The next focus in my investigation of the ship model centered on the physical ship construction of the war canoe, and I set out to examine not only the stylistic features of the model, but also the materials implemented by the builders of the boat. However, even though I was assessing the more technical aspects of the ship model, such analysis further illuminated the societal and political landscape that characterized the Iban people within the Sarawak region of the late 19th century. Indeed, answers to questions like, "What was the purpose of this vessel?" and "How did the vessel serve its purpose?" grew clearer through researching the construction of the model, from the planking structure to the water-proof functionality of the boat's tall awning. Because the model is, after all, a model, I used it as a starting point for deeper analysis and research of the actual Iban war canoes it represents. Thus, the canoes that inspired the model were likely constructed in such a manner that would make them most effective for their primary function as warring vessels, enabling efficient navigation along the Bornean rivers and providing ample space for the Iban warriors and weapons.

Before delving into any societal or cultural implications, I initially focused on the essential construction features of the model. Measuring around forty inches in length, the ship model depicts a traditional Iban war canoe that likely spanned between forty and sixty feet from stem to stern (one should note that one of the model's drawbacks is its incomplete stem-post, which lacks an upper half portion of the stem that had broken off from the model). Most notably, as the model also indicates, these boats lacked nails, treenails, bolts, or even wooden timbers as a means of binding and holding the physical vessel together. Instead, the canoes were constructed almost entirely of wooden planks lashed together, starting first with the primary keel plank - also known as the lunas - that ran the entire length of the boat. The lunas then had two ledges about
one inch on either side of the keel plank, and subsequent planks (approximately four to five on each side) would then be laid edge-to-edge from each of these ledges. Native to Malaysia, the Iban to this day use the fronds of a native palm tree known as rattan for a variety of purposes, from handicraft to furniture making. Yet in the 19th century, with respect to canoe construction, the Iban relied upon rattan lashings, as opposed to treenails or other fasteners, to hold the planks firmly together (Horsburgh 36, 1858). One can see this lashing, edge-to-edge construction on the base and side of the canoe model (image 1).

During the late 19th and early 20th century, Iban tribes were often at war both amongst each other and against the British colonizers, thereby necessitating vessels that would facilitate their fighting capabilities and transportation in the water. The construction materials and methods used for the Iban war canoes were conducive to both efficient maritime travel and readiness for battle, thus serving its purpose as a fighting vessel. The reliance upon rattans as lashings underscores how the Iban were likely able to quickly re-fit and repurpose their canoes - an ability that would be most apt for circumstances involving unexpected attacks common in warfare. This is because the rattans themselves lacked durability and would quickly rot, and one firsthand account describes the Iban solution: "whenever a boat returns...the lashings are cut and the planks being separated, are taken up into the house. When she is again wanted the planks are taken down, and the boat reconstructed as before" (Roth 247, 1968). Moreover, such re-fitting would've been particularly essential in the event of damage or other impairment inflicted upon the boat from a naval attack. In a similar vein, the wood used in construction tended to be dense and heavy, thus enabling the canoe to better withstand rough and unpredictable currents in the water, which was not uncommon in the Sarawak and Rajang Rivers of Borneo. Finally, the canoe's lower deck - the large open space underneath the main deck, as indicated in the model
(image 2), likely served as a critical storage hold for both weapons and men. Indeed, one account claims the canoes were "sufficiently capacious to hold from seventy to eighty men" (Marryat 63, 1848).

The roof on the ship model and the paddles led to further research indicating awnings as a commonplace feature on such war canoes and paddles as a propulsive mechanism enabling stealthy travel along the rivers. Known as a "Kadjang," the awning was constructed out of palm fronds and served as a watertight, flexible cover for the canoe. During attack, it would provide some shelter for those on board, and, as demonstrated by the bend in the roof (image 3), could also be quickly rolled up and stowed away if need be, for the fronds were light in weight and relatively malleable (Hornaday 354, 1885). Such versatility would thus enable Iban fighters to adjust to particular warfare scenarios. The paddles (image 4) in the model are noticeably pointed at their ends, which, by minimizing the oar's surface area, entered the water more quietly without alerting enemies nearby - another essential capability for a warring vessel.

Thus, in analyzing the ship model's planking structure, lashing, awning, and oars, I obtained a much clearer understanding of how the Iban tribes implemented their canoes as fighting vessels. Having determined that such canoes were likely used for battle, a deeper examination of the nature of these battles themselves would perhaps provide an even more detailed picture of the Iban's lifestyle in the late 19th century. How, for example, did the maritime warfare compare between those battles fought amongst the Iban tribes and the battles between the Iban and the British foreigners? While my research so far has provided fascinating insight into the Sarawak region, I hope to examine even more questions such as this one pertaining to the cultural, political, and economic nature of the Iban people.
Image 1 (photo by author): Bottom stem side of ship model

Image 2 (photo by author): Main deck and below-deck space under raised awning
Image 3 (photo by author): Aerial view of the roof

Image 4 (photo by author): Paddles
Bibliography


