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A Collaborative Approach to the Analysis of Northwest Coast Treasures from the Ehlers Collection in Denmark

Magdalena Naum, Laura Ahlqvist, Aay Aay Gidins, Ḥaa'yuups, and Thomas Birch

Introduction

This paper is the result of five individuals reacting to three Northwest Coast treasures currently held at the Ehlers Collection, a museum in Haderslev, Denmark. Here we are commingling the thoughts of living members of the First Nations, from where the pieces originate, and the analysis of European academics. The studied pieces are a Nuu-chah-nulth *kuxmin* (bird rattle) (Ehlers Collection inv. no. 1107; fig. 1), Haida *sGaaga* (medicine man) figure (Ehlers Collection inv. no. 1108; fig. 2), and Kwakwaka'wakw or Wuikinuxv wooden model totem pole (Ehlers Collection inv. no. 1114; fig. 3). The rattle is carved from alder in the shape of a woodpecker, painted with red, white, black, and green colors, and filled with small pebbles.[1] The figure representing a medicine man or *sGaaga* is carved from coniferous wood in naturalistic style and painted using black and red colors. The label glued to the bottom of it reads

Magdalena Naum is a historical archaeologist at Lund University in Sweden, researching Scandinavian colonial history. Laura Ahlqvist is an archaeologist and postdoctoral researcher at Aarhus University. Her research focuses on art and gender in prehistoric Scandinavia as well as Indigenous material in Danish museums and multivocality in academia. Ḥaa'yuups is the head of the house of the Takiishtakamlthat-h clan of Huupa'chesat-h. Born in 1948, he has been involved in singing, carving, painting, jewelry-making, dancing, and composing most of his life, and has documented more than 10,000 Nuu-chah-nulth names. Aay Aay Gidins was raised in Skidegate village, learning stories from relatives and learning art from *nanaay* (grandmother) and Evelyn Vanderhoop. He is currently working at Saahlinda Naay, the Haida Gwaii museum, as the research and repatriation coordinator. Thomas Birch is an archaeometrist at Moesgaard Museum in Denmark, specializing in the analysis of archaeological materials and past technologies.

Fig. 1. *Axaps'yi/tluux'wichit* kuxmin, *Ehlers Collections inv. no. 1107. Photo: Laura Ahlqvist.*

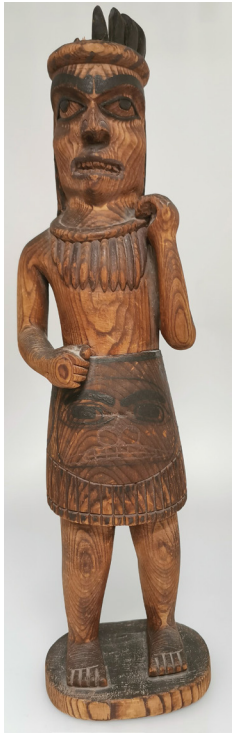

Fig. 2. SGaaga *figure, Ehlers Collections inv. no. 1108. Photo: Laura Ahlqvist.*

Fig. 3. *Wooden model of a totem pole, Ehlers Collections inv. no. 1114. Photo: Laura Ahlqvist.*

"[med]icine man & wife, [Qu]een Charlotte Is., N. America," suggesting that the first collector originally acquired a pair of matching carvings. The totem pole model is probably carved from alder. It represents, from the bottom to the top, an eagle, a bear holding a human face, and a raven. It was carved by a Kwakwaka'wakw or Wuikinuxv carver. The objects were made by different artists and for different reasons, yet they share some biographical aspects: all date to the end of the nineteenth century or early twentieth century, and they are made of wood—carved, painted, and imbued with multiple layers of significance. This, together with their displacement from the original context and convergence in Louis Ehlers' collections, ties them together.

The majority of Northwest Coast and other American Indian treasures kept in Danish museums have lingered in storage rooms since their accessioning.[2] They are understudied, rarely exhibited, and often unrecognized for what they are. The three objects analyzed here are no exception; the available information in the museum records is very vague and, in some cases, incorrect. Our study is the first attempt to understand them using collaborative research and plural approaches. We investigate the materials and pigments used in their making and their function and value in the Indigenous contexts as well as their significance as collectors' objects. Recognizing the systemic silencing of Indigenous voices in academia, which ties closely with the specific cultural situation that these objects sprang from, we undertake this pursuit by drawing on multiple sources and epistemologies.[3]

The project arose from a broader interest in the histories of these pieces and a specific opportunity to investigate pigments used on the three objects using nondestructive x-ray fluorescence (XRF) analysis.[4] In the process of informing Indigenous institutions and knowledge-keepers about the existence of these objects and seeking permission to conduct the analysis, those of us situated in Denmark realized that our initial approach risked overlooking valuable insights if the research design only reflected non-Indigenous perspectives and knowledge. We appreciated that there was an enormous opportunity to engage in a dialogue about these pieces with Indigenous curators, historians, and artists. This dialogue proved to be a process of revelation, a humbling and enlightening experience that allowed us to examine the studied pieces in a multifaceted way, to identify and contextualize them and appreciate their historical, cultural, relational, and aesthetic details.

This engagement in the study of these objects highlighted the development of artistic traditions in Haida and Nuu-chah-nulth communities and the continuous entanglement of these pieces, and of art in general, in storytelling and narratives of ancestry and history. While aware of colonial "extractivist" projects that brought these objects to Denmark in the first place—the mass removal of Indigenous material culture from their ancestral homes for the sake of science or aesthetic appeal—the collaboration acutely reminded those of us situated in Denmark about the cultural and emotional value these treasures continue to have for Indigenous people.[5] It also confronted us with problematic realities at many Danish museums: difficulties in accessing these objects for Indigenous communities due to language barriers and incompleteness of the information or misidentification of the objects in the museums' catalogs.

This connects to wider, well-known, and ongoing problems of inequalities regarding access to cultural heritage on a worldwide scale, linking up with the damaging effects of colonialism.[6] The themes of colonialism and displacement run as a larger arc in our paper, as the objects are products of this cultural context. The lack of knowledge about these objects can also be seen to indirectly relate to the dark heritage of colonialism as they represent perspectives, values, and settings that were systematically marginalized. Following this, the collaborative approach in our research connects to a larger, recent move in academia toward a more inclusive research practice.[7]

Approaching the Objects through Multiple Perspectives

Speaking of the complexity of ethnographic collections at large, Nicholas Thomas used the analogy of an archaeological site, seeing museum research as a form of an excavation. "[Ethnographic collections] are made up of multiple layers and accretions but are also marked by erosion and loss. They cannot be understood without sustained analysis of the material objects themselves," without the participation of Indigenous experts from the source communities or wide-ranging archival research.[8] Such excavation was the aim of our collaborative work. On a basic level, our goal was to counter archival silences and correct misinformation about these pieces, recover what was lost in terms of understanding them from Indigenous perspectives, explore what these pieces meant and still mean, and discover how they were made and how and why they arrived in Denmark. The inventory records for all three objects lack any substantive information, which means that they exist in a linguistic and cultural limbo (fig. 4). Our research provides previously unknown information about these objects, but it also uncovers their multilayered nature. Each of the objects encapsulates several technologies, and for this reason we found it methodologically appropriate to explore them through different epistemologies and approaches. The combination of Indigenous knowledge, archival research, and laboratory analysis created the possibility of seeing the pieces from different, multiple perspectives. The voices of knowledge-keepers and other knowledgeable individuals inside the communities of origin have rarely been invited and valued in the studies of such objects in museum contexts. The project arose from and is built upon the need of listening to and learning from Indigenous perspectives, thinking about these perspectives as a privileged basis of any study of Indigenous pieces, and as a way of using these perspectives for contextualizing knowledge obtained through other methods of analysis.

Our research group emerged organically. Magdalena Naum and Laura Ahlqvist took initial contact with Taa.uu 'Yuuwans (Jisgang Nika Collison) and Aay Aay Gidins at Haida Gwaii Museum to confirm Haida identity of the objects and seek permission for conducting the XRF analysis. The generosity of knowledge shared by both during the first meeting encouraged us to ask about interest in collaborative research about the *sGaaga* carving. With the help of Sarah Holland, curator at the Museum of Anthropology, University of British Columbia, and Robin Wright, curator at the Burke Museum of Natural History and Culture, we could confirm identity of the two other pieces; we then reached out to Marika Swan, curator of

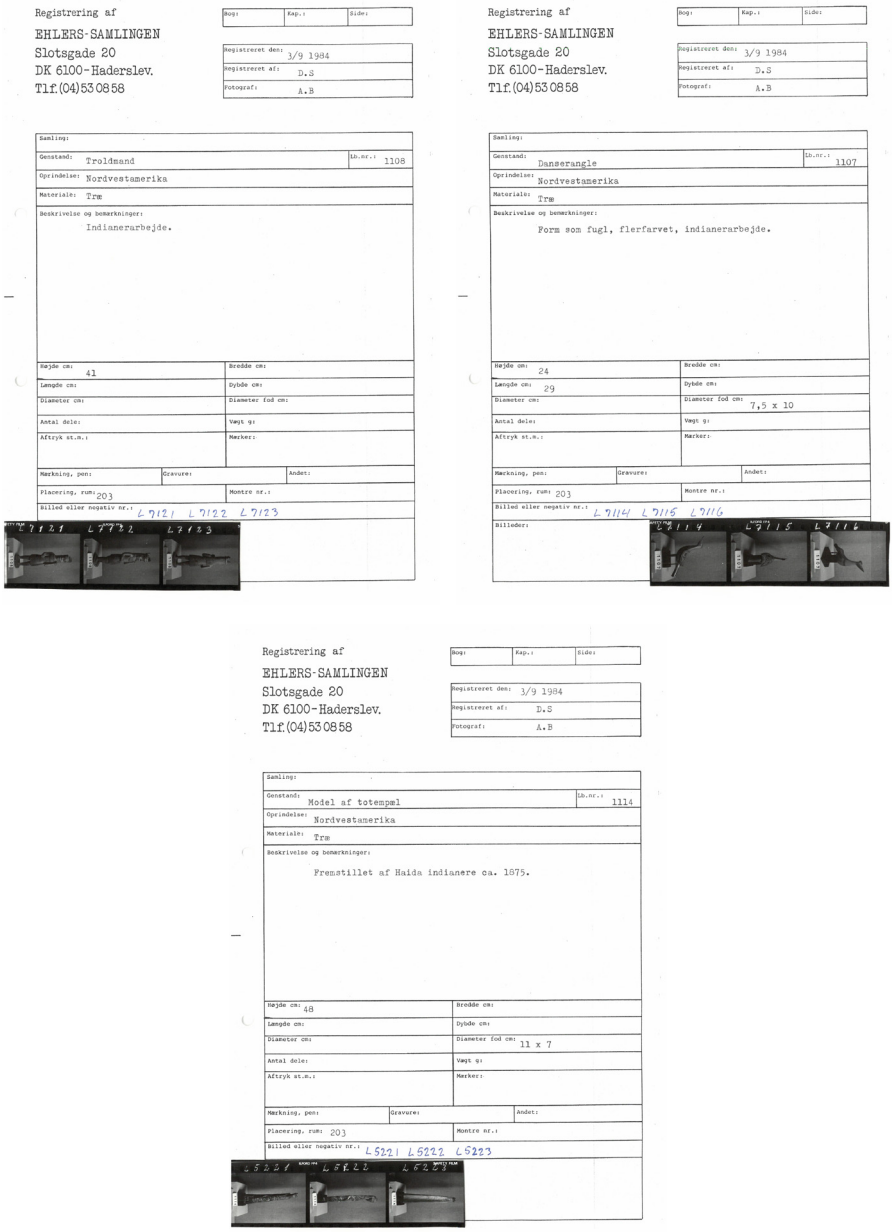

Fig. 4. *Catalog entries for the* sGaaga *figure (fig. 4a),* kuxmin *(fig. 4b), and model totem pole (fig. 4c) in Ehlers Collection records. The* sGaaga *is identified as "Troldmand"—shaman, from Northwest America. The description simply states that the object is made by a Native American craftsperson ("Indianarbejde"). The* kuxmin *is described as a dance rattle from Northwest America in the shape of a bird, multicolored and made by a Native American craftsperson. The totem pole model is misidentified as made by Haida, c. 1875.*

the Nuu-chah-nulth Living Archive, and Juanita Johnston, executive director of the U'mista Cultural Centre, for permission to analyze the objects and with an inquiry about interest in coresearching the pieces. Independently, Swan and Naum reached out to Ḥaa'yuups, who kindly agreed to share his knowledge about the bird rattle. We have contacted several carvers and knowledge-keepers from Wuikinuxv Nation and Kwakwaka'wakw Nation, who shared their thoughts about the totem pole model, but they were unable to study it in depth and write about it. Simultaneously, Thomas Birch (assisted by Rasmus Andreasen from the Department of Geoscience at Aarhus University, along with archaeologists Mathias Bjørnevad-Ahlqvist and Laura Ahlqvist) conducted x-ray fluorescence analysis, filming the analytical process and recording and synthesizing the results, which was shared and discussed with Johnston, Gidins, and Ḥaa'yuups. Prompted by Ḥaa'yuups's interest in the material from which the *kuxmin* was made, we requested wood analysis (conducted by Welmoed Out from Moesgaard Museum) and x-ray photographs showing the cavity of the rattle and its contents.[9]

Our research did not arise in a vacuum. It is inspired by scholarship and practice of community and Indigenous archaeology, Indigenous studies, and collaborative projects.[10] Other sources of inspiration are works of feminist anthropologists and archaeologists, who argue for research that is more dialogic and attuned to diversity of experiences, showing a greater consideration of the issues of representation and language.[11] It is also informed by decolonizing methodologies based on inclusivity, plurality, and reflexive scrutiny of traditional academic epistemologies: recognizing and accepting that there are different ways of knowing, being, and relating to reality.[12]

Compared to some other examples of collaborative projects that aim at major sociopolitical interventions and policy changes, our vision and version of collaboration had more modest goals.[13] We saw it as a means of erasing some of the epistemic ignorance that surrounds the studied pieces and the circumstances of arrival of these types of objects in Denmark, of recognizing the primary importance of Indigenous knowledge and voices, and as an ethical and inclusive way of conducting research on Indigenous heritage treasures. It is aligned with definition and practices of collaboration as proposed by Luke Lassiter, who sees it as an endeavor built on the cooperative relationships present in research and production of texts that are "coconceived or cowritten with local communities of collaborators and consider multiple audiences outside the confines of academic discourse."[14]

In conducting and completing our research, it was particularly important to us to stress that each of us is a researcher on an equal footing. We wanted this research to be coauthored, retaining individual styles of writing and forms of expression. We knew that this could result in an article that is stylistically diverse, but that this would be better than homogenizing individual voices. We regard this as an important part of decolonizing and democratizing knowledge, reflecting the messiness of knowledge and the different epistemological processes and traditions that guided our research.

As our project developed during the time of the pandemic, we were unable to travel, meet in person, and have object-centered discussions. Instead, we met virtually, discussed our findings, exchanged our thoughts, and shared photographs, video recordings, and other information via email. This has certainly been challenging

and sometimes limited the depth of conversations and collective participation. We defined our collaboration as a process of side-by-side research built on a mutual understanding that each of us could contribute with a unique perspective on a specific aspect of the pieces and the collection based on our individual interests, a particular type of knowledge and sources. Naum and Ahlqvist, who at that time were both archaeologists at Aarhus University in Denmark, reviewed archival material and published records concerned with collecting and recording of the Pacific Northwest objects in Denmark, as well as ways of conceptualizing these pieces in Danish museal contexts. Gidins, a Haida artist and research and repatriation coordinator at Haida Gwaii Museum, studied the *sGaaga* figure, its relation to Haida medicine practitioners and Haida art by drawing on oral tradition, conversations with the elders, and to some degree ethnographic accounts. Ḥaa'yuups, who is a scholar and knowledge-keeper, the head of the House of Takiishtakamlthat-h of the Tlikuulthat-h Clan of the Huupa'chesat-h First Nation of Nuu-chah-nulth-speaking peoples, contextualized the use and meaning of *kuxmin* and other rattles among the Nuu-chah-nulth based on his direct experience of Nuu-chah-nuulth ceremonial and ritual life. Birch, an archaeologist at Moesgaard Museum specializing in archaeometry, conducted pigment analysis using x-ray fluorescence analysis, comparing his findings to knowledge about pigments communicated by Gidins and Ḥaa'yuups and reported in earlier ethnographic studies.

Although we shared some notions about the value of and reason for collaborating, such as learning from each other, satisfying our curiosity, and simply doing research as an act of enjoyment, each of us had individual motivations for working together. For Naum and Ahlqvist, ethical issues were of key importance; Gidins was guided by positive examples of previous collaborations and the pleasure of studying Haida art. For Ḥaa'yuups, the collaboration was an opportunity to bring attention to and recontextualize Nuu-chah-nulth treasures. He was also answering a request from his niece to "write something meaningful" about the *kuxmin*. Birch was curious about comparisons between and combination of the results from archaeometric investigations with the Indigenous knowledge. These individual reasons and our own positions are explored further in the analytical sections of the article.

The analysis starts with an exploration of the possible pathways of the objects to Denmark and the meaning they had for Danish collectors. It aims at building an understanding of why and how these pieces ended up in Denmark. This is followed by close explorations of *sGaaga* carving and *kuxmin* in Indigenous contexts and a summary of pigment analysis.

Ehlers' Collections and Treasures from the Northwest Coast in Denmark—Magdalena Naum and Laura Ahlqvist

We would like to start with a short reflection on the importance of collaboration and the approaches used in our research. For both of us, ethical considerations played a key role in structuring this research as a collaboration. Naum has been researching colonial histories, including collecting, using postcolonial approaches as a methodological and

theoretical framework for over a decade, but increasingly has felt that they are not sufficient for overcoming certain types of knowledge gaps, misrepresentations, and silences. This self-critical reflection arose especially in the context of working with Indigenous collections and was deepened after conversations with Indigenous archaeologists and historians. It led her to a fuller embrace of the epistemological project of "undoing and redoing" advocated by decolonial paradigm, predicated on actively engaging in discussions with and learning from Indigenous knowledge-keepers.

As an early career researcher, Ahlqvist has increasingly found herself inspired by activist, feminist, and inclusive archaeologies that are developed to highlight the systemic issues of the oppression and silencing of minorities in academia and other aspects of Euro-American society. Her previous research has employed such frameworks as epistemological tools, but for this project, she was eager to pursue more active ways of inclusion. Working with Indigenous treasures, we have an ethical responsibility to listen to and learn from Indigenous perspectives on these objects. At the same time, it quickly became clear that we would get a better understanding of the objects by approaching them from multiple angles, not just inviting research from their new setting but also from their original context.

Approaching the three Northwest Coast objects, we were interested in their journey to Denmark and to the Ehlers museum and wanted to understand Danish interests and ways of collecting in northwestern regions of America. We were also interested in how these pieces were perceived in early twentieth-century Denmark. To investigate these questions, we have reviewed documents, published and unpublished expedition and museum acquisition records, and other literature on the subject. The choice of sources and methods was partly motivated by our research questions, but it is also an expression of an academic tradition of conducting research we had been schooled in. That tradition privileges written accounts and material evidence and their systematic analysis based on empirical approaches, attempted objectivity, and inductive-deductive reasoning, the ensuing researches often reported in impersonal, "scientific" style. Throughout our education and academic career, we were exposed to and embraced approaches advancing multivocality, contextuality, and critical scrutiny of knowledge sources and production. Discussing the sources and findings with Gidins and Ḥaa'yuups helped us to reflect on and contextualize Danish collecting activities and interest in northwestern pieces.

The Ehlers Collection's records are very partial. Consequently, not much is known about the circumstances of collecting and acquisitioning of the pieces. They date to the late nineteenth and early twentieth century, a period of the most intensive scramble for artifacts, ancient and new, along the western coast of the United States and Canada and a time when many such objects entered Danish collections.[15] The collector, Louis Ehlers (1916–98), acquired them at an auction or from an art dealer in the 1940s.[16] It was perhaps their aesthetic quality that attracted his attention. Studying art in Copenhagen at that time, he came into contact with the modernists who found inspiration in the Indigenous and folk art—a form of expression he was interested in and explored himself.[17] Already in the late 1940s, Ehlers's collecting priorities had changed and he became primarily interested in Danish ceramics. The ethnographic

pieces became odd outliers in his collection. Unlike ceramics, to which Ehlers devoted considerable research and curatorial attention, they were never studied.

Ehlers' collection is unique in the Danish context for its early consideration of Indigenous treasures as pieces of art, albeit in a Western sense of the word. Other late nineteenth- and early twentieth-century Danish museums typically classified the objects from the Pacific Northwest in terms of archaeology and ethnography. Outside of Denmark's National Museum, which curates the largest number of such artifacts, there are a couple dozen identified pieces originating from this area scattered across Danish regional museums. Most of them arrived in the late nineteenth century and early twentieth century as souvenirs obtained by mariners, objects collected by Danish settlers or by officials on scientific expeditions, or as ethnographic artifacts exchanged with American and European museums. An important example of the latter was a collection of at least sixty treasures from the Nuu-chah-nulth area and other Northwest territories collected in the 1880s by Johan Adrian Jacobsen and exchanged between the Museum für Völkerkunde in Berlin and the Denmark's National Museum. Another was a gift of forty "particularly fine pieces" received by the National Museum in Copenhagen from the Field Museum in Chicago in 1934.[18] Through exchanges, purchases, and donations, the National Museum has assembled a collection of Northwest Coast objects originally acquired by the Wilkes expedition, Franz Boas, James Swan, and George Heye, as well as Danish collectors, most notably Arnold Eugen Reimann.

For the Danish scientific expeditions engaging in systematic collecting, the Pacific Northwest was only of marginal interest. The area was regarded primarily in the context of the discoveries made in Greenland and as a region that could possibly shed some light on the questions of origins and development of Inuit culture.[19] The Fifth Thule expedition (1921–24), led by Knud Rasmussen, explored the area, passing by Haida Gwaii, Vancouver Island, and Seattle and engaging in substantial and targeted collecting activities. They led to a "colossal increase of Inuit and Native American collections" at the National Museum in Copenhagen.[20] Ten years later, a joint archaeological-anthropological project of the National Museum in Copenhagen and the University of Pennsylvania in the Prince William Sound occasioned collecting of "rather comprehensive ethnographical material" from Chugach and Eyak peoples.[21] Kaj Birket-Smith, who led the Danish fieldwork, also procured a number of other objects, including parts of a Kaigani Haida totem pole (from Prince of Wales Island) and a Tlingit basket.[22] It is clear that much of this collecting and recording was informed by the salvage paradigm: Chugach and especially Eyak peoples were deemed as disappearing by Birket-Smith.[23]

Alongside these targeted endeavors, museums and learned societies reached out to Danish settlers and mariners making an active effort to propagate collecting and sending objects to museums in Denmark as an act of patriotism and patronage.[24] This resulted in donations of diverse objects that in the eyes of the collectors represented "typical" aspects of Indigenous culture. Treasures related to the ceremonial and spiritual life as well as models of totem poles executed in argillite and wood are examples of such pieces.[25] The majority of the northwestern American pieces in regional Danish

museums seem to originate from these random private donations and purchases made on auctions.

The massive removal of Indigenous treasures had profound negative consequences for these communities. The effects of this displacement are still prevalent today, one example being the many exogenous objects continuing to linger in European museums despite requests for repatriation. But the all-encompassing thirst for art also made Indigenous artists respond creatively by developing novel designs, incorporating new materials and miniaturized versions of objects that were deemed "typically Indian," such as baskets and totem poles. In places like the nineteenth century Haida Gwaii, the dwindling fur economy and rising tourism encouraged local artists to experiment with forms inspired by the exposure to European material worlds and to create art for economic rather than social or ceremonial purpose. As noted by Jaalen Edenshaw, a Haida artist, "This market created the freedom to be an artist in the Western sense of the word. Now you were creating things not for utility and beauty but just for beauty."[26] In the same vein, Gitxsan elder and artist Doreen Jensen speaks of exploration of new forms, materials (such as argillite), and designs engendered by the tourist market. Rather than a sign of degeneration, as was the prevalent narrative in Euro-American anthropology at the time, these new artistic productions continued to be made with the same core belief of the act of creativity coming from the cosmos and artists' responsibility "to pass on the language of cosmos" to the next generations. The information contained in these pieces was "a meaningful and coded means of expression."[27] These points also became clear in our discussions with Gidins about the carvings of *sGaaga* and in his exploration of the figurine. Crafted as a souvenir in a style experimenting with Euro-American forms of expression, the figurine is nonetheless rich in references to Haida cosmology, worldview, and culture.

From this process, new styles of art produced with the intention of subsequent sales sprang up and grew, and new venues for selling these items—world fairs, curio and art dealer shops—emerged. The pieces acquired by Ehlers, at least the *sGaaga* figure and the totem pole model, originated from these settings.

As related by Ḥaa'yuups, the *kuxmin* in the Ehlers Collection is a ritual treasure made with a specific purpose, users, and audience in mind. Treasures of this kind were purchased or stolen by individuals hired by or collaborating with museums (such as Swan, Boas, and Jacobsen) or acquired during private and scientific expeditions. Some of them ended up in Canadian, American, and European museums as a result of confiscations of ritual treasures executed during the potlatch ban enacted in 1884.

Northwestern objects gathered during anthropological fieldwork often aided by Indigenous collaborators, like those of Birket-Smith, were understood as having complex social dimensions and representing aspects of the worldview, history, and genealogy.[28] In the context of museums, however, the objects were classified as artifacts and evaluated based on their technical qualities, treated as evidence of traditional economic and spiritual life. If evaluated as art, they were judged through the prism of European form and technique.[29] Their rich narrative and symbolic dimensions were rarely recognized and appreciated in museum context, which is reflected in the conspicuously sparse labels and inventory entries created for these objects.

In the context of Ehlers' Collection records, the minimalist entries for the three Northwest Coast objects, the separation of Indigenous treasures from Indigenous perceptions and worldviews, and the lack of intellectual scrutiny might have been a result of a particular gaze espoused by Ehlers towards them. It is likely that what appealed to him were the aesthetic dimensions of these pieces and the perceptual-emotional experiences generated by these objects.

Comparing the epistemological vacuum in which these objects existed and continue to exist with the rich-in-detail descriptions offered by Gidins and Ḥaa'yuups, we were struck by the dissonance and out-of-placeness of these pieces in the Ehlers Collection. Ḥaa'yuups has pointed out how the *kuxmin* in particular "has been displaced from its real home, its place of meaning." Like other treasures taken away, it has been severed from a setting where it had deep cultural associations and functioned as a ceremonial object to be put on a shelf or displayed behind glass as an artefact of aesthetic gaze, a colonial trophy won in a process of dominating others and stealing their treasures.

Another collectively reached reflection relates to the rather eclectic and piecemeal character of the assemblages originating from the Northwest Coast in the large and smaller institutions in Denmark. This would indicate that this geographical and cultural area was not a priority for Danish collectors, but still of some interest. To satisfy that interest, the museums and collectors tapped into a global system of trade and exchange of Indigenous pieces without being necessarily concerned with acquiring background information about those pieces. It was more about possession of evocative and representative examples than completing assemblages illustrating diversity and complexity of Indigenous culture. The practices of colonial extraction and accumulation as well as the lack of engagement in the Indigenous realities that these treasures once inhabited reflect Danish museological methods of the late-nineteenth and early-twentieth century.

The SGaaga Figure—Aay Aay Gidins

My investigation focuses on the carving representing a *sGaaga* and is driven by curiosity and the enjoyment of doing research. I did not know much about Haida pieces in Denmark. I was keen to learn what kind of pieces are in the collections and how they made it there. I wanted to explore further the role and representation of *sGaaga* in Haida culture and was interested in learning more about traditional pigment recipes. I have been previously involved in an x-ray fluorescence (XRF) study of the Naaxiin apron in the Pitt Rivers Museum at Oxford, which determined that iron was used to make dyes. I also learned that iron can be used as mordant to fix dyes in the fibers. This was new and interesting information. Although elders retain some knowledge about pigments and their preparation, most modern artists use industrially made paints and dyes, occasionally experimenting with the traditional recipes. Knowing the potential of XRF analysis, I was interested to learn about the process and the results of Tom Birch's study of the carving and the two other pieces, and to follow the analysis on the videos recorded by him. It was fascinating to see how some of the chemical components detected in the scientific analysis can be explained by traditional

knowledge of making pigments and discover possible recipes and types of pigments that are forgotten.

Approaching the carving, and doing research in general, an important source of knowledge is our oral tradition. Before she passed away, my *nanaay* (grandmother) was a major source of learning. Being able to sit next to her and talk about our traditions and history, listen to her memories and stories was a precious experience. Conversations with other family members and the elders from the Skidegate Haida Immersion Program are also crucial to expanding my knowledge and appreciation of Haida traditions and worldview, including maintenance of the traditional system of knowledge-recording based on memorization rather than annotation. My understanding of Haida art comes also from tacit knowledge, the handling of art pieces, and visual memory, which I developed as an artist. All these sources played a part in exploring the *sGaaga* from Ehlers' collections.

In Haida Gwaii communities, *sGaaga*, like the one represented in the carving, had many powers (fig. 5). They could tell the weather, the future, heal, and even bring someone back to life. They were medicine men: with an ailment of any kind, one would go see a *sGaaga*, from a boil on the back to a cut on the hand.[30] Some of the medicines were topical; some were old ways of spit medicine; one known medicine was able to cure seizures. Though the spit medicine is lost to us, we know that it was a powerful medicine to use.

When the *sGaaga* used medicine on a high-ranking individual, they were paid with Chilkat/Naaxiin textile pieces (like the one painted on the *sGaaga* figure in the Ehlers Collection). Aprons, robes, and leggings were all used as payment for bringing a person back to life. War belts were also given as payments (when people were out fighting

Fig. 5. *Dr. Kude, who was a* sGaaga, *his two helpers, and a person he brought back to life. Photograph by Edward Dossetter, 1881, courtesy of the Canadian Museum of History.*

with other nations along the coast, they had to have a *sGaaga* with them to let them know where they were going).

In order to become a *sGaaga*, one had to go through a strict fasting procedure and train with another *sGaaga*. One could have also become a *sGaaga* with the spirit of an older *sGaaga* entering the body of another person, then becoming a younger version of that same *sGaaga*. The knowledge could have been passed down from one *sGaaga* to the next. The elder *sGaaga* would show his powers to the younger trainee, and by doing so make him stronger.

The first *sGaaga* was taught by the supernatural beings after returning from a long journey to the other side. His village was saddened by his passing, and they danced and sang him back to life. Ever since then, when we pass away, we must sit in state for four days, as we might come back to the living world.

When we die, they say, we wander in the forest aimlessly. Nang King.aay ‘uuwans tells a story of the reincarnation of a young man who had died: The young man’s spirit was wandering in the forest when he heard singing.[31] He followed the sound of the singing, but kept returning to his starting point. It took three trials until he was able to find the source of the singing, Nang King.aay ‘uuwans says: it was his own funeral. The young man then saw a tree, climbed into its hollowed trunk, and fell asleep. In the morning, he woke. When he crawled out of the tree trunk, the people said he had been born again, back to the same village that he was from.

When the *sGaaga* is getting ready to go out into the forest and look for the individual who has passed on, he brings a soul catcher with him to capture their soul. If he is successful, he takes the soul back to the individual’s physical body and then blows it back in, to revive them.

We don’t usually talk about how a *sGaaga* used their medicine, but we do know that the last known *sGaaga* to practice on a patient did so in the early 1900s. It was said that the patient needed surgery on their neck—an infection that needed attention right away. The patient had a scar on their neck for the rest of their life, but the surgery was a success.[32]

The *sGaaga* figure from Ehlers’ Collection is carved out of a single piece of cedar except for the crown (spikes or horns), which was added (fig. 2). Haida art, just like the language, is very precise, and it could have been a representation of someone who was a *sGaaga*. The figure was possibly created during the 1893 Chicago World’s Fair, or around that time. The grain of the cedar shows that the carving was made quickly out of a young cedar tree.

The figure doesn’t have the tools of a *sGaaga* that one would normally see in the hands—a rattle (*siisah*), whistle, or medicine bag. The hands of the *sGaaga* are bored out enough to hold the tools the medicine man would use during his trance, but this one doesn’t have them; perhaps they are lost. Most of the rattles were globular or round in shape, but some were also raven rattles, or heron batons. It is not appropriate to share any photos of *sGaaga* tools or any other pieces that a *sGaaga* used in medicine, as we believe they can still have the powers of the *sGaaga*.

The *sGaaga* figure depicts a medicine man in a trance, indicated by his eyes looking up. When the *sGaaga* is in a trance, he can call upon the spirit that is needed to help

the sick. He could call upon an animal, or a supernatural being, and would talk in their language to seek advice.

The painting on the apron represents the Chilkat/Naaxiin weaving. It depicts a face with wings on the side, moving toward the back of the apron. It is most probably a bird, a helper of the *sGaaga*. The *sGaaga* had many helpers when he went into a trance, a bear, a bird, a human, a supernatural being—anything and anyone able to help. The *sGaaga* were very powerful. We have learned over the years that the *sGaaga*'s tools and prized possessions can still hold the power the *sGaaga* put into them.

The crown of the *sGaaga* is made from cedar. In real life, other materials sometimes used were mountain goat horns or grizzly bear claws. There are very few of these crowns in museum collections around the world, but they can be seen on the models of *sGaaga*. The neck ring is made from cedar bark, and the represented pieces hanging down were either the bone or claws of an animal that would help him in his journey. Usually, one would never see the bones or claws that the *sGaaga* would use, only the patient would see them.

This figure is similar to the ones in the Museum of Vancouver collection exhibited in *Haida Now* (catalog number AA 671-73, fig. 6). They show similar stylization of the face and body and could have been made by the same artist, which, according

Fig. 6. *Figures of a* sGaaga, *a high-ranking woman, and a chief (fig. 6a), Museum of Vancouver, AA 671-673 with a close-up of* sGaaga *figure (AA 672) (fig. 6b). Courtesy of the Museum of Vancouver.*

Fig. 7. Salmon *(2018) by the late Ben Davidson, who used traditional pigment for the color green, as seen in the eye socket. Photo courtesy of Cori Savard.*

to the museum's research could have been either Thomas Collinson, Amos Watson, or John Gwaytihl.

The figurine is painted. The natural pigments we used in our art were black (charcoal), red (ground red ochre rock or berries), green (ore found on Haida Gwaii), and blue (mineral origins). Hematite, glauconite and magnetite are the scientific pigment names.[33] The green pigment (fig. 7) is found in only one source on Haida Gwaii. The pigment was ground to a fine dust, then mixed with fish eggs that had been chewed up and spit out, used as the binding agent so it would stick to the piece being painted. The black paint was made the easiest way, from ground charcoal, and also the most commonly used. Birch's analysis shows that the charcoal used for making the black paint applied on the carving came from burnt bones crushed and mixed with ash and soil, a result which is consistent with our knowledge.

Red paint was typically made from a red ochre rock found on the beach of Haida Gwaii. It was ground to a fine dust, then mixed with salmon eggs. It is interesting that the red on the *sGaaga* carving seems to be made from other materials than ochre. It indicates that there were several recipes and ways of obtaining this color.

Many different substances were used as the binding agents: the slime from the body of the halibut as it was taken out of the water, the fat from a seal that was rendered and made into oil. Salmon roe that was chewed up and spit into the pigment was a great binding agent. It made the texture of the painting a bit better, and it made the piece shine. Birch has noted in his analysis a high elevation of sulfur in the pieces, which could be interpreted as a reflection of the use and importance of these binding agents.

We used these pigments for face paintings as well. The charcoal was used as a sunscreen. Because we traveled by canoe on the water, our bodies were painted with charcoal or with red ochre mixed with rendered seal oil. It gave us a sheen as well as protection from being burnt by the sun. When we went to war, we painted our faces so we could tell which clan was which.[34] In one photo taken in 1890 (one of the first known photos taken with most of the people of Skidegate), one can see face paintings whose patterns allow the viewer to identify the clans of the wearers.

When we weren't painting faces, hats, canoes, houses, totem poles, boxes, bowls, and spoons, we also used the pigments for tattooing.[35] Poke tattooing was the most

common method, using a stick and a bone needle, just like the Japanese. Before that method, we used the copper needle, mountain goat wool, and pigment, drawing the design on the skin and following it with the sewing technique.

Tattoos were for high-ranking men and women. They were usually done in a potlatch setting, with witnesses to watch what was going on. When they finished, the tattooer was paid with many blankets in earlier years, and later with bracelets, pendants, and the like.[36]

Leather bags were used to hold the ground-up paint pigments (fig. 8). In some of the old bags (e.g., Canadian Museum of History catalog number VII-B-273), one can still see traces of the pigment. Paintbrushes were made from hair and sticks (fig. 8). Sometimes they were made for a specific use (one for the color red, another for green). Some brushes were made with a fine tip for painting thin lines.

Overall, the carving in the Ehlers Collection is a naturalistic representation of an accomplished *sGaaga*, most likely a real medicine man known to the carver, depicted during his spiritual journey and communication with spirits. It might have been carved by one of the Haida carvers present at the 1893 Chicago World's Fair. After the closing of the fair, the Haida pieces were taken to the Chicago Field Museum and eventually dispersed to other institutions through exchanges. As noted by Naum and

Fig. 8. *Leather bag for pigments and paint brushes, unknown maker—Haida c. 1900 (Canadian Museum of History, catalogue number VII-B-538) and a paint brush used in the 19th century—Haida (Canadian Museum of History, catalogue number VII-B-549). Photo courtesy of the Canadian Museum of History.*

Ahlqvist, Danish museums also participated in such exchanges, but Scandinavian and European tourists and collectors visited the fair and purchased souvenirs made by Indigenous artists. We do not know how exactly the figure of *sGaaga* made it to Denmark, but there were enough connections between the continents and interest in Indigenous art to move them from one place and context to another.

Axaps'yi/Tluux'wichit Kuxmin: Pileated Woodpecker Rattle—Ḥaa'yuups

In my analysis I concentrate on *kuxmin*—a bird rattle, which is recorded in Ehlers' Collection accounts rather incompletely and inaccurately. Unfortunately, this is often the case with Northwest Coast pieces in European and North American museums. I was asked to write about the *kuxmin* by Marika Swan and Magdalena Naum. The request for information about the *kuxmin* and evolving conversations about matters intellectual and emotional related to the displaced treasures struck me as an invitation to a feast of ideas and a meaningful exchange of thought, which I enjoy as a scholar and human being.

For more than a century now, academics from Europe and the United States have been "discovering" us, describing us, analyzing our cultures, and in a very real sense claiming expertise in all matters of import about us. Today, these sorts of practices are seen for what they are, racist arrogance. We have entered upon a time when individuals from Northwest Coast First Nations insist on speaking for themselves. I do not want to stifle the voices of Western academics, nor do I want to diminish the value of their work. I do want to add a local, knowing, Indigenous voice to those already informing and participating in the discussion of our treasures.

I have been researching our treasures and collaborating with larger and smaller museums and related institutions for a very long time. At heart, such institutions are very conservative, refusing to acknowledge simple facts about the circumstance of assembling collections, many of which were made at a time when the potlatch ban was in place, between 1884 and 1952. It appears that Danish museums and collectors obtained their collections in the same way or profited from such practices. Still, I continue to do the work I do so that, when future generations of young people from our communities come to such institutions to take possession of our treasures again, there will be some reliable information to accompany their repatriation. I hope that people wanting to understand our old treasures can learn something from my effort.

I take the position that foreign institutions possess our treasures, but we still own them in a very real sense. So, I hope my participation in the current discussion about the *kuxmin*, in particular, adds something of value to current study practices. I hope sincerely that we are past the time when academics ignore our voices or, worse, claim authorship of knowledge taken directly from our communities. It seems we are still at the point in this new style of conversation when we have to say, "I can speak for myself, and I have something of primary importance and worth in adding to the scholarly study of my culture and the beautiful treasures arising from it." I do not want my words to be sublimated as though they are not as valuable as the words of others.

Rather, I want to feel that we are meeting each other and coming together in a manner that recognizes the worth of each other's contributions to the current study. This is a new privilege for people in my community. I am grateful for the opportunity to inform others about these treasures, so that when they come home to us, something of worth to people in my community will be known about them. The Euro-American colonial project has done immeasurable damage to our culture, yet Westcoast people have always continued to feast and potlatch. Significantly, our treasures continue to have deep meanings to us today. [*Editor's note:* Westcoast people *is a term adopted by the Nuu-Chah-Nulth in 1958 to refer to their tribe.*]

I am interested in what our treasures continue to mean to us today, not just what they once meant or what others think they once meant. Our treasures held in foreign institutions have a role to play in our communities' ongoing healing. Surely, the insights provided by knowledgeable Kuu-as (Nuu-chah-nulth people) are not just "adding to the knowledge obtained through other methods of analysis" but rather should become the basis of any study of our treasures, not just another added perspective. This is to say that knowledge shared by members of the communities of origin for these treasures should be seen as primary, and thus privileged as such.

Although I do not have a sense of what proportion of my knowledge came through which stream of learning, a significant part of it comes from my own experience shaped by conversations with the elders and by participation in communal ceremonies: (1) as a boy and, later, a young adult, watching older people handling our treasures in ceremony and ritual settings; (2) as a teen and, then, an adult handling our treasures in these same sorts of situations; and (3) since my teen years and until the present, carving ceremonial and ritual equipment for various relatives, neighbors, and friends. Ever since, as a five-year-old boy, I watched my softly spoken *nen*—her face painted red, her always-braided hair taken out of braids and hanging long and loose in electric zigzags, her shoulders covered by a fringed shawl, her head tilted back slightly—appear from behind a ceremonial curtain, *kuxmin* in hand, singing a *'tsiik'yak* in a high, loud, and clear voice, I have wanted to make others feel the way experiencing my *nen* at that *'tliitsuu* made me feel. With pride and joy, I felt like crying, "That is my *nen*!" I was, in the truest sense of the word, ecstatic! How could I ignore older relatives' requests, as I aged and matured, to get involved in various roles in our mostly winter ceremonial and ritual life. As time went by, I took every opportunity to look at and study old treasures of every description and file everything I learned while looking at such treasures. I also learned and continue to learn intuitively. I find that, when I am alert to what is in front of me, solutions to problems present themselves; it is as if the wood I am carving talks to me. I certainly was taught to talk to the wood I am working on before I start a project and throughout that project.

These types of knowledge inform my analysis of the *kuxmin*, which is today in the collections of the Ehlers museum. The primary focus of my contribution is to build a context, to show that the little bird rattle does not exist in a vacuum but rather comes from a rich cultural setting.

Westcoast people have always loved to sing and dance, whether in playful fun dances or serious ceremonial and ritual settings. During our winter ceremonials we

employ drums, whistles, and rattles as accompaniment to our singing. Each has a role to play, during the time when the spirits of plants, animals, and other supernatural beings reveal themselves to us each winter. There are several various forms of rattle employed in winter ceremonies on the West Coast of our Island home. We regularly use five types of rattles, each for different purposes: the *aa-aastimxmin*, the *'chiskmin*, the *'tiitskmin*, the *nuulthmin*, and the *kuxmin*. There is a sixth type of rattle also used on the West Coast, but only rarely.

Aa-aastimxmin are long, tubular rattles, wider in their center sections and tapering to their ends, in imitation of a baby's cradle. In fact, some old *aa-astimxmin* were carved in the form of miniature cradles with miniature babies in them. These rattles look somewhat like a slender rugby ball with flat ends. The body of an *aa-aastimxmin* is made by carving a length of *humis* (sacred red cedar) to a shape roughly like that of the finished instrument, then splitting it into two halves. The exterior of the *aa-aastimxmin* is then finely smoothed with a knife, sometimes even sanded to a nice finish to prevent the user from getting slivers. Both halves are hollowed out to a thinness providing the desired sound. Then, small round pebbles are placed inside and the two halves are tied or glued together. I have heard that, in the past, some *aa-aastimxmin* used yew wood sticks instead of pebbles as sound-makers. Most often *aa-aastimxmin* are decorated with geometric or curlicue designs, although family crest figures are sometimes featured. This type of Westcoast rattle is used only in association with rituals and ceremonies performed to honor new babies, in particular the *aa-aastimxwa* (to make the baby precious) ceremony. In accompaniment to slow one-two, one-two rhythm lullabies, an equal number of women shake *aa-aastimxmin* gently.

A second type of rattle used on the West Coast, *'chiskmin*, are made of kerfed sheets of whale's baleen. After steaming the baleen soft and forcing it over a wooden form into the desired bulging triangular shape particular to this type of rattle, the baleen hardens again to produce a good volume of sound given its small size. These rattles, used by *uu-uutah* (whale harpooners) and *uushtakyuu* (doctors), have noise-makers in the form of short strings of beads suspended on the *outside* of the hollow baleen resonator cavity.[37] Later examples of this type of rattle were made of cow horn in precisely the same form as the earlier baleen examples. *'Chiskmin* are about eight or ten inches long and about five or six inches wide, typically, with a cloth-wrapped handle.

The third type of Westcoast rattle, the *'tiitskmin* (thunder rattle) takes the form of a large wooden box with handles, used by two men, and having inch diameter or larger round pebbles inside as sound-makers. As the name *'tiitskmin* implies, it is used exclusively for performances of a *ha'wilth*'s *'tiitskin* dance.[38] During this chiefs' thunderbird dance, this type of rattle is used out of sight of the guests at the *'tliitsuu* or *'nuushitl* (feast or potlatch).[39] I have heard old-timers describe these rattles as being as much as five or more feet long and three feet wide. Sometimes the pebbles were rolled from one end of the box rattle to the other end; sometimes the massive rattle was shaken. These comparatively massive *'tiitskmin* are used in concert with several other types of noisemakers setting up the desired cacophony.

The fourth type of Westcoast rattle, the *nuulthmin* is connected to the now defunct *nuulthim* (dog eaters) secret society. The *nuulthmin* takes the form of a pair of cedar

withes bent round a form into two hoops measuring ten or twelve inches in diameter. Numerous large seashells of the *Pectinidae* family, popularly referred to as scallop shells, are pierced near their hinges and hung from the two withe hoops in such a manner as to cause a loud and harsh sound when shaken. These rattles were carried by the *nuulthim* dancer as he circled the bighouse fire properly, from left to right.

The fifth class of rattle used on the West Coast is the *kuxmin* (noisemaker). *Kuxmin* are usually carved in the form of a bird, most often a *ko-ishin* (raven) or *'tsiixwatin* (eagle). The beautiful bird rattle in Ehlers' collections (fig. 1) is a *kuxmin*. Depicted here is not a *ko-ishin* or a *'tsiixwatin*; it is an *axaps'yi/tluux'wichit* (pileated woodpecker), the largest of several species of woodpecker resident on the coast we share with them.[40] The *kuxmin* is used exclusively by a *ha'wilth* or, in certain instances, his chosen representative. We can safely say this *kuxmin* was the treasure of a *ha'wilth*. *Kuxmin* are shaken in a counterclockwise direction with the arm and hand holding the *kuxmin* at a right angle to the user's body, so that the forearm is parallel to the ground or floor the user is standing on. The loud hiss of the *kuxmin* accompanies the user while singing a *'tsiik'yak* (prayer chant). We use these chants to call our ancestors from the limits of the universe to come and be with us at momentous times in our lives: to give us strength; to witness the ceremonies and rituals we are performing; to keep us focused on the business at hand; and to keep us honest about the rights and privileges we show our guests as part of our particular history. The three most common uses of *'tsiik'yak*, and therefore *kuxmin*, are as follows: (1) when a *ha'wilth* shows his most prestigious dances and other forms of crest displays, a *'tsiik'yak* is sung before the display; (2) when a member of one of our royal families dies, a *'tsiik'yak* is intoned as part of the funeral rituals; and (3) when a *ha'wilth* shows his *kwayaa'tsiik* (wolves) the most powerful symbol of his authority, a *'tsiik'yak* used exclusively for this purpose must be performed. Clearly then, the *kuxmin* is itself a symbol of high authority.

On the West Coast we use symbolism derived from the smaller and less showy yet equally handsome *'tlehma* (red-shafted flicker), another woodpecker species, more than we do the *axaps'yi/tluux'wichit*. Historically, the Uu-inmitisat-h *ha'wilth*, *'Tlehasim*, before going to war, rubbed a *'tlehma* skin all over his body after ritually bathing in ice cold water as his secret *huu-apsi* (medicine to make one strong).[41] Wiisatskum (the queen of the 'Tuu'kwaat-h First Nation), the *hakum* of the 'Tuu'kwaat-h, a smaller tribe on our coast, has a *'tlehma* depicted on her *thliitsapilthim* (crest curtain).[42] My own house, Takiishtakamlthat-h, has the right to use the *'tlehma* as a family crest. Traditionally, we mount bundles of brilliant red and black *'tlehma* tail feathers at the sides of our *tlaaxsaatim* headdresses.[43] These headdresses, powerful visual symbols of chiefly status and authority in our potlaches, are owned by a small number of *ha'wiih* (hereditary chiefs).

The woodpecker depicted by the *kuxmin* is clearly the *axaps'yi/tluux'wichit* or pileated woodpecker. Of the ten species of woodpeckers on our island, the pileated woodpecker is the largest and showiest both visually and audibly. This *kuxmin* has been masterfully sculpted and this makes its identification easier. Clearly visible at the top of the bird's head is the telltale crest of the *axaps'yi/tluux'wichit*. The powerful beak of this bird is faithfully reproduced by the carver. The *axaps'yi/tluux'wichit* uses its

beak to tear the bark off of trees and uncover ants and other insects, its favorite source of sustenance. This sturdy tool is also used to create, annually, the hollow in a tree that will form the home of the nesting *axaps'yi/tluux'wichit* and its mate.

The carver of this *kuxmin* has taken the liberty of painting much of the bird's head and all of its neck red. I had a suspicion that the red paint was Chinese vermillion, traded popularly in small envelopes and, later, larger leather pouches along our West Coast. This was confirmed by the analysis conducted by Tom Birch. This *kuxmin* has a shiny patina of human oil from being handled a lot. The rich glow of the patina may have been added to by human handling over the years since its removal from our home country. The carver's choice of red is odd, since the head of the *axaps'yi/tluux'wichit* is mostly black with a prominent white stripe running down each side of its otherwise completely black neck.

The carver of this *kuxmin* has also taken the additional liberty of adding considerable length to the neck of the *axaps'yi/tluux'wichit*. The longer neck may have been a means of adding resonance to the *kuxmin*, or it may have been an unconscious or conscious effort of the carver to make the *kuxmin* resemble the much more common *ko-ishin* form of West Coast bird *kuxmin*; the angle of its head certainly resembles the more common *ko-ishin kuxmin*. In addition, the position and proportion of the wings relative to the body recalls the *ko-ishin* type. The wings and tail of the *kuxmin* each have large concentric, roughly ovoid design elements representing the site of articulation for these active parts of the bird's body. These joint forms consist of three concentric angular ovoids with the two outer ovoids separated by a field of blue-green (which I thought was copper-based but proved to be made from the mineral celadonite) and the central element solid black. The tail joint has a small black lobe projecting from the middle of its outer edge toward the handle of the *kuxmin*. This black lobe creates a rhythm with the trailing ends of the wings as they sweep back along the upper edge of the *axaps'yi/tluux'wichit*'s body. The red triangles on the outside corners of the stylized tail are not modeled on the real bird.

I was interested to learn what kind of wood was selected by the carver of the *kuxmin* and what material was used to create the rattling sound. Among the most common woods used for carving *kuxmin*, in the past and today, are yew, maple, alder, yellow cedar, and red cedar. I have used them all at various times for carving *kuxmin*. The wood analysis showed it to be alder. The x-ray picture indicates that the belly of this *kuxmin* contains enough small pebbles to create the desired sound, not unlike a Mexican maraca (fig. 9). I was surprised, however, by their angularity. When I make rattles, I pick smooth pebbles (from beaches or rivers) that are small enough to create a hiss as opposed to a clatter. The angularity of the pebbles in this instance would wear against the interior wall of this rattle. I have seen a number of old rattles where the noisemakers have indeed worn through the wall of the rattle's sound chamber. Once shotguns became common on our coast (circa 1880), lead shot of various sizes replaced pebbles. Alternately, it may have held the baby teeth of the owner's children, collected over time for this purpose, a common Westcoast practice. The carver of this alert-looking *axaps'yi/tluux'wichit kuxmin* created enough symmetry in his sculptural composition and painted detail to please the eye, yet the bird depicted is not so symmetrical as to look stilted

or lifeless. His choices represent a great combination of astute observations of nature and traditional stylization. This *kuxmin* must have been treasured by its owner family as it passed from one generation to another.

It is important to recognize that this *kuxmin* has been displaced from its real original home, its place of original and deepest meaning. It was created for a specific person, in a specific family, in a specific clan, in a specific First Nation. It was created for specific purposes. It was created to function within a community with a specific belief system. While some aspects of it can be studied and its general cultural and ceremonial context can be understood, there is a level of knowledge about the *kuxmin* that is privileged only to the members of the family of its origin.

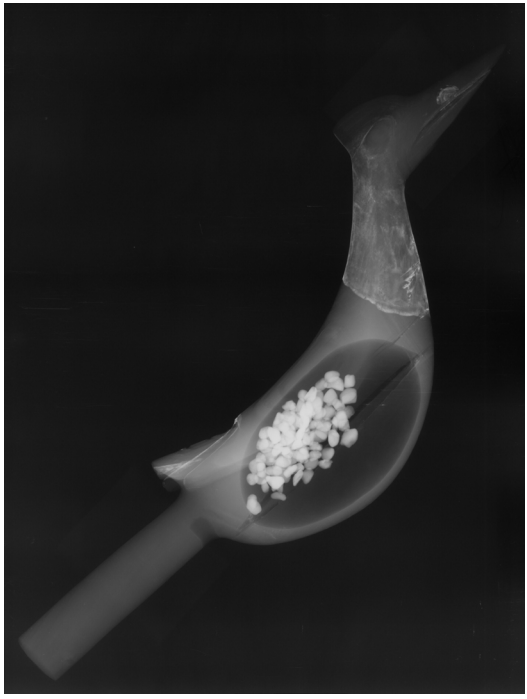

Fig. 9. *X-ray image of the* kuxmin *showing pebbles in the rattle's cavity. Photo courtesy of Moesgaard Museum.*

X-Ray Fluorescence Analysis of Pigments and Wood—Thomas Birch

When I was first approached by Naum and Ahlqvist about the project, I was immediately excited by the prospect of being involved with the analysis of such an interesting group of objects, as well as the opportunity to investigate pigments—a medium that I had previously very few encounters with. It was only after the first online team meeting with Aay Aay Gidins and Taa.uu 'yuuwans/Jisgang Nika Collison from the Haida Gwaii Museum that I fully appreciated the significance of the objects—not as old souvenir art pieces but potentially as valued cultural items embedded in ritual practices important in the past and present. I was further humbled when I learned that consultation and permissions would be needed from clan elders before conducting any analysis, emphasizing the potential sacred importance of the treasures. It was during this same meeting online (when describing the XRF method for everyone) when I first realized that, while the analysis may be described materially as "nondestructive," it doesn't necessarily mean that it is not invasive by other means (conceptualizing such objects both in sacred and spiritual terms). It seems so plain and simple, going back to

my bachelor's reading on sociocultural norms, cultural relativism, and agency, but on reflection I can see clearly how time spent in my profession has rooted me deeper into a mostly material way of thinking.

One of my main motivations for collaborating in the project was the unique opportunity to marry the results from archaeometric investigations with the invaluable knowledge shared by Gidins, Collison, and Ḥaa'yuups. As archaeologists, we rarely, if ever, have the opportunity to ask questions or be provided with oral knowledge from the craftspeople of the past; such an endeavor is often left to anthropology, and even then it is often with artifacts contemporaneous with living communities. On this occasion, we could combine the analytical results with the knowledge shared by the knowledge-keepers, learning more about past objects from existing people and communities—a rare occurrence and a rather unique collaboration opportunity. One example of this (in our case) perfect union was being able to link the knowledge of binding agents (fish eggs), carving practices (softening with sea water), and materials (pigments) with the chemistry observed. Making sense of such chemical data without the knowledge shared by Gidins and Ḥaa'yuups would not only have been far more difficult (if not impossible) but would have led to more speculative interpretations and conclusions.

The analysis began with careful macroscopic studies to observe areas of interest for further study. These observations were explored to determine the main materials used to manufacture the objects (wood speciation and anatomy), including the composition of their colored decoration, staining (chemical analysis), or both. Traces of tool use were also studied using various microscopes to determine the tools and techniques used during manufacture. In addition, three-dimensional models were created using photogrammetry, a method of stitching individual photographs together to produce digital models using computational algorithms. These models were further processed, in conjunction with some of the results from chemical analysis of the decoration, to produce digital restorations and reconstructions of the original appearance of the objects. A detailed description of the analyses summarized here can be found in full in the accompanying forthcoming publication.[44]

Each object is made from wood, and shows traces of woodworking from tools (gouge, chisel or knife, saw) typically used to carve such objects.[45] Ḥaa'yuups shared with me that the *'chak'yak* (single-hand adze) is the most common tool used to rough out any but the smallest of woodworking projects.

Each object was carved from a single piece of wood (with the exception of the *sGaaga* crown and the modern base block addition hosting the model totem pole). The rattle was made from a single piece of roundwood, the model totem pole from a section of a branch or trunk, and the figure from the outer part (excluding the central part) of a tree trunk. The back of the model totem pole is hollowed out, probably to allow it to have been mounted or attached to an upright holder of some sort. Both the rattle and *sGaaga* figure show signs of repair where parts have been glued back together. Chemical analysis of the wood of the model totem pole indicates elevated concentrations of sodium and chlorine, elements commonly found in salt, indicating that the object may have been soaked in sea water during the process of wood working, making

it softer and easier to carve. Ḥaa'yuups related that when he was apprenticing at the Thunderbird Park in Victoria with Henry Hunt, the well-known carver, he learned that Hunt's father-in-law, Mungo Martin, who worked at the park in the 1950s and 1960s, used to soak his model poles and other small carvings in a five-gallon bucket of tap water when he was not working on them. The carving shed at the park was some distance from salt water, which would have likely been used in coastal locations.

Chemical analysis was used primarily to determine the main chemical elements constituting the decoration, which were subsequently used to help identify and interpret the likely sources of the colorants used. The principal method of analysis was x-ray fluorescence (XRF), a nondestructive form of chemical analysis. The analysis works by bombarding the surface of a material or an object with high-energy x-rays and then measuring the secondary (fluorescent) x-rays emitted afterwards. Each chemical element can be characterized by the secondary x-rays emitted. Each analysis will produce a resulting spectrum showing x-ray lines, which can then be compared to those x-ray lines characteristic of the different chemical elements to determine which are present. Under certain circumstances, the analytical results can be held to be representative of the bulk chemical composition, resulting in quantitative chemical data (often represented as a composition of different elements or oxides totaling 100 percent). The instruments can be checked for their accuracy and precision by measuring standard reference materials with a known composition, comparing the results obtained with those values certified to measure the difference between them, as well as the error.

For this study, the results are regarded as qualitative, which means that although the containing elements can be identified, they cannot be accurately quantified. This is because, for example, the analysis of the surface decoration will also include results from the wood underneath, essentially "blurring" the results from both the wood matrix and anything overlying it. Sometimes, as is the case and purpose of the nondestructive analyses in this study, qualitative analysis is sufficient for identifying the main chemical components present and thus allowing for an interpretation of what the decoration is likely made of and from.

Two different XRF instruments were used to study the objects. The first one is a bench desktop XRF, essentially a chamber in which objects can be placed and sealed under vacuum for more accurate analyses (removing the potential effects of any contamination in the environment, such as dust particles in the air); in this study, a Bruker M4 Tornado micro-XRF was used. The micro-XRF has the advantage of producing detailed chemical maps of areas analyzed, allowing for their distribution to be spatially mapped and examined in relation to other elemental maps. This is because a small micro x-ray beam is used to traverse the analytical area, with a resolution as small as 20 microns, building up a very detailed pixelated image representing the spatial distribution of elements (either individually or combined as a false color image).

Due to the size of the pieces in relation to the chamber of the desktop XRF, it was not possible to always position or orient them to access certain points of interest for chemical analysis. In order to access these hard-to-get-to areas, a second instrument was used, commonly referred to as a portable XRF. This is essentially a piece of

hardware, shaped like a gun, which can easily be transported to analyze objects that are otherwise hard to access, such as those that cannot leave museum collections or premises and those that cannot be exported from a given country. While the portability of this instrument is clearly advantageous, analyses are often performed in "as air" conditions (not in a vacuum), meaning background "noise" and any contamination from the composition of the air may affect the results. Likewise, the small size of the instrument means that larger areas are often analyzed, in the range of several millimeters or a few centimeters. This means that detailed areas smaller than the beam size cannot be separated from the surrounding area during analysis. In this study, the portable XRF was used to analyze surface decoration and wood on the objects where it was not possible to do so via the desktop XRF.

The chemical results from the XRF analyses helped to illuminate the chemical composition of some of the colorants used, providing fascinating insights into the likely origin. For the *sGaaga* figurine, the black color (i.e., the eyes) is rich in calcium and phosphorous, indicative of the mineral apatite, otherwise known as "bone" and therefore in accordance with the recipe of "bone black." This would be formed by burning bone, crushing and/or mixing the remains (ash) with some binding medium, which in this case appears to contain common soil, as indicated by the iron oxide and other common earth elements present. The red color is rich in lead, pointing toward the use of "red lead" pigment, an oxide of the metal that can be found naturally as the mineral "minium."[46] Some of the red areas analyzed show similarities with the composition of the bone black, indicating this may have been painted first (as a base layer or coat) before painting red pigment on top.

The black color used in the *kuxmin* also appears to be consistent with bone black, with a composition rich in the elements found in bone (ash), mixed with those found in common soil. The white color of the eyes is different in composition to the white found on the underbelly of the bird. The white of the underbelly points toward the use of an ash-based white paint, such as plant or wood ash rich in alkali compounds of magnesium, potassium, and calcium. The white of the eyes, however, is richer in phosphorous, indicating this white to have been produced from white bone ash. The red color present mostly on the underbelly of the bird is composed almost entirely of two elements, mercury and sulfur. These two elements are found most commonly and exclusively in the red mineral cinnabar, a mercury sulfide also referred to as "vermillion."[47] The blueish-green color found around the eyes is more complex to identify based on its composition, containing potassium, alumina, silica, and iron. These elements, however, are commonly found in the "green earths" found on Haida Gwaii and the Northwest Coast, silicate minerals that are green in color, such as glauconite and celadonite.[48] Some of the blueish-green areas analyzed show phosphorous, again indicating that the color was probably applied over a white base layer made from bone ash. It is interesting that both the rattle and model totem pole consistently showed comparatively higher levels of sulfur than the figurine. While this might be residual from the metal-based pigments (i.e., mercury sulfide), it also seems plausible and likely that this element is a remnant from the binding medium used to make the

colorants—fish eggs. This possibility was pointed out by Gidins, who learned from the elders about the use of fish roe and slime as binding agents.

The model totem pole exhibits the largest array of colors. Although bone black was also identified on the model, this bone black appears to be purer, mostly made from calcium and phosphorous only, lacking other common earth elements. The black identified on the base is different in that it also contains cerium, an element found commonly in modern paints where cerium oxide is used, indicating this base unit of the model to be a modern addition, most likely fixed to the object by the museum curators. A third black color was identified based on the chemical composition rather than the appearance. The third black, located on the side of the bear's face, is rich in zinc and lead and contains visible red inclusions that are rich in mercury. Based on the composition, this third black area may originally have appeared red, a form of red lead containing cinnabar (mercury sulfide) inclusions. The blackening of red lead has been observed in previous studies.[49] The white color observed in the recess of the eye contains elevated metal contents of lead and zinc as well as calcium, indicating that a lead carbonate is likely to be the main mineral used, host to other accessory minerals (such as zinc). It appears that this white may also have been used as a base layer underneath some blueish-green areas, due to the lead detected in the analyses. The blueish-green contains both iron and phosphorous, indicating that this may be the mineral vivianite (iron phosphate), which was used on Northwest Pacific Coast objects.[50]

The chemical analyses are to some degree consistent with the ethnographic observations made in the late nineteenth and early twentieth century, especially regarding the recipes for black, green, and blue colorants and pigments as well as the binders. Edward Keithahn, for example, writing about Tlingit and Haida totem poles, noted that they "were painted with a type of fish-egg tempera, consisting of a mineral pigment mixed with a mordant of fresh salmon eggs and saliva. The colors originally were red, black, and apple green. The red was obtained from hematite, the black from graphite and carbon, and the apple green from various copper ores common in the region."[51] Dennis Wood, an old member of an Eagle clan at Gitlaaxdamks, situated northeast of the Haida area, added that "the earlier native paints were fixed with the oil of the salmon roe. The dyes were extracted by chewing from the bark of the cedar. Red ochre was also used. Green (*mehlatk* and *lawrawsan*) was obtained by pulverizing a green rock. Black was produced from the charcoal of alder ground together with the oil of salmon roe."[52] And finally, Franz Boas, who conducted ethnographic research among the Kwakwaka'wakw, was informed about the use of powdered coal and graphite to make black pigment, roasted red ochre or steamed fungus growing on alder for red, burnt shells for white, and "a bluish clay found in Koskimo, where it occurs in a broad vein in which pieces of metallic luster are embedded" for a light dull blue.[53]

Overall, the chemical analyses reveal that some natural pigments (green earths, vivianite) and local colorants (bone black, ash white) were used in combination with nontraditional and nonlocal (namely metal-based) pigments and paints that became more readily available after the 1700s through trade, such as minium or red lead, vermillion red, and lead white. The results from wood and chemical analysis reveal

the objects to be made using traditional methods and mediums; however, the presence of nonlocal paints and pigments on two of the pieces provides nuanced evidence on their decoration that point toward a development of artistic practice brought about by the intersection between creative artists and the particular sociotemporal setting of colonialism.[54] Thanks to the results of these analyses, not only can their manufacture be better understood and reconstructed but their original color appearance can also be reconstructed based on the identification of the paints and pigments used.

Conclusions

The figurine of *sGaaga*, the *kuxmin* rattle, and the totem pole model were collected in a moment of escalating European and American colonial ambitions along the Northwest Coast of North America overlapping with an interest in Indigenous art and culture. This assemblage is a valuable heritage, a resource for understanding artistic expression, materials, and historical embeddedness of Northwest Coast art, as well as a window into Danish collecting interest in the early twentieth century.

Our collaborative analysis contributed to a better understanding and contextualization of these three treasures. Analyzing historical records, Naum and Ahlqvist showed how this collection fits into the larger historical contexts of collecting and evaluating Indigenous art, its possible trajectory of movement from the Northwest Coast to Denmark, and the likely grounds for its appeal to Louis Ehlers. Gidin's and Ḥaa'yuups' examination of the *sGaaga* figure and the *kuxmin*, based on oral history and cultural knowledge, illustrated that the meanings of these treasures were, and continue to be, significantly different for Indigenous communities than for the European collectors. These are pieces that animated Indigenous people's connections to their history, ancestors, and each other; heritage deeply embedded in life, encapsulating memorable events and customs. In a sense this study illustrates how inadequate the Western terms of "object" or "artifact" (as conventionally defined) are to understanding these pieces. These terms fail to recognize the intangible elements—stories, chants, dances, genealogies—that are inalienable parts of material heritage for the Northwest Coast people. Birch's chemical analysis of pigments, aided by Indigenous knowledge, provided information about material choices, processes of carving, and recipes for different colors, illustrating how interdisciplinary analysis and research can identify and reignite otherwise intangible aspects of material culture.

Reflecting on the state in which many Indigenous objects are preserved in European museums, Cara Krmpotich and Laura Peers argued that these items "exist in a kind of limbo which is both terminological and social."[55] This is certainly true of the First Nations' and other Indigenous objects in Danish museums, including the Ehlers Collection. The museum has very scant and mostly incorrect information about the studied pieces. They are classified simply as "Northwest Coast," "American Indian," or "Haida," and no previous consultation about them has been held with the First Nations in the Pacific Northwest region. One of our goals was to bring the objects out of this limbo, to recognize and identify the cultural belonging of these treasures, to counter the misinformation in museum records, and to understand these pieces

from the perspective of Haida, Nuu-chah-nulth, Wuikinuxv, and Kwakwaka'wakw artists and knowledge-keepers. In many Indigenous communities, and as expressed by Ḥaa'yuups, the study of heritage artifacts is an important way of reclaiming cultural knowledge suppressed during the colonial era and as an act of decolonizing knowledge.[56] In bringing these treasures to the spotlight and out of the terminological and social limbo, we followed a process resembling archaeological excavation. It was a process of revealing layers—of the objects' histories, their material and symbolic dimensions, piecing together fragments based on exploration of these pieces through oral histories, archival records, and laboratory analysis.

What was described in the museum's record as "dancing rattle in a shape of bird; from northwestern America; work of American Indian" was identified by Ḥaa'yuups as a *kuxmin*, a noisemaker used by a local Nuu-chah-nulth *ha'wilth*, a hereditary chief, while singing a prayer chant in very specific social and communal settings demanding an overt expression of authority. The chants, assisted by the sound of the rattle, connected with spirits and ancestors. The artist that made the *kuxmin* chose the pileated woodpecker as his model, the largest and showiest of the bird species that had an important spiritual and mythological role for Nuu-chah-nulth people. Indigenous knowledge combined with chemical analysis allowed to discern an array of colorants and pigment preparation recipes used by the artist, including use of fish eggs as a binding agent. It is this component, combined with frequent handling of the *kuxmin* (testified by the high degree of wear on the handle), that added visible shine to the finished rattle.

Gidins has redefined "a shaman, made by American Indians from northwestern America" as a representation of a Haida *sGaaga*, or medicine man, perhaps fashioned as a souvenir during the 1893 Chicago World's Fair. Very likely a carving of a specific medicine man rather than a generic representation, the medicine man is depicted in a state of trance, calling upon an animal or supernatural being in order to help a sick person—one of the tasks and skills of the *sGaaga*. The elements carved—the crown, necklace, and apron—are all significant for understanding the identity of this *sGaaga* and his spiritual helpers. The apron in the Chilkat/Naaxiin weaving, in itself a prized possession and a reflection of social standing and accomplishment of the medicine man, depicts a winged figure, probably a bird. This bird helper, like the animal whose claws adorn the man's neck, assisted the *sGaaga* in his liminal crossings and communication with supernatural beings. The color scheme used by the artist represents a traditional choice of black (composed of burnt and crushed bone mixed with ash and a component rich in iron oxide, perhaps ochre or soil) and reddish-brown (identified to be red lead and not ochre, which was traditionally used for the color according to Haida elders).

The wooden model of a totem pole is described in the museum's catalog as "made by the Haida, c. 1875." Curators Robin Wright (Burke Museum) and Sarah Holland (Museum of Anthropology, University of British Columbia) established it as Kwakwaka'wakw, circa 1900.[57] Further consultations with a Kwakwaka'wakw carver led to refining the knowledge about the object:

> This is an interesting pole. I think that it is from a Waskashan speaking group, but [it] doesn't appear to be a standard Kwakwaka'wakw carving to me. I also think it's probably earlier than 1900 (perhaps 1890–95), as it doesn't show any influence from makers from the Alert Bay and Blunden Harbour areas, who had such a huge impact on the production of makers from that area in the early twentieth century. To my eye, I think it would be from the Wuikinuxv or some other Heiltsuk-adjacent culture, as there are a number of northern features mixed into the carving (especially the bottom figure and the bear, but even the small face in the centre of the pole looks more mainland central coast to me).[58]

Other Wuikinuxv carvers and knowledge-keepers, David Stevenson and Frank Hanuse, established it as possibly originating from Kildala (Gàldala). As an important port for commercial fishing and a site of a fish cannery, the village attracted some traffic, including passing tourists interested in souvenirs. The pole could have been carved for the tourist trade.[59]

The model was painted with a palette of colors, some of which faded away or darkened, obtained from locally available minerals and through trade. Its glossy surface resulted from the presence of an oily, sulfur-rich fish component used as a binding material, and the heightened content of sodium and chloride indicated possible soaking of the wood in sea water.

The chemical analysis and information from knowledge-keepers indicated that some pigments used on the three pieces were made by processing locally available mineral and organic resources, but the artists also adopted commercially made paints and pigments made available through trade. This addition of vermillion and lead paints went hand in hand with stylistic developments in art, changes in artistic sensitivities and forms of expression. The *sGaaga* figure exemplifies this process well. On the one hand, as pointed out by Gidins, the carving captures an image of a socially and culturally important persona in Haida communities, respected and rewarded for his skills by Chilkat/Naaxiin textiles. The *sGaaga* is carved in the act of communicating with his animal helpers and crossing to another world. Thus, the carving is positioned in the communicative conventions of Haida art and in Haida ontology. On the other hand, as suggested by Taa.uu 'yuuwans/Jisgang Nika Collison, the stylized realism of carving was something relatively new in Haida art, an effect of experimentation and inspired by Western ways of figurative art.[60] The materials used for carving and painting the figurine similarly merge different temporal contexts.

Our combined research contributed to a new appreciation of the collection, illustrating the validity of the multi-epistemological, interdisciplinary approach. The collaborative effort identified the richness of the objects' stories, the belief systems and the regimes of value these treasures functioned in across time and space. For a long time, colonial violence and systemic inequality have bled into academic practice, forming conventions that value certain types of knowledge more than others and ordering different voices in hierarchies, effectively silencing some communities.[61] Our underlying premise was based on a recognition that knowledge flows from different sources and experiences. All knowledge practices are porous, contextual, culturally

and socially situated. While sometimes incompatible with each other because they are focused on different details and regard specific aspects of accounted phenomena to be more important than others, different epistemologies may also overlap with each other, allowing us to reach a more holistic understanding—as showcased in the present article. The plural, relational conceptualizations of the objects' meanings and values, and the diverse interpretative practices that we have employed, enhances the quality and completeness of research, and illustrate the fruitfulness of collaborative, multi-epistemological methods.

As demonstrated by our research and other collaborative studies of Indigenous treasures in non-Indigenous museums, there is much to be gained from decentering and challenging traditional academic research practices. This approach recognizes Indigenous knowledge as a primary source, embraces coauthorship, and bases itself on various sources and methods (including those more attuned with Indigenous production practices such as storytelling and object-centered conversations). Such an approach produces richer and more nuanced accounts of objects and their biographies; it is more credible, respectful and ethical, initiating a necessary process of acknowledging and mending injustices and overcoming ignorance embedded in colonial categorizations of collections. If archaeology and other material culture studies wish to be truly multivocal, an inclusive approach such as the one undertaken here should be the norm and not the exception.

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Notes

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4. Thomas Birch et al., "Souvenir Art: Non-Destructive Analyses of Surface Colors and Wood Speciation of Indigenous Northwest Pacific Coast Objects in Danish Collections," in prep.

5. Linda Martin Alcoff, "Extractivist Epistemologies," *Tapuya: Latin American Science, Technology, and Society* 5, no. 1 (2022): https://doi.org/10.1080/25729861.2022.2127231.

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9. Out, *Wood Analysis*.

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18. "Nationalmuseets Etnografiske Samling 1934," *Geografisk Tidsskrift* (1934): 72; Field Museum amassed an outstanding collection of northwestern objects through purchases: see Cole, *Captured Heritage*: 165–211.

19. H. Rink, "Om Resultaterne af de nyeste etnografiske Undersøgelser i Amerika," *Geografisk Tidsskrift* (1892): 207; Kaj Birket-Smith, "Folke- og kulturvandringer i det nordlige Nord-Amerika," *Geografisk Tidsskrift* (1929): 27–59; Kaj Birket-Smith, "Nye Samlinger fra Nord-Amerikas Indianere," *Fra Nationalmuseets Arbejdsmark* (1932): 43; Kaj Birket-Smith, "Plan for en arkæologisk ekspedition til Alaska sommaren 1933," *Geografisk Tidsskrift* (1933): 62–65.

20. Thomas Thomsen, "Nationalmuseets etnografiske Samling 1931," *Geografisk Tidsskrift* (1931): 67. In the obituary of Knud Rasmussen published in *Fra Nationalmuseets Arbejdsmark 1935*, T. Thomsen calculates that Rasmussens's fifth Thule expedition resulted in the donation of 13,752 objects.

21. Kaj Birket-Smith, "Foreløbig beretning om den dansk-amerikanske ekspedition til Alaska 1933," *Geografisk Tidsskrift* (1934): 187, 227. Photograph of Eyak dance pole: https://samlinger.natmus.dk/es/object/82069.

22. "Nationalmuseets Etnografiske Samling 1933," *Geografisk Tidsskrift* (1933): 158; "Nationalmuseets Etnografiske Samling," *Geografisk Tidsskrift* (1934): 71; https://samlinger.natmus.dk/es/object/82058.

23. Birket-Smith, "Foreløbig beretning": 221; Kaj Birket-Smith and Frederica de Laguna, *The Eyak Indians of the Copper River Delta, Alaska* (Copenhagen: Levin and Munksgaard, 1938); see also James Clifford, *The Predicament of Culture: Twentieth-Century Ethnography, Literature, and Art* (Cambridge: Harvard University Press, 1988).

24. Through articles and letter published in *Danmarksposten*, available to Danish communities in the United States and Canada; Thomas Thomsen, "Nationalmuseets etnografiske Samling 1931," *Geografisk Tidsskrift* (1931): 69.

25. In *Souvenirs of the Fur Trade: Northwest Coast Indian Art and Artifacts Collected by American Mariners, 1788–1844* (Cambridge: Harvard University Press, 2000), Mary Malloy theorizes that the impulse to collect among the nineteenth-century American and European mariners and the choices of souvenirs related mostly to the mariners' own experiences rather than attempts to materially "catalog" encountered Haida, Kwakwaka'wakw, or Nuu-chah-nulth peoples. This might be true for the Danish mariners as well.

26. Jisgang Nika Collison, "Creating for Culture: Edenshaw's Haida Roots and Cultural Transformations," in *Charles Edenshaw*, eds. Robin K. Wright, Dana Augaitis, and Jim Hart (London: Black Dog Publishing, 2013): 25; see also Kathryn Bunn-Marcuse and Jisgang Nika Collison, "Gud Gii

AanaaGung: Look at One Another," *ab-Original: Journal of Indigenous Studies and First Nations and First Peoples' Cultures* 2, no. 2 (2018): 265–99.

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28. Birket-Smith and de Laguna, *The Eyak Indians.*

29. Birket-Smith, "Nye Samlinger": 49; see also Graeme Chalmers, "European Ways of Talking about the Art of Northwest Coast First Nations," in *Art, Culture, and Pedagogy: Revisiting the Work of F. Graeme Chalmers*, eds. Dustin Garner and Anita Sinner (Leiden: Brill, 2019): 229–40, for a general view on European assessment of northwestern art.

30. As told to me by personal communication with Haida scholar, knowledge-holder, fluent speaker, and grandmother-*nanaay* Dr. SGaana Jaads K'yaagaxiigans, Hot Springs Island, Haida Gwaii, 2005.

31. As told in a recording by oral historian Nang King'aay 'uuwans James Young, as he learned from his oral historian father, Gidgii Dlaay.yas (also in a recording at Skidegate Haida Immersion Program from the reincarnation story told by Nang King'aay 'uuwans in 2006).

32. As told to me by personal communication with Haida scholar, knowledge-holder, and fluent speaker Dr. Gwaaganad Diane Brown, Skidegate, Haida Gwaii, 2021.

33. Bill McLennan and Karen Duffek, *The Transforming Image: Painted Arts of Northwest Coast First Nations* (Vancouver: University of British Columbia Press and the UBC Museum of Anthropology, 2000): 90–98.

34. Each clan had their own face paintings, described in John Reed Swanton in *The Contributions of the Ethnology of the Haida* (Leiden: Brill, 1905).

35. It is noted that the Haidas are the only ones to have used red in their tattooing.

36. Due to the Potlatch Ban, tattooing was not allowed after 1885.

37. *Uu-uutah* (whale harpooners), and more generally all whalers, sometimes used to refer to land hunters. Traditional male and female healers who typically specialized in particular fields of medicine such as child delivery, bone-setting, or herbal remedies. *Uushtakyuu* often had no children.

38. *Ha'wilth*—"wealthy one"—a chief. *'Tiitskin*—generic name for the thunderbird, all of which have proper names of their own.

39. *'Tliitsuu* is a feast, usually consisting of one main dish served to the members of one community or even a select group of one community, as contrasted with a *'nuushitl* or potlatch with many main courses and guests from as many communities as can be accommodated.

40. *Axaps'yi* and *tluux'wichit* are two names alternately applied to the pileated woodpecker, the largest woodpecker found on the West Coast. This bird is striking in the extreme because of its sharply contrasting color scheme—predominantly black with some white bits and a flamboyant red topknot—and its high-pitched, piercing call, which never fails to draw attention. This is not a common bird in our forests.

41. *Uu-inmitisat-h*—one of several small independent groups of Westcoast people including the 'Tlitsaat-h, Kilthmaa-at-h, and Kwaatsweyat-h, who joined forces with the Aahuusat-h to make war on the O'tsuusat-h confederacy. After the protracted war, all these smaller groups amalgamated with the Aahuusat-h. Later, the few remnants of the O'tsuusat-h and Maa'nuusat-h also joined the Aahuusat-h.

42. May refer to the chief's wife, the chief's eldest daughter, or a woman sitting in a chief's seat, typically holding it while waiting for a male heir to come of age and take the seat.

43. A *ha'wilth's* headdresses featuring a small frontlet mask worn above the brow of the dancer and used to scatter bird down as a sign of peace.

44. Birch et al., "Souvenir Art," in prep.

45. Out, *Wood Analysis*.

46. Elisabetta Gliozzo and Corina Ionescu, "Pigments—Lead-Based Whites, Reds, Yellows, and Oranges and their Alteration Phases," *Archaeological and Anthropological Sciences* 14 (2022): 17, https://doi.org/10.1007/s12520-021-01407-z.

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50. Melonie Ancheta, "Revealing Blue on the Northern Northwest Coast," *American Indian Culture and Research Journal* 43 (2019): 1–30, https://doi.org/10.17953/aicrj.43.1.ancheta.

51. Kethahn quoted in Marius Barbeau, *Totem Poles: According to Crests and Topics* (Volume 2) (Ottawa: Department of Resources and Development, National Museum of Canada, 1950), 773.

52. Barbeau, *Totem Poles,* 828.

53. Franz Boas, *The Kwakiutl of Vancouver Island* (New York: American Museum of Natural History, 1909): 402–3.

54. Federica Pozzi, Elena Basso, Samantha Alderson, Judith Levinson, Madeleine Neiman, and Soraya Alcalá, "Aiding the Cleaning of Four Nineteenth-Century Tsimshian House Posts: Investigation of Museum-Applied Surface Coatings and Original Polychromy," *Heritage Science* 9 (2021): 42, https://doi.org/10.1186/s40494-021-00513-4. The study indicates that industrially made paints were used for making pieces of art not intended for tourist markets.

55. Krmpotich and Peers, *This Is Our Life,* 91; see also Sonya Atalay, "Braiding Strands of Wellness: How Repatriation Contributes to Healing through Embodied Practice and Storywork," *The Public Historian* 41, no. 1 (2019): 78–89, https://doi.org/10.1525/tph.2019.41.1.78.

56. See the studies in Bunn-Marcuse and Jonaitis's *Unsettling Native Art*, as well as community projects like Nuu-chah-nult Living Archive, led by Marika Swan, https://nuuchahnulthlivingarchive.com/, and Reciprocal Research Network, https://www.rrncommunity.org/.

57. Personal email communication with Robin Wright, April 23, 2021, and Sarah Holland, May 7, 2021.

58. Personal email communication with Sarah Holland, May 7, 2021.

59. Personal email communication with David Stevenson, August 4, 2021.

60. Bunn-Marcuse and Collison, "Gud Gii AanaaGung," 269, 284.

61. Hannah Cobb and Rachel Crellin, "Affirmation and Action: A Posthumanist Feminist Agenda for Archaeology," *Cambridge Archaeological Journal* 32, no. 2 (2022): 265–79, https://www.cambridge.org/core/journals/cambridge-archaeological-journal/article/affirmation-and-action-a-posthumanist-feminist-agenda-for-archaeology/B790BC2993D0955579548C2C7EF90B85; Craig N.Cipolla, "Posthuman Potentials: Considering Collaborative Indigenous Archaeology," *Cambridge Archaeological Journal* 31, no. 3 (2021): 509–14.