house. Malu hālau loa, shade of the long house; fig., shade of trees. Ā ua nui Hilo, hālau lani i ke ao (chant), and Hilo rains so much, a heavenly shed in the clouds. (PNP folau).

**hale:** 1. nvi. House, building, institution, lodge, station, hall; to have a house. Many types of hale are listed below. Ua hale mākou, we have a house. Hale i luna a i lalo, a two-story house. ho'o.hale To lodge in a house; to receive in a house. E ho'ohale 'ia aku, he makamaka ola, extend the hospitality of the house, [he is] a friend who extends appreciation. (PPN fale.)

**hale 'aina:** n. Restaurant, cafe, eating house, boardinghouse; in ancient times, the eating house for women.

**hale hālāwai:** n. Meetinghouse, synagogue.

**hale hoahu:** n. Warehouse, storehouse, shed.

**hale kū'ai:** n. Store, shop. Eating house.

**hale kuku:** n. House for beating tapa

**hale moe:** n. Sleeping house

**hale mua:** n. Men's eating house

**hale noa:** n. House without taboo, where the family mingled and slept.

**hale noho:** n. Dwelling house, residence.

**hale papa'a:** n. Storehouse (Kin. 41.56). Lit., secure house. ho'o.hale papa'a To convert into a storehouse; to store in a house; to serve as a storehouse.

**hale pea:** n. Menstrual house.

**hale pili:** n. House thatched with pili grass.

**hale pule:** n. Church, chapel. Lit., prayer house.

**hale wa'a:** n. Canoe house

**Hāloa:** n. A son of Wākea. The first Hawaiian person.

**hana ka 'ahu 'ula:** Making feather cape

**hana ke kapa:** Making kapa

**hau:** 1. n. A lowland tree (*Hibiscus tiliaceus*), found in many warm countries, some spreading horizontally over the ground forming impenetrable thickets, and some trained on trellises. The leaves are rounded and heart-shaped, the flowers cup-shaped, with five large petals that change through the day from yellow to dull-red. Formerly the light, tough wood served for outriggers of canoes, the bast for rope, the sap and flowers for medicine. (Neal 559–60.) Of the two varieties of hau, a rare erect one (hau oheohe) was grown for its bast and a creeping one (hau) was planted for wind-breaks. (HP 196.) See 'au hau. (PPN fau.)

**Hawai'i:** nvs. Hawai'i (both the island and the group of islands); Hawaiian person; Hawaiian. Elsewhere in Polynesia, Hawai'i or a cognate is the name of the underworld or of the ancestral home, but in Hawai'i the name has no meaning; see Pukui, Elbert, and Mookini, 1974. See saying, kuauli. ho'o.hawai'i To act as a Hawaiian; to ape or imitate Hawaiians. (PPN Sawaiki.)

**he'e:** form of an 'aumakua.1. n. Octopus (*Polypus* sp.), commonly known as squid. He'e mahola, octopus given for sickness caused by sorcery, as octopus (he'e) would cause the sickness to flee (he'e) or spread out (mahola). (PPN feke.)

**hei:** 2. nvi. String figure, cat's cradle; to make such. Many kinds are listed by Dickey.

**heiau:** n. Pre-Christian place of worship, shrine; some heiau were elaborately constructed stone platforms, others simple earth terraces. Many are preserved today. Several types are listed below. In Isa. 15.2, heiau is a high place of worship. See hei 5. Hale heiau, house of worship. (PPN fai.)

**heiau po'o kanaka:** Heiau where human sacrifices were offered. (FS 159.)

**hekikili:** Form of an 'aumakua.1. nvi. Thunder; to thunder. Fig., passion, rage. See hakikili. Ku'i ka hekili, thunder roars. Ua hekili, rain consisting of big drops, so called because of the noise of their falling. Nā hekili o ke kuko 'ino, passions of lust. Ke hekili mai nei ke Akua nani (Hal. 29.3), the God of glory thunders. ho'o.hekili To cause thunder; threatening thunder storm, Ho 'ohekili maila o' lēhova, Jehovah thunders. (PNP fatitili.)

**Hikani:** Uhi pattern: brand on the forehead of the kauwā and also the mark of the seducer of the chief's wife

**Hilo:** Hilo, the city and district (also the name of a famous Polynesian navigator and of the first night of the new moon), perhaps mentioned in chant and saying more than any other single place in the Hawaiian Islands: see 'A'ala honua, hālau 1, holowa'a 1, ka'ele 1, kinai 2, laumeke, 'ōiwi 2, po'i 1, umauma, rain,

storm, UL 104. All of these refer to rain and its rich symbolism. Lehua blossoms and Chief Hanakahi are also associated with Hilo. Exhausted by the many streams of Hilo, many hills, countless descents ... cliffs of windward the upright cliffs of Hilo (PH 32), pau ke aho i ke kahawai lau o Hilo, he lau ka pu'u, he mano ka ihona ... he pali no Ko'olau ka Hilo pali kū (of trial and hardship). Voice with many tears of Hilo (FS 225), ka leo waimaka nui o Hilo.

**ho'oki:** Kapa beaters with patterned faces

**ho'olu'u:** Kapa dyeing method where kapa is immersed in a container of liquid dye

**ho'onani:** To beautify, adorn, trim, decorate, glorify, honor, exalt, praise, adore; decorative, glorifying. Nāmea ho'onani, decorations of any kind. Ho'onani kākou iā Ia (hymn), let us adore Him. Mea ho'onani kino, any bodily adornment, as jewelry.

**ho'opa'i:** Kapa beating technique where one gradually switches to beaters with smaller and smaller groves and ridges

**hoahoa:** Redup. of hoa 3; a rounded tapa beater (also called hohoa, pepehi); rapid beating, striking, as of tapa or pandanus leaves; a stick beater for washing clothes. Fig., bad-tempered. Keu ho'i kēia a ke kanaka hoahoa, this person certainly beats the beater [in rage]. ho'o.hoa.hoa Caus/sim.

**hoaka:** the ali'i's divine ancestry. 1. n. Crescent; arch, as over door of ancient house (Kep. 101); crescent-shaped design at base of temple drum; crest, as on a helmet.

**hohoa:** See hoahoa

**hōlei:** Plant dye. 1. n. A small native tree (*Ochrosia compta*) related to the hao (*Rauvolfia*) and closely resembling it, but the leaves thicker, the yellow flowers fragrant, and the twinned fruits yellow and much larger. Formerly, bark and roots yielded a yellow dye for tapa. (Neal 691.) 2. nvt. Tapa dyed with hōlei; to dye thus.

**holo** 8. n. Diagonal pole or strut attached to the inner side of the roof framework and extending obliquely from the upper end of a rafter at one corner to the lower end of the rafter at the other corner.

**Honolulu:** n. Name of the capital city in the Hawaiian Islands Lit., sheltered bay. (For PPN see Hono- and lulu.)

**honu:** form of an 'aumakua. 1. n. General name for turtle and tortoise, as *Chelonia mydas*. Hula honu, an ancient dance imitating the movements of a turtle. Honu ne'epū ka 'āina, the land moves like the turtle [land passes slowly but inexorably from owner to heir]. (PPN fonu.)

**hula:** 1. nvt. The hula, a hula dancer; to dance the hula. For types of hula see below and 'ai ha'a, 'āla'apapa, 'ami, hapa haole, hue, ki'elei, kōlani, kuhi, ku'i, mu'umu'u, 'ōhelo, 'ōlapa, 'ōniu, pahu, pa'i umauma, 'ūlili, UL 275–6. For hulas named for instruments see 'ili'ili, kā'eke'eke, kā lā'au, pahu, pā ipu, papa hehi, pū'ili, 'ulī'ulī. For hulas named for creatures see below or honu, 'ilio, kōlea, manō, pe'epe'emakawalu, pua'a. He hula (For. 5:479), a hula dancer. Kumu hula, hula master or teacher. Hula mai 'oe (song), come to me dancing the hula. Haihai askula nā wāhine apau mamuli ona, me nā mea kuolokani, a me ka hula (Puk. 15.20), all the women followed after her with timbrels and dancing. ho'o.hula To cause someone to dance; to pretend to hula. (PCP (f,s)hula.) 2. nvt. Song or chant used for the hula; to sing or chant for a hula.

**hulu:** 1. n. Feather, quill, plumage. (PPN fulu)

**humu:** Featherwork making technique where feathers are stitched to base. Method used to make humupapa.

**humuniki:** Uhi pattern: squares joined at their points in a row. n. Pattern in pāwehe plaiting, said to consist of a continuous row of red lozenges with their lateral angles touching.

**i'e kuku:** n. Tapa beater

**iho:** Plain uncolored sheet of kapa

**ilio:** Spandrel. 4. Tie beam in a house, brace that holds rafter to crossbeam.

**ipu:** Form of an 'aumakua. 1. n. The bottle gourd (*Lagenaria siceraria*, also *L. vulgaris*), a wide-spreading vine, with large-angled or lobed leaves, white, night blooming flowers, and smooth green and mottled or white fruits varying widely in shape and size. The plant is a native of tropical Asia or Africa. Hawaiians have long used gourds as receptacles, small gourds with thin walls to hold water or food, or for rattles for dances (the ipu has a fine tone, halfway between that of niu and la'amia), larger ones with thin to thick walls to hold tapa and other articles or to serve as drums. Orientals cook and eat the white pulp of green fruits. Hawaiians have distinguished between a kind with bitter pulp, used medicinally, and a kind with nonbitter pulp. (Neal 812–3.) For gourds classified according to shape and color see hōkeo, hue, hulilau, kūkae'iwa, 'olo, po'okanaka. Cf. pule ipu. (PPN ipu.)

**ipu hoehoe:** Same as hoehoe, gourd whistle.

**Ka'ahumanu:** Ali'i who took over the construction of Kawaiaha'o after Kalanimoku

**Ka'ahupahau:** Famous 'aumakua

**Ka'ehuikimanooPu'uloa:** Famous 'aumakua

**kahanu:** Uhi pattern: paired rows of triangles facing each other and touching at the tips.

**kāhili:** 1. nvt. Feather standard, symbolic of royalty; segment of a rainbow standing like a shaft (also a sign of royalty); to brush, sweep, switch (kā- 2 + hili). See uhao and kāhili chants, 'ou'ou 1 and ulua'o'a 2. Pa'a kāhili, kāhili bearer. Kū kāhili, one standing by a kāhili or carrying it. Kāhili pulu, to clear away mulch. Haku 'ia na'e ho'i ka hulu o ka moa i kāhili i mua o nā ali'i; kāhili 'ia na'e ho'i kō kua (FS 101), chicken feathers indeed are woven into a standard for the presence of the chiefs; your back is brushed by the kāhili ho'okā.hili Caus/sim., to brush or fan gently.

**kahua:** Pedestal foundation. n.1. Foundation, base, site, location, ground, background, platform, as of a house; an open place, as for camping or for sports, as for 'ulu maika or hōlua sliding; playground, arena, stand, stage, courtyard course, camp; bed, as of a stream. fig., declaration of principles or policy, doctrine, platform. Ka Monroe kahua kālai 'aina, Monroe doctrine about land division. E hana mua ā pa'a ke kahua, mamua o ke a'o 'ana iā ha'i (saying), work first to make firm the foundation before teaching others. ho'o.kahua To lay a foundation, establish, found; to camp or be stationed, as soldiers; to settle down and develop a place, as homesteaders. Ho'okahua ka no'ono'o, settle down to a task with determination to see it through. Ko'u noho ali'i i ho'okahua 'ia maluna o kahi pu'u' pele, my kingdom established on a lava hill. (PEP ta(f,s)u'a.)

**kahuna:** nvi.1. Priest, sorcerer, magician, wizard, minister, expert in any profession (whether male or female); in the 1845 laws doctors, surgeons, and dentists were called kahuna. See kahu and many examples below; for plural see kāhuna. ho'o.kahuna To cause to be a kahuna or pretend to be one; to ordain or train as a kahuna. (PPN tufunga, PCP t(a, o)funga.)

**kahuna kā uhi:** Expert tattooist

**kākau:** 2. nvt. To tattoo; tattooing. (PPN tatau, PCP taatau.)

**kākau ka uhi:** marking tattoo

**Kalanimoku:** Ali'i who was determined to build the first church out of stone. He played a key role in the creation of Kawaiaha'o but eventually turned the project over to Ka'ahumanu.

**kalapau:** End collar beam, gable end tie.

**kalo:** 1. n. Taro (*Colocasia esculenta*), a kind of aroid cultivated since ancient times for food, spreading widely from the tropics of the Old World. In Hawai'i, taro has been the staple from earliest times to the present, and here its culture developed greatly, including more than 300 forms. All parts of the plant are eaten, its starchy root principally as poi, and its leaves as lū'au. It is a perennial herb consisting of a cluster of long-stemmed, heart-shaped leaves rising 30 cm. or more from underground tubers or corms. (Neal



157–60.) Specifically, kalo is the name of the first taro growing from the planted stalk; names of generations as listed for Hawai‘i Island (Kep. 153) are (1) kalo: see ex., palili, (2) ‘ohā or mu‘u, (3) ‘a‘ae or ‘ae, (4) ‘ōnihinihi, (5) kokole, (6) pahūpahū. Kō mākou kalo kanu o ka ‘āina (saying), our planted taro of the land [proud and affectionate reference to a chief]. (PPN talo.) 2. Same as kalokalo. (PPN talo.)

**Kamāmalu:** Ali‘i and wife to Kamehameha II

**kamani:** 1. n. A large tree (*Calophyllum inophyllum*), at home on shores of the Indian and western Pacific Oceans, with shiny, oblong leaves to 20 cm long, white flowers much like orange blossoms, and globose green fruits about 2.5 cm in diameter. The wood is hard and was formerly made into calabashes. (Neal 585–6.) Also kamanu, tamanu. (PPN tamanu.) 2. vt. Smooth, shiny, polished, as of kamani wood. Kamani ke po‘o, baldheaded, ho‘o.kamani To act the hypocrite (Mat. 15.7); to deal falsely (Oihk. 19.11), to disguise oneself (1 Nal. 14.2), to pretend, be insecure; hypocrite; sham. Ho‘okamani ‘ole, honestly, unfeigned.

**Kamehameha:** Also known as Kamehameha the Great. He unified the Hawaiian islands and became the first king of Hawai‘i.

**Kamehameha II:** Successor to Kamehameha the Great. Also known as Liholiho.

**Kamehameha III:** Successor to Kamehameha II. Also known as Kauikeaouli.

**Kamehameha IV:** Successor to Kamehameha III. Also known as Alexander Liholiho.

**Kamehameha V:** Successor to Kamehameha IV. Also known as Lot Kapuāiwa.

**Kamohoali‘i:** Famous ‘aumakua

**kanaka:** 1. nvs. Human being, man, person, individual, party, mankind, population; subject, as of a chief; laborer, servant, helper; attendant or retainer in a family (often a term of affection or pride); human sacrifice (FS 111); physique; human, manly, pregnant, inhabited; Hawaiian; private individual or party, as distinguished from the government. (Singular; cf. the plural, kānaka). Ko‘u kanaka, my helper, servant, etc. Ka‘u kanaka, my man selected for a purpose. Kanaka nō! A real man! Well done! People have come. Mahalo ‘ia ke kāne i ke kanaka maika‘i (FS 205), the man was admired for his handsome physique. He kanaka maoli, a true human, a mortal. I wawā ‘ia nō he hale kanaka, na wai e wawā ka hale kanaka ‘ole? (name song for Ka‘ahu-manu), the inhabited house sounds with voices, who would talk loud in an uninhabited house? ho‘o.kanaka Manly, human, courageous; to become a servant or helper; to assume human shape, as a child in the womb. See ho‘okanaka makua. E ho‘okanaka, be a man. E ho‘okanaka ‘oukou, ‘a‘ole e ho‘onāwaliwali kō ‘oukou mau lima (2 Oihn. 15.7), be strong, let your hands not be weak. (PPN tangata). Plural (kānaka)

**kanaka maoli:** Indigenous person

**Kāne:** One of the three major Hawaiian gods. God of life and creation.

**kaona:** 1. n. Hidden meaning, as in Hawaiian poetry; concealed reference, as to a person, thing, or place; words with double meanings that might bring good or bad fortune. Kaona ho‘o‘ino‘ino, pejorative innuendo. No wai ke kaona o kēlā mele? Who is being referred to in veiled language in that song?

**kapa:** 1. n. Tapa, as made from wauke or māmaki bark; formerly clothes of any kind or bedclothes; quilt (various kinds are listed below). ‘Elua kāua i ke kapa ho‘okahi (PH xiii), two of us in a single tapa [marriage]. (PCP tapa.)

**kapa moe:** n. Blanket, quilt, bedspread (general name); sleeping tapa.

**kapu:** 1. nvs. Taboo, prohibition; special privilege or exemption from ordinary taboo; sacredness; prohibited, forbidden; sacred, holy, consecrated; no trespassing, keep out. ho‘o.kapu To make taboo, prohibit, sanctify consecrate, forbid. (PPN tapu.)

**kapua‘i koloa:** Uhi pattern: resembling duck tracks. 1. Sole of the foot, footprint, footstep, tread, track; foot in measurement; paw of an animal. Hele mai, ē Kāne, he kapua‘i akua, he kapua‘i kanaka (ancient prayer), come, O Kāne, walk as a god, walk as a man. (PCP tapuwae.) 2. n. Hawaiian duck (*Anas wyvilliana*). Also

koloa maoli, native koloa, to distinguish it from migratory or introduced ducks, also called koloa. Formerly on all main islands except Lā-naʻi and Ka-hoʻolawe; in 1976 common only on Kauaʻi; birds raised in captivity and released have been seen on Oʻahu and Hawaiʻi; considered endangered in 1978. Koloa birds protected a legendary blind giant, Ima-i-ka-lani, and quacked to warn him from which side he might expect an attack (FS 169). (PPN toloa.)

**kauhale:** loc.n. Group of houses comprising a Hawaiian home, formerly consisting of men's eating house, women's eating house, sleeping house, cook-house, canoe house, etc. Term was later used even if the home included but a single house, and is sometimes used for hamlet or settlement. It is used without an article. (Gram. 8.6.) Lit., plural house. E hoʻi kākou i kauhale, let's go home. Kanaka hele i kauhale, a person who goes from house to house; to gad.

**kauhuhu:** n.1. House main ridgepole. (PPN taʻofufu.)

**kauiā:** n.1. A native tree in the buckthorn family (*Alphitonia ponderosa*), found on the six main Hawaiian islands, with alternating leaves, oblong to narrow and woolly below; its hard wood was used for spears and mallets. (Neal 541.) Its wood was one of three kinds from trees on Mauna Loa, Molokaʻi, that were rumored to be poisonous from that location alone, and were used in black magic. The three trees were called kālai pāhoa; the others were ʻohe and nōi. 2. A native tree in the buckthorn family (*Colubrina oppositifolia*), found only on Oʻahu and Hawaiʻi, with opposite leaves, ovate and to 15 cm long. Its hard wood was valued for spears and tools, and was not reputed to be poisonous. (Neal 541.) Called oʻa on Maui. Cf. ʻānapanapa.

**kaula kākau:** Kapa decorating technique where one snaps a dye-soaked cord on kapa

**kauwā:** n. Outcast, pariah, slave, untouchable, menial; a caste which lived apart and was drawn on for human sacrifices (these traditional meanings carried great opprobrium). Later it was used in the Bible and in formal correspondence to translate servant. Lesser chiefs who served higher chiefs were called kauā maoli (see alii poʻe kauā). See haʻalele loa 2, lauʻi pekepeke, makawela, and below for insulting names for kauā, and pejorative -a and Malo 68–72. Kauā ʻai noa, kauā who eats without observation of eating taboos. Kauā kuapaʻa, hard-backed outcast. Kauā make loa ʻoe! You are an outcast to be killed! I'll kill you. Kauā a ke Akua, servant of God. ʻO wau kāu kauā, I am, your servant [signature to a letter]. hoʻo.kauā To burden with work, make a servant of, enslave; to act as servant or outcast.

**Kawaiahaʻo:** First Christian church in Hawaiʻi

**Kāwelu:** 1. n. A wind-blown grass (*Eragrostis variabilis*), famous in songs of Nuʻu-anu pali; E. niuhauensis on Niʻihau. Also kalamālō and ʻemoloa. (Neal 64.) See song, kehakeha. 3. n. A seaweed, perhaps *Wrangelia penicillata*, which resembles the flowering head of *Eragrostis variabilis*. 4. n. A type of house thatching.

**kī:** 1. n. Ti, a woody plant (*Cordyline terminalis*) in the lily family, native to tropical Asia and Australia. It consists of a branched or unbranched, slender, ringed stem, ending in a cluster of narrow-oblong, leaves 30 to 60 cm long, from among which at times rises a large panicle of small, light-colored flowers. The leaves were put to many uses by the Hawaiians, as for house thatch, food wrappers, hula skirts, sandals; the thick, sweet roots were baked for food or distilled for brandy. (Neal 203–4.) Besides green-leaved tis, which rarely fruit, many ornamental varieties are grown in gardens, having leaves wide to narrow, large to small, the colors purple, crimson, scarlet, rust, pink, or green, striped or plain. Red tis may have red flowers and berries. Green ti leaves are still believed to afford protection from spirits and to purify a menstruating woman. (Na\_na\_190–2.) See heʻe 2, hōlua kī. (PPN tii.)

**kiʻi pōhaku:** n. Stone statue; petroglyph.

**kia manu:** n.v. Birdcatcher, birdcatching by gumming; to catch birds by gumming. Ea mai ke alii kia manu, ua wehi i ka hulu o ka mamo (hula chant for Ka-lā-kaua), the birdcatching chief arises, adorned with the feathers of the mamo.

**kiawe:** 1. n. Algaroba tree (*Prosopis pallida*), a legume from Peru, first planted in 1828 in Hawaiʻi, where, in dry areas, it has become one of the commonest and most useful trees (Neal 413–4.)

**Kihawahine:** Famous 'aumakua

**Kihanuilulumoku:** Famous 'aumakua

**kīhei:** nvt. Shawl, cape, afghan; cloak of makaloa matting; rectangular tapa garment worn over one shoulder and tied in a knot; bed covering; to wear a kīhei. He kīhei loloa, a long kīhei [said of a gadabout].

**kikiko:** Uhi pattern: tattoo with dots and spots. vt. Spotted, dotted, mottled, spattered; to make a dot; to print; to tattoo with dots and spots. Ua kikiko 'ia ku'ū lole, my dress is spotted, spattered [as with ink].

**kiko:** Uhi pattern: tattoo with dots on the forehead. 1. nvt. Dot, point, spot, speck of any kind; section of a story; cock or trigger of a gun (see ex., ala 2); punctuation mark; dot in music indicating time added to a note, also to repeat; dotted, speckled, spotted; to dot, mark, peck, hatch; to pick up food, as chickens; to injure fruit, as by a fruit fly; tattooed with dots on the forehead. Ke a'ō 'ana i ke kau 'ana i nā kiko, instruction in the placing of punctuation marks. ho'ō.kiko To hatch. (PCP titō.)

**kilohana:** 1. nvs. Name of the outside, decorated sheet of tapa in the ku'inakapa, bed coverings; the four inner layers were white, contrasting with the decorated kilohana. Hence extended meanings: best, superior, excellent. He ali'i ke aloha, he kilohana e pa'a ai (saying), love is like a chief, the best prize to hold fast to.

**kō:** 1. n. Sugar cane (*Saccharum officinarum*), a large unbranched grass brought to Hawai'i by early Polynesians as a source of sugar and fiber. The thick stems are full of sweet juicy pulp. In time, many different kinds of cane were produced, with many different attributes and names. Cane yields one of the most valuable plant products known. For commercial purposes the yield has been increased by hybridizing with such success that the sugar industry was for many years the largest industry in Hawai'i. (Neal 77–9.) For. 5:582–9 lists types of kō, all are listed in the Dictionary except kō malolo (also known as kō puhala and kō 'ailolo). Cf. kea 3. He 'oi kēlā 'o ke kanaka huhū ... 'a'ohē pū kō momona iāia (For. 5:209), he's a very angry man ... no clump of sugar cane will sweeten him up [i.e., you can't mollify his anger]. Kō 'eli lima a 'o Hālālī'i, hand-dug sugar cane of Hālālī'i [famous in songs descriptive of Ni'ihau; its stalks grew in sand with only the leaves protruding]. (PPN toro, possibly PEP toa, PCP too.)

**ko'eau:** Uhi pattern: moving worm (gently waving parallel lines) n. Design on a tapa beater or on tapa consisting of gently waving, delicate parallel lines (the waves are smaller and less jagged than those of the hā'ao). Cf. pū'ili.

**ko'o:** 1. nvt. Brace, support, wand, prop, helper; small stalks to which feathers on large kāhili, standards, are tied, and which are attached to the main pole; pole as used in pushing a canoe; sprit of a canoe's sail; stick fastened across a small fish net near the meeting of the sticks (kuku) supporting the net; to pole, push with a pole, prop; to uphold (Isa. 63.5). Cf. kāko'o, kaniko'o. ho'ō.ko'o Prop with a pole, as a heavily laden banana plant, or a house to keep it from falling down; to pole, as a canoe.(PPN toko.)

**koa:** 3. n. The largest of native forest trees (*Acacia koa*), with light-gray bark, crescent-shaped leaves, and white flowers in small, round heads. A legume with fine, red wood, a valuable lumber tree, formerly used for canoes, surfboards, calabashes, now for furniture and ukuleles. A small koa was sometimes added to the hula altar to Laka, goddess of the hula, to make the dancer fearless. (Neal 408–11.) The name koa may be qualified by the terms kā, kū ma kua, kū mauna. E ola koa, live like a koa tree [i.e. long]. (PPN toa.)

**koa'e:** Uhi pattern: bird pattern. 1. The tropic or boatswain bird, particularly the white-tailed tropic bird (*Phaethon lepturus dorotheae*), which inhabits cliffs of the high islands. The red-tailed tropic bird (*P. rubicauda rothschildi*) is koa'e 'ula; the white is koa'e kea. Ka pali lele koa'e, cliff [where] tropic birds fly. (PPN tawake.)

**kōlea:** 4. n. Native species of trees and shrubs (*Myrsine* [*Rapanea*, *Suttonia*]) with oval to narrow leaves more or less crowded at branch tips, small flowers, and small round fruits among or below the leaves. Uses: red sap and charcoal from the wood to dye tapa, wood for houses, logs for beating tapa. (Neal 664.)

**kōnane:** Uhi pattern: checkerboard pattern. 2. nvi. Ancient game resembling checkers, played with pebbles placed in even lines on a stone or wood board called papa kōnane; to play kōnane. Cf. nane, riddle; mū, papamū. 3. n. Tapa-beater design.

**kou:** 1. n. A tree found on shores from East Africa to Polynesia (*Cordia subcordata*), with large, ovate leaves, and orange, tubular flowers 2.5 to 5 cm in diameter, borne in short-stemmed clusters. The beautiful wood, soft but lasting, was valuable to the early Hawaiians and was used for cups, dishes, and calabashes. (Neal 714–5.) (PPN tou.)

**Kū:** One of the three major Hawaiian gods. God of governance and welfare.

**kua:** 2. nvt. To hew, chop, chip, hack, dub, strike, cut out; to fell, strike down, as an image (Oihk. 26:30); anvil, as of a blacksmith or for beating tapa; house used for beating tapa. See ex. ‘auhau 3. n. Beam, rafter.

**kua’iole:** n. Upper ridgepole of a house above the lower ridgepole (kauhuhu).

**kua’ula:** n. Ribbed or grooved tapa, as made with a grooved board.

**kualohia:** 2. n. Reported to be a kind of grass used in thatching.

**kuene hale:** Knowledge of house building, one skilled in house building; house waiter.

**kuhanu:** See kahanu

**kūkaenēnē:** n. A native trailing, woody plant (*Coprosma ernodeoides*), with narrow, tiny leaves and black, berry-like fruits. (Neal 803) Lit., food of the nēnē goose. Also ‘aiakanēnē, leponēnē, pūnēnē.

**Kukauakahi:** Famous ‘aumakua

**kukui:** n.1. Candlenut tree (*Aleurites moluccana*), a large tree in the spurge family bearing nuts containing white, oily kernels which were formerly used for lights; hence the tree is a symbol of enlightenment. The nuts are still cooked for a relish (‘inamona). The soft wood was used for canoes, and gum from the bark for painting tapa; black dye was obtained from nut coats and from roots, (Nuts were chewed and spat into the sea by men fishing with nets for parrot fish (kākā uhu) in order to calm the sea (FS 38–9): see ex., pili 1). Polished nuts are strung in leis; the silvery leaves and small white flowers are strung in leis as representative of Moloka‘i, as designated in 1923 by the Territorial legislature. The kukui was named the official emblem for the State of Hawaii in 1959 because of its many uses and its symbolic value. Kukui is one of the plant forms of Kama-pua‘a that comes to help him (FS 215). Called kuikui on Ni‘ihau. (Neal 504–7.) See lei kukui. He ali‘i no ka malu kukui, a chief of the candlenut shade [chief of uncertain genealogy].

**kukuna:** n. Ray, as of the sun; radius of a circle; spoke of a wheel; antenna of a lobster; spike of hā‘uke‘uke, a sea urchin; feeler of any creature; pistil of a flower; gate, door, or gable post; end post of a Hawaiian house other than the main post and the corner posts (Malo 119). Kukuna X, x-ray.

**kukuna li‘i:** Upper wall post

**kuleana:** nvt. Right, privilege, concern, responsibility, title, business, property, estate, portion, jurisdiction, authority, liability, interest, claim, ownership, tenure, affair, province; reason, cause, function, justification; small piece of property, as within an ahupua‘a; blood relative through whom a relationship to less close relatives is traced, as to in-laws. Cf. ‘ākuleana. Kuleana lako, supplies, equipment. Kuleana pule, necessary prayers, prayer responsibilities. Ke kuleana o ke kanaka, man's rights and privileges, human rights. Kuleana wai, water rights. Ka ho‘olimalima kuleana kū‘ai, rental with the right to buy. Kō ha‘i kuleana, other persons' affairs or business. Kuleana ala hele e hiki aku ai, right of way of access. Make wale nō lākou me ka hewa ‘ole, a me ke kuleana ‘ole no ka make (Kep. 147), they were killed without having done wrong, and without justification for death. ‘O Hina kō mākou kuleana, ‘a‘ole ‘o ke kāne, we are related through Hina, not through the husband. Kuleana hapakolu o ka wahine kāne make, dower right of widow to a third of an estate. Kuleana o ke kāne male, estate by courtesy, of a husband's right in the estate of his wife. ‘Elua lo‘i ‘ai, ua kuleana ‘ia e a‘u, two taro patches claimed as kuleana by me [will]. ho‘o.kule.ana To entitle, give right to possess; to give a responsibility. Palapala ho‘okuleana, patent, copyright.

**kumu:** 2. Teacher, tutor, manual, primer, model, pattern. Kumu alaka'i, guide, model, example. Ka'u kumu, my teacher. Kumu ho'ohālike, pattern, example, model. Kumu hula, hula teacher. Kumu ku'i, boxing teacher. Kumu kula, school teacher. Kumu leo mele, song book. Kumu mua, first primer.

**Kumulipo:** n. Origin, genesis, source of life, mystery; name of the Hawaiian creation chant (see Beckwith 1951 and Johnson 1981); written kumu uli po in Malo text, Chapter 1, section 11.

**Kupono:** Gable ridge pole

**Kupuna:** n. 1. Grandparent, ancestor, relative or close friend of the grandparent's generation, grandaunt, granduncle. ho'o.kupuna To take a person as a grandparent or grandaunt or granduncle because of affection; an adopted grandparent; to act as a grandparent. (PPN tupuna.) 2. Starting point, source; growing. Plural (kūpuna).

**kuwā:** 2. n. Prayer for special events, as trimming grass from over the door of a grass house, or completion of a new canoe or net. (Malo 184.) See 'eleao 3.

**lā'au:** Form of an 'aumakua. 1. nvs. Tree, plant, wood, timber, forest, stick, pole, rod, splinter, thicket, club; blow or stroke of a club; strength, rigidness, hardness; male erection; to have formed mature wood, as of a seedling; wooden, woody; stiff, as wood. Kumulā'au, tree. Ua hele ke kino ā lā'au, the body is stiff in rigor mortis. ho'o.lā'au To form mature wood, as of a shrub; to gather in trees, as birds. (PPN ra'akau.)

**la'au lapa'au:** n. Medicine. Lit., curing medicine.

**lama:** All endemic kinds of ebony (Diospyros, synonym Maba), hardwood trees with small flowers and fruits. (Neal 674.) Also ēlama. (PNP lama.)

**lānai:** n. Porch, veranda, balcony, booth, shed; temporary roofed construction with open sides near a house. Lānai kaupoko 'ole, terrace.

**lanalana:** Form of an 'aumakua. 3. n. Spider. (Isa. 59.5.) Also lalana, nananana.

**lauhala:** Leaf of the hala tree. See hala

**lei:** n. Lei, garland, wreath; necklace of flowers, leaves, shells, ivory, feathers, or paper, given as a symbol of affection; beads; any ornament worn around the head or about the neck; to wear a lei; special song presenting a lei; crown; ring around a drake's neck; yoke, as for joining draft animals, especially oxen. Fig., a beloved child, wife, husband, sweetheart, younger sibling or child, so called because a beloved child was carried on the shoulders, with its legs draped down on both sides of the bearer like a lei. Cf. lei palaoa. Kāna lei, his lei (to give away or sell). Kona lei, his lei (to wear). Leilani (name), royal child, heavenly lei. 'Uhene ahahana ka'u lei na'u ia (song), oh joy, oh boy, she's my darling. ho'o.lei To put a lei on oneself or on someone else; to crown. (PPN lei.)

**lei hala:** Uhi pattern: a design like blunted spear points connected to base point. n. Lei made principally or solely of pandanus keys, sometimes considered bad luck because hala, pandanus, also means to pass away, to fail.

**lei humupapa:** Feather hatband

**li'u** 2. vs. Well-salted, salty, seasoned. 3. vs. Deep, profound, as of skill or knowledge. Cf. kuli'u, lili'u, li'ua. Li'u ka 'ike i ke kālai wa'a, he's skilled in canoe carving. Li'u ka na'auao i loko ona, wisdom within him is profound.

**Liholiho:** Successor to Kamehameha the Great. Also known as Kamehameha II.

**lohelau:** 1. n. Wall and gable plates in house.

**lohelau alo:** Front plate

**lohelau kua:** Back plate

**loli:** Form of an 'aumakua. 2. n. Sea slug, sea cucumber, beche-de-mer, trepang (*Holothuria* spp.); for some people an 'aumakua. See kūkaeloli and saying, 'īloli. (PPN loli.)

**Lono:** One of the three major Hawaiian gods. God of fertility and counter balance of Kū.

**luakini:** nvi. Temple, church, cathedral, tabernacle; large heiau where ruling chiefs prayed and human sacrifices were offered; to perform temple work (For. 6:48).

**ma'aloa:** See 'oloa

**ma'o:** Plant dye. 1. vs. Green. Cf. mama'o, ma'oma'o, 'ōma'oma'o. 2. n. The native cotton (*Gossypium sandvicense*), a shrub in the hibiscus family, bearing yellow flowers and seed cases containing brown cotton. (Neal 566.) Also huluhulu. Cf. pulupulu haole. 3. n. The hoary abutilon (*Abutilon incanum*), a small native, velvety shrub, in the hibiscus family, with small heartshaped leaves, small pink and red flowers, and small dry fruits. (Neal 550.) 4. n. The hairy abutilon (*Abutilon grandifolium*), a weedy, hairy, South American shrub, with large, broad leaves, orange, 'ilima-like flowers, and ten-parted, black, dry fruits. When green and soft, these fruits are used in making 'ilima leis, one for each end of the lei. (Neal 550.)

**mā'oi'oi:** Uhi pattern: zigzag. 1. Redup. of mā'oi. 2. vs. Uneven, notched, zigzag.

**mahi'ole:** nvt. Feather helmet, helmet; to wear a helmet. 'Oki mahiole, a haircut with crest of hair left down the middle of the head.

**maile:** n.1. A native twining shrub, *Alyxia olivaeformis*. St. John, 1975a, described four forms of maile based on leaf size and shape. They are believed to be sisters with human and plant forms and are listed below. They were considered minor goddesses of the hula. Maile kaluhea is also believed by some to be a sister. See moekahi, māpu, palai 1, and chants, līhau and 'ū 1. The maile vine has shiny fragrant leaves and is used for decorations and leis, especially on important occasions. It is a member of the periwinkle family. Laka, goddess of the hula, was invoked as the goddess of the maile, which was one of five standard plants used in her altar. (Neal 690–1.) (PPN maile.)

**maka uhi:** n.1. Face tattooed solid, without patterning. 2. Tattooed eyelid, as a humiliating sign of a warrior's defeat. 3. Downcast eyes. Ke-au-hou maka uhi. Ke-au-hou with downcast eyes [said of the people at Ke-au-hou who did not welcome visitors because of chiefly taboos].

**maka'āinana:** n. Commoner, populace, people in general; citizen, subject. Cf. lunamaka 'āinana. Lit., people that attend the land. (PNP matakainanga.)

**makahiki:** 2. n. Ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and taboo on war; this is now replaced by Aloha Week.

**makaloa:** n.1. A perennial sedge (*Cyperus laevigatus*), found in or near fresh or salt water in warm countries. From a horizontal, creeping stem rise long, slender unbranched stems, each topped by a small inflorescence. Formerly the plants were valued in Hawai'i for making the fine Ni'ihau mats. (Neal 86.) Also makoloa.

**malo:** n.1. Male's loincloth; chant in praise of a chief's loincloth. Malo 'eka, dirty malo [said of farmers in dry areas]. (PPN malo.)

**māmaki:** n. Small native trees (*Pipturus* spp.) with broad white-backed leaves and white mulberry-like fruit; the bark yielded a fiber valued for a kind of tapa, similar to that made from wauke but coarser. Often misspelled mamake. (Neal 318–9.) Also waimea. See ex., wale 1.

**māmāne:** 1. n. A native leguminous tree (*Sophora chrysophylla*), which thrives at high altitudes, up to the tree line, as on Mauna Kea and Mauna Loa. The leaves are narrow, compound, more or less downy, the flowers commonly yellow, the pods four-winged, yellow-seeded. Hawaiians formerly used the hard wood for spades and sled runners. (Neal 442–3; Kep. 65.) See ex., lau 4, Mālua Kī'i Wai. Uhiuhi lau māmāne, kahi wai o Ka-pāpala, covered with māmāne leaves is the water of Ka-pāpala [any concealing, as of truth (Kel. 139) or scandal; māmāne branches are said to have been tossed in this pool at Kā'ū to make the mud

settle]. Kīkē ka 'alā, uwē ka māmane, rocks crash, the māmane tree weeps [someone weeps when there is a clash].

**mana:** 1. nvs. Supernatural or divine power, mana, miraculous power; a powerful nation, authority; to give mana to, to make powerful; to have mana, power, authority; authorization, privilege; miraculous, divinely powerful, spiritual; possessed of mana, power. Cf. -āmana. Mana makua, parental authority. Leo mana, voice of authority that is obeyed. Mana kia'i, guardian power. Mana loa, great power; almighty. Noho mana, to wield power, occupy a position of power. Ke kumu ... i mana ai ka 'ao'ao ali'i, the reason for giving the chief's side power. E mana ana nō i ke konohiki (Kep. 159), it is the privilege of the landlords. E mana nō ma ka lā 'umi, effective on the tenth day [as a law]. ho'o.mana. a. To place in authority, empower, authorize. He bila e ho'omana ana i ke koho 'ia o nā luna māka'i, a bill authorizing the election of district sheriffs. 'O nā kānāwai i ho'omana hou 'ia, laws re-enacted.

**mana'o:** nvt. Thought, idea, belief, opinion, theory, thesis, intention, meaning, suggestion, mind (Mat. 22.37), desire, want; to think, estimate, anticipate, expect (see ex., lele'oi), suppose, mediate, deem, consider (not the intellectual process of no'ono'o). See mana'o nui. Kau nui ka mana'o, think constantly, concentrate. Eia ko'u mana'o iā'oe (beginning of a letter), this is my thought for you. Ka mea i mana'o 'ia, the one thought of [the intended victim of sorcery]. 'O ka mea i ho'opi'i 'ia e mana'o 'ia nō, 'oia he kanaka maika'i nō, the accused party shall be presumed a good man. ho'o.mana'o To remember, recall, commemorate, reflect deeply on, meditate. See 'ōlelo ho'omana'o. Ho'omana'o aloha, to remember with affection. He ho'omana'o, in memoriam. Mea ho'omana'o, souvenir, keepsake, reminder, memorandum. Kia ho'omana'o, monument, memorial tablet. He mau 'ōlelo ho'omana'o, notes. (PPN manako.)

**manō:** Form of an 'aumakua. n. Shark (general name). Many kinds are listed below. Reef sharks may attain a length of 1.5 m. Fig., a passionate lover. Sharks were 'aumākua to some; they were said to have never harmed and frequently to protect those who fed and petted them. Cf. 'ai ā manō, hula manō, niuhi, pua 1. Manō í'a, ordinary shark. Manō hae, fierce shark or fighter. Manō kanaka, shark thought to be born of a human mother and sired by a shark god, or by a deified person whose spirit possesses a shark or turns into a shark. Manō ihu wa'a, shark traditionally said to rest its head on the outrigger of a canoe, beloved by fishermen and fed; lit., bow shark. Pau pele, pau manō, consumed by volcanic fire, consumed by shark [may I die if I don't keep my pledge]. ho'o.manō To behave as a shark; to eat ravenously; to pursue women ardently. (PNP mangoo.)

**Mānoa:** 2. (Cap.) n. A large Honolulu valley.

**maoli:** 1. vs. Native, indigenous, aborigine, genuine, true, real, actual; very, really, truly. Maika'i maoli, very good indeed. Kanaka maoli, 'ōlelo maoli, Hawaiian native, Hawaiian language [so used in reports of 1852 legislative session]. E puka ai ka makemake maoli o ka mea koho, expressing the free will of the voter. (PPN ma(a)oli.)

**mō'i:** n.1. King, sovereign, monarch, majesty, ruler, queen. (Perhaps related to 'ī, supreme. According to J. F. G. Stokes, the word mō'i, king, is of recent origin and was first in print in 1832.) Temple image (Malo 162); lord of images (Malo 173); according to Kepelino and Kamakau, a rank of chiefs who could succeed to the government but who were of lower rank than chiefs descended from the god Kāne (For. 6:266). See ikū nu'u. The term mō'i was apparently not used in the Fornander legends collected in the 1860s nor in RC 2. Same as 'awa mō'i.

**mo'o:** Form of an 'aumakua. 1. n. Lizard, reptile of any kind, dragon, serpent; water spirit. Mea nānā mo'o (Kanl. 18.10), enchanter. (PPN moko.)

**Mo'oinanea:** Famous 'aumakua

**Mo'okū'auhau:** kik Genealogy. Dic., sp. var. Mo'olelo mo'okū'auhau. Genealogical story.

**mo'olelo:** n.. Story, tale, myth, history, tradition, literature, legend, journal, log, yarn, fable, essay, chronicle, record, article; minutes, as of a meeting. (From mo'o 'ōlelo, succession of talk; all stories were oral, not written.) Puke mo'olelo aupuni, public records. ho'o.mo'o.lelo Caus/sim. (For. 6:523.)

**mo'omo'o:** 1. Same as mo'o 5; strips of wauke bast beaten together from which tapa sheets are to be made (Kam. 76:113). ho'o.mo'o.mo'o To beat raw bast into mo'omo'o.

**mole:** 3. n. Name of the smooth, uncarved side of a tapa beater, as used at the end of the beating to smooth out the cloth.

**mōli:** 2. Any straight line separating designs in tattoo pattern. 3. Bone made into a tattooing needle, hence a tattooing needle.

**nā:** Added to the beginning of words to create plural form

**na'auao:** nvs. Learned, enlightened, intelligent, wise; learning, knowledge, wisdom, science. Lit., daylight mind. Cf. 'imi na'auao. Na'auao 'ike mua, foresight. Ho'omana Na'auao, Christian Science. Ka na'auao loa 'ana, the instruction, education. ho'o.na'au.ao To educate, instruct; educational, instructive, civilized. Ua ho'ona'auao 'ia 'oia, he was educated. Ku'u home ho'ona'auao, my home of learning.

**naio:** 3. The bastard sandal-wood (*Myoporum sandwicense*), a native tree, with hard, dark yellow-green wood, scented like sandal-wood. Leaves are narrow-oblong, pointed, grouped at branch ends; flowers are small, pink or white; fruit, small, white, round. (Neal 791). Cf. 'a'aka.

**nāki'i:** Featherwork making technique where feathers are tied to a netted backing

**nani:** 1. nvs. Beauty, glory, splendor; beautiful, pretty, glorious, splendid. Nani makamae, precious, exquisite. ho'o.nani To beautify, adorn, trim, decorate, glorify, honor, exalt, praise, adore; decorative, glorifying. Nāmea ho'onani, decorations of any kind. Ho'onani kākou iā la (hymn), let us adore Him. Mea ho'onani kino, any bodily adornment, as jewelry. 2. n. Beautiful flower (sometimes followed by -o- + place name: see below. 3. n. Good thing (idiom). He nani nō ia, it's a good thing.

**nānū:** Plant dye. n. Native species of gardenia, shrubs and trees with broad leaves and tubular, white single flowers. (Neal 800.) Also nā'ū. Cf. kiele.

**nao:** 1. nvs. Ripple; ridge, as of twilled cloth or a tapa beater; groove; streak on tapa; grain of wood or stone; thread of a screw; crevice, as in rocks; grooved. See nao-ho'opa'i. Kui nao, screw; lit., nail with thread.

**nene:** Uhi pattern: paired triangles stacked base to point and resembling geese in flight. 2. n. Hawaiian goose (*Nesochen sandwicensis*), protected and rare on Maui and in Hawai'i uplands (down to 40 at one time and about 1,000 in 1978). 3. n. Mat pattern: two vertical rows of triangles, with the bases below, and the apices touching the bases above.

**neneleau:** n. The native Hawaiian sumach (*Rhus sandwicensis*, synonyms *R. semilata* var. *sandwicensis* and *R. chinensis* var. *sandwicensis*) a shrub or small tree, with light, soft, tough wood. (Neal 525–6.) Also neleau.

**niho manō:** Uhi pattern: shark teeth. 1. nvs. Tooth; toothed; nipper, as of an insect; octopus beak; Aristotle's lantern, of a sea urchin; claw, as of crab; tusk; stones set interlocking, as in a wall; biting, of the teeth; cog. See niho-manō. Mai hana wale aku 'oe iā Ke'oi, he niho, don't act indiscriminately toward Ke'oi, he has teeth! [He is dangerous, as in sorcery.] Nā niho o kāna pale kaua (Ioba 15.26), the bosses of his bucklers. Puka ka niho o La'a-kea, La'a-kea is getting his teeth. Ho'onoho niho 'ia, the stones are set [as in a fence]. ho'o.niho To lay stones interlocking; to set stones, as in a fence. (PPN nifo.) 2. n. Tapa or mat patterns, always followed by qualifiers; see below. n. Shark (general name). Many kinds are listed below. Reef sharks may attain a length of 1.5 m. Fig., a passionate lover. Sharks were 'aumākua to some; they were said to have never harmed and frequently to protect those who fed and petted them. Cf. 'ai ā manō, hula manō, niuhi, pua 1. Manō 'ia, ordinary shark. Manō hae, fierce shark or fighter. Manō kanaka, shark thought to be born of a human mother and sired by a shark god, or by a deified person whose spirit possesses a shark or turns into a shark. Manō ihu wa'a, shark traditionally said to rest its head on the outrigger of a canoe, beloved by fishermen and fed; lit., bow shark. Pau pele, pau manō, consumed by volcanic fire, consumed by shark [may I die if I don't keep my pledge]. ho'o.manō To behave as a shark; to eat ravenously; to pursue women ardently. (PNP mango.)



**niho wili hemo:** Uhi pattern: zig zag stripes.

**niu:** 1. n. The coconut (*Cocos nucifera*), a common palm in tropical islands of the Pacific and warm parts of eastern Asia; coconut meat or oil. Hawaiians used all parts of the tree. (Neal 119–21.) Coconut water and coconut cream (the white liquid squeezed from ripe coconuts) were both called wai niu and wai o ka niu. In For. 5:596 niu ā wali was translated ‘milk of the coconut’. Niu moe a Kala-pana, the supine coconut palm of Kala-pana. [Young trees were bent over and made to grow crookedly, in order to commemorate great events; two of such trees were at Kala-pana in 1950]. Ē niu, ē kūlolo, O coconut, O coconut pudding [said of one who talks too much; see niu kūlolo]. (PPN niu.)

**niuhi:** n. Man-eating shark, *Carcharodon carcharias*; any Hawaiian shark longer than 3.5 m is probably a niuhi. Catching niuhi was the game of chiefs; it was a dangerous sport and special techniques were used. Its flesh was taboo to women. See ex., holopapa 2, kāpapa 2. (PPN n(a,e)ufi, PEP niufi.)

**noa:** 1. nvs. Freed of taboo, released from restrictions, profane; freedom. Lā noa, weekday. He ali’i noa au loa, a chief who frees [his people] from taboo for a long time. ho’o.noa To cause to cease, as a taboo; to free from taboo; to repeal, revoke; to adjourn, as a meeting; to prostitute, as one’s daughter (Oihk. 19.29). Ua wehe ‘ākea ‘ia ka noa o nā wahi apau o ke kūlanakauhale, the restrictions on all parts of the city were opened up completely. (PPN noa.)

**noni:** 1. n. The Indian mulberry (*Morinda citrifolia*), a small tree or shrub in the coffee family, a native of Asia, Australia, and islands of the Pacific. Leaves are large, shiny, deep-veined. Many small flowers are borne on round heads, which become pale-yellow unpleasant-tasting fruits. Formerly Hawaiians obtained dyes and medicine from many parts of the tree. (Neal 804.) See kōhi 1, pūhai. (PPN nonu, PCP nono, but Marquesan noni.)

**o’a:** n.1. House rafter; timbers in the side of a ship; sides of a rock wall. (PPN hoka.)

**O’ahu:** n. Name of the most populous of the Hawaiian Islands and the seat of Honolulu. The name has no meaning (see Pukui, Elbert, and Mookini; 1975, 262). See saying kau po’ohiwi, and epithets, O’ahu (English-Hawaiian).

**olonā:** n. A native shrub (*Touchardia latifolia*), with large, ovate, fine-toothed leaves, related to the māmakī. Formerly the bark was valued highly as the source of a strong, durable fiber for fishing nets, for nets (kōkō) to carry containers, and as a base for ti-leaf raincoats and feather capes. See ōpuhe and ex., kaekae 1. (Neal 319–20, Kam. 76:44–7, 52–5.) Cord of ‘olonā fiber; flax (Sol. 31.13), hemp, linen; muscle ligament. sinew (Kol. 2.19). Olonā i hilo ‘ia (Puk. 28.15), fine twirled linen.

**pa’ele:** Uhi pattern: solid black without design. 1. nvt. Negroid, dark, black; to blacken; to tattoo solid black without design; to paint black, as a canoe; to blot. Pa’ele i ka ‘alaea a me ka nānahu (FS 259), paint black with red coloring and charcoal. ho’o.pā.‘ele To blacken, etc.

**pa’ele kulani:** Uhi pattern: solid black kept on only one side of the body.

**pa’i’ula:** 1. n. Tapa made by beating red rags or tapa pieces to form a mixture of white and red (as outer or kilohana sheet for bedcovers). Also welu ‘ula. Cf. moelola.

**pa’u:** 1. Soot, smudge; ink dregs; ink powder; ink used for tattooing made of burned kukui shells; tarcolored excrement as resulting from hemorrhage; sooty. ho’o.pa’u To soil, smudge, make sooty.

**pā’ū:** 1. nvt. Woman’s skirt, sarong; skirt worn by women horseback riders; to wear a pā’ū. Fig., the sea (UL 36). Cf. pā’ū halakā. Pā’ū hula, any kind of dance skirt. Pā’ū lā’ī, ti-leaf skirt. Pā’ū-o-Lu’ukia, ornamental sennit lashing of canoe float to outrigger boom, said to have been named for the chastity belt worn by Lu’ukia (Malo 134, Emerson note.) ho’o.pā.‘ū To put on a pā’ū.

**pa pōhaku:** Vertical post or diagonal post foundation

**paepae:** 1. nvt. A support, prop, stool, pavement, house platform; plate of a house on which the rafters rest; block to keep an outrigger float off the ground; log or wooden horse that supports a seesaw; to support, hold up, sustain; rows. Loina paepae āhua, customs that add prestige; lit., elevated mound

customs. E paepae mai i ka uluna ā ki'eki'e, pile the pillows high. Paepae 'o'opu, old term for a built-up pool for keeping 'o'opu fish. ho'o.pae.pae To build up a paepae (platform) or a taro embankment; to finish a space in quilting. (PPN paepae.)

**pahu:** 1. n. Box, drum, cask, chest, barrel, trunk, tank, case, ship binnacle, collection box, keg, ark, coffin, dresser, bureau, cabinet; bald heads were sometimes ridiculed as drums. Cf. hulipahu, pahu pāpale. Hula pahu (UL 103), dance to drum beat, perhaps formerly called 'ai ha'a. (PPN pasu, PEP pahu.)

**pala'a:** 1. n. The lace fern (*Sphenomeris chinensis* syn. *chusana*), a common wild fern in Hawai'i; also known in other parts of Polynesia and in Asia. Long, slender stems support smooth, ovate, pointed fronds, about 30 cm long, which are subdivided three times. Formerly a brown dye was extracted from the fronds. Also palapala'ā and pā'ū-o-Pala'e. (Neal 15, 16.) 2. n. A tapa of māmaki bark dyed brownish-red with pala'ā fern, of silky quality. 3. vs. Brownish-red.

**Palolo:** City located on the island of O'ahu

**papa:** Layers of the universe. 1. nvs. Flat surface, stratum, plain, reef, layer, level, foundation, story of a building, floor, class, rank, grade, order, table, sheet, plate, shelf (rare), face (of a watch); flat, level; to be a great many. Cf. al'i'i papa, noho papa 1, papa al'i'i. Kui papa, to make overlap on a lei, as feathers. Helu papa, to recite in consecutive order. Ne'e papa, to move in rank. Kūkū papa, to stand in ranks, as an army. ho'o.papa To place in rank or file; to put in order, to put in layers, overlay, as shingles; to make a shelf; to pack neatly. (PPN papa.)

**papa hole:** n. Smooth, planed lumber; grooved board for making ribbed tapa.

**Papahānaumoku:** Elements that are born into the world

**Papahulihonua:** Elements of the earth and sea

**Papahulilani:** Elements of the sky and heavens

**papalua:** Uhi pattern: two rows of triangles connected at their top points. Redup. of pālua; twice as much, very much, doubly, couple. 'Ano pāpālua, dual natured. 'Ike pāpālua, to have the gift of second sight. Kino pāpālua, to have a dual form, as the demigod Kama-pua'a, who could change from man to hog. Miki pāpālua, to eat poi with two fingers. Pāpālua aku ke kolohe, twice as much mischief. Ua pāpālua ka nui o kēlā ma mua o kēia, there's twice as much of this as of that.

**pe'a:** 5. n. Forks or branches made of stalks of feathers bound at their bases with 'ie'ie roots, coming together to form the ko'o (stalk) which in turn is attached to the kāhili staff.

**pili:** 2. n. A grass (*Heteropogon contortus*) known in many warm regions, formerly used for thatching houses in Hawai'i; sometimes added to the hula altar to Laka, for knowledge to pili or cling; thatch (preceded by ke). (Neal 80.) Hale pili, house thatched with pili grass. Lei kōkō 'ula i ke pili (song), red network lei [rainbow] on the pili grass. Hū wale aku nō ka waiwai i ke pili (Kep. 119), the wealth overflowed on the pili grass [of great quantities].

**pinao:** Form of an 'aumakua. 1. n. Dragonfly, (KL. line 290.) Cf. lelepinao. (PCP pingao.)

**pipili:** Featherwork making technique where feathers are glued onto a base. The ideal method for tiny feathers.

**pōhaku:** Form of an 'aumakua. 1. nvs. Rock, stone, mineral, tablet; sinker (see ex., pīkoi 3); thunder; rocky, stony. See haku 3. Mauna Pōhaku, Rocky Mountains. Ke ka'a maila ka pōhaku, the thunder peals. ho'o.pō.haku To harden, as lava; to petrify; hard. Fig., stubborn. (PPN fatu, PCP poo-fatua.) 2. vs. Weighted with rocks, hence stationary, not moving. Pōhaku kaomi moena, a stone weighing down a mat, said of a homebody. Pōhaku 'au wa'a lā le'ale'a i kai nei (chant), fleet of canoes at anchor, happy here at sea. ho'o.pō.haku To remain long in one place; to stay at home. E ho'opōhaku, e noho mālie (chant), stay, rest quietly. 3. n. Type of crab.

**pono:** 1. nvs. Goodness, uprightness, morality, moral qualities, correct or proper procedure, excellence, well-being, prosperity, welfare, benefit, behalf, equity, sake, true condition or nature, duty; moral, fitting, proper, righteous, right, upright, just, virtuous, fair, beneficial, successful, in perfect order, accurate, correct, eased, relieved; should, ought, must, necessary. Pono 'ole, unjust, unrighteous, dishonest, unprincipled, unfair, wrong. No kou pono, in your behalf. Ka pono o ka lehulehu, public welfare. Nā pono lāhui kānaka, human rights. Nā pono o nā wāhine, women's rights. Ka pono kahiko, the old morality or moral system. Pono i ke kānāwai, legal, legality. Pono 'ole ka mana'o, disturbed, worried, upset. Me ka pono, respectfully [complimentary close in letters]. Nā mea e maopopo ai kona pono, proofs in his own favor, his defense. Kōkua no ka pono o ka lehulehu, help for the public welfare. Ka no'ono'o e pono ai kēia hana, the study necessary for this work. Loa'a ka pono i ka lāhui mamuli o ke ahonui o ka 'elele, the people were benefited by the patience of the delegate. E pono iā'oe ke hele, you should go. Pono 'o 'oe ke hele, you should be the one to go. Pono i ke keiki e hele, the child ought to go. Ke ui mai nei 'oe, 'a'ohē a'u pono, when you turn to me, I have no rights. E 'eha nō a e pono, no ka pinana nō i ke kumulā'au, serves you right to be hurt, since you climbed the tree. Aia ka pono, 'o ka pae aku, what is necessary is to reach shore. Pono e pili pa'a loa, inalienable rights. ho'o.pono Righteous, respectable, correct, upright; to behave correctly. Ho'opono 'ole, unjust, dishonest. (PCP pono.) 2. vs. Completely, properly, rightly, well, exactly, carefully, satisfactorily, much (an intensifier). Pau pono, completely finished. Piha pono, completely filled; complete, as a thought; clear. Nānā pono, look or examine carefully. A'o pono 'ia, well-taught. Ua loa'a pono 'o Lawa mā e 'aihue ana, Lawa and others were caught in the act of stealing. I luna pono o ka pu'u (For. 5:61), at the very top of the hill. 3. n. Property, resources, assets, fortune, belongings, equipment, household goods, furniture, gear of any kind, possessions, accessories, necessities. 4. n. Use, purpose, plan. E ku'u haku, pale ka pono! 'A'ohē pono i koe, ho'okahi nō pono 'o ka ho'i wale nō koe o kākou, ka'uka'i aku nei ho'i ka pono i kō kaikuahine muli lā ho'i ... (Laie 419; priest is advising his lord to give up quest of Lā'ie and depend on his sister's help), my lord, set aside the plan; there is no hope left; the only hope is for us to go back and depend on your youngest sister ... Nā 'āpana 'āina aupuni no ka pono home noho wale nō, government land parcels for the purpose of dwelling houses only. 5. n. Hope. See ex., pono 4. Ua pau ka pono a ke kauka, the doctor has lost hope. 6. vs. Careless, informal, improper, any kind of (preceding a stem). Pono 'ai, to eat in any way or anything, take potluck. Pono hana, to work any way that suits one. Pono nō i ka noho, living any old way, shiftless. Pono lōle, any kind of clothes. Mai pono hana 'oe, akā e hana pono, don't work carelessly, but work carefully.

**pou hana:** Ridge post

**pou kaha:** See pou kukuna

**pou kanu:** Buried post

**pou kihi:** n. Corner post.

**pou kukuna:** Wall post. n. Gable post. See kukuna.

**pouomanu:** Center post. n. House post; post designating place of human sacrifice, said to be named for an ancient deity.

**puakala:** Uhi pattern: triangles in a row, bases and tips touching.

**Puhala:** Leaves of the hala tree. Also referred to as lauhala. See hala

**puka makani:** n. Opening for ventilation, window (1 Sam. 19.12); anus. Lit., wind hole.

**pūlo'ulo'u:** 2. n. A tapa-covered ball on a stick (pahu) carried before a chief as insignia of taboo.

**Punahou:** place name in early Hawai'i

**pueo:** Form of an 'aumakua. 1. n. Hawaiian short-eared owl (*Asio flammeus sandwichensis*), regarded often as a benevolent 'aumakua (HM 124). Keiki a ka pueo, child of an owl [one whose father is not known]. 7. n. House lashing. (Kam. 76:97.)

**Pueokahi:** Famous 'aumakua

**uhi:** 1. nvt. Covering, cover, veil, film, lid, solid tattooing, tent (Puk 26.12); to cover, spread over, engulf, conceal, overwhelm; to don, as a feather cloak. Fig., to deceive, hide the truth. Kākau uhi, to tattoo solidly. Uhi mai ka lani pō, the night sky spreads forth [ignorance]. Ua uhi 'ia kō lāua mau mana'o i ke aloha (For. 4:67), their thoughts were overwhelmed with love. Uhi i ka moe, to make a bed. ho'o.uhi Caus/sim. (PPN 'ufi.)

**uhiuhi:** 2. n. An endemic legume (Mezoneuron kauaiense), a tree with pink or red flowers and thin, broad, winged pods (Neal 435). The wood is hard and heavy and formerly was used for hōlua (sleds), spears, digging sticks, and house construction. Also kawa'ū, kea, kolomona, and the weedy herb Phaseolus lathyroides (Niihau). ho'o.uhi.uhi To prepare uhiuhi wood for house posts (GP 8).

**uila:** Form of an 'aumakua. nvs. Lightning, electricity; electric. Ka'a uila, electric bus. Kapuahi uila, electric stove. Kukui uila, electric light. He nuku uila, a lightning snout [an incessant talker]. ho'o.uila, hō.'uila To flash, as lightning. (PPN 'uhila.)

**Wai'anae:** City on the island of O'ahu

**Waikiki:** City on the island of O'ahu

**Waipahū:** Gushing water. City on the island of O'ahu.

**wao akua:** Realm of the gods. n. A distant mountain region, believed inhabited only by spirits (akua); wilderness, desert. See ex., panao, pua 1. Wao akua nui a Sahara, great Sahara desert.

**wao kanaka:** Realm of the people. n. An inland region where people may live or occasionally frequent, usually considered below the wao akua.

**wauke:** n. The paper mulberry (Broussonetia papyrifera), a small tree or shrub, from eastern Asia, known throughout the Pacific for its usefulness. It belongs to the fig or mulberry family. The bark was made into tough tapa used for clothing, bed clothes; it lasted longer than māmaki tapa. (Neal 301.) Cf. po'a'aha 2. (PCP (w)aute.)

**wili:** Featherwork making technique where feathers are wrapped around a core

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