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« THE ART OF MODEL-MAKING », by Bernard FRÖLICH

Can we speak of model-making as Art?
Is model-making an Art? Is there any art in model-making? In which kind of model-making?

It is not easy to answer this kind of question, but a priori, it appears to me that some kind of model-making confine to Art: this is what I have tried to demonstrate in my book: “The Art of Model-making”.

So, let’s resume the question: is model-making an Art? If the practiced form of model-making is something different that a game of child which consists for example in making a navigating model conceived as a toy, (Although I have nothing against my colleagues who used to do navigating crafts), if this model-making made with the aim of being a scrupulous historical reconstruction and results by its choices, it requirements, its practices in an object of unquestionable aesthetical quality which would be as well a faithful and accurate reconstitution of the reality of its epoch, if this beauty so created by the model-maker is able to create to the lookers-on some emotion, then yes it will be possible to talk about Art, artistic creation leading to a real art object.

Therefore, what are the requirements of this kind of model-making? First, I said a great concern about historical accuracy. The model-maker will have to gather, before starting the building of his model, a best quality documentation, based on irrefutable historical sources and around this he will have to acquire a complete culture of the epoch he is interested in, or at least on the maritime history and naval ship building of this time. By the way, I would be tempted to specify that this epoch according to me, can only be the great epoch of sailing navy, let’s say around the 18\textsuperscript{th} century. Why this limit? For various reasons which are more or less personal and whose some of them could be questionable. At first, with regard to the sources, we do not have reliable documents before the beginning of the 18\textsuperscript{th} century even if some rare plans exist in the archives dated from the decade around 1680, but very few other written sources. The plans start being designed in the navy yards only around year 1720 and start to be completed with building estimates providing accurate and quoted information about raw materiel and written building techniques. Other source of great interest documentation: the genuine models appear in the museum collections in the middle of the 18\textsuperscript{th} century, although they are reliable as historical source only if they don’t have been awkwardly and abusively restored which is not always the case.

Then, there is to observe that the end of the century extended up to the end of the Empire, sees the navy of the epoch to reach a kind of apex: the technical machine that a ship of this time represents reaches the maximum of its efficiency before the last technical improvement of the 19\textsuperscript{th} century will come to prepare the great change of steam an plate-armour which according to me will fully adulterate the sailing navy of the old time, so rich in beauty and dream potential. Indeed, with the “Restauration Navy”, the decorations get simpler, the style become more abstemious and rigid, the colours are given up in the favour of black and white, and the shape of the hull is modified: the fore and aft curve traditionally very important in the 17\textsuperscript{th} century is about to disappear to leave the rigid and stern shapes of the mid 19\textsuperscript{th} century which are far from drawing the eyes as the elegant and decorated shapes of the 17\textsuperscript{th} and 18\textsuperscript{th} century vessels did. This is why I consider personally that only the navy from 1680 to 1820 cans inspire an artistic expression of model-making.
The model-maker attracted by this 18th century navy will have to make choices, and we are going to see that in his choices, all along his approach the artistic criteria will intervene to conduct his step, choose the solutions and finally will interfere on the quality and the beauty of the result of his work.

The attraction for this navy will drag him along little by little in a cultural way, in reading documents and plans analysis, in order to acquire by degrees a culture of this epoch, concerning naval shipbuilding and its human and technical environment. He will have to study the life on board and its difficulties and become familiar with special techniques of that time, such as growing of linen for example, which is a basic material for sail making, or this of hemp used for the numerous ropes composing the rig, or the metallurgic techniques for founding the guns and forge the anchors.

DOCUMENTATION

The search of documentary sources may happen in two different ways. The first one consists in going himself to rummage in archives to find out the plans or construction tenders which could allow a reliable historical restoration. But this is a very complicated work which is better to be done by some few specialists. The second way of proceeding is to use the work of these specialists in using the result of their searches. So, Jean BOUDRIOT after several decades of searches in archives and helped today by Gerard DELACROIX has published reference books on French 18th century navy, particularly the four volumes of “The 74 guns vessel”, since followed by a series of monographs about various vessels from the small schooner commissioned with two guns, up to the stately 80 guns tree-deckers. As a result, the most demanding model-maker has a direct access to reliable and complete documentary sources, whose detailed plans designed with much rigour are an unavoidable help for the user.

CHOICE OF THE MODEL

In this documentary source, the model-maker will be able to pick-out the model he is eager to realize. A frigate? A chebec? A lugger? A bomb-ketch? A trading vessel? Or a magnificent carved decoration three-decker? The criteria of his choice are numerous. He can succumb to the admiring examination of the elegant hull of a chebec, or to prefer “La Belle Poule”, superb 1765 frigate that he will imagine wearing her sails. Or he can simply choose a smaller or simpler model, like a schooner or a lugger bearing a less complicated rig. Therefore, the first choice to be done is this of the model. And in this choice, the practical arguments take place. The size of the model is important, and of course the scale, that the model-maker will be able to take different that this of his documentation. One of my friends realizes wonderful little models of frigate or vessels at very small scale like 1/288 which is six times smaller that 1/48 of the monograph documentation of “Ancre Collection” of J. BOUDRIOT and H. BERTI, and to intensify the whole he orders to action station, three or four hundred five millimetres high sailors acting on the deck or the castles.
THE SKELETON

Once the choice of the model has been done, it will be necessary to specify some options. Will the skeleton be represented? Or not? All the monographs do not necessarily describe the skeleton. The model-maker if so decided, will be obliged to study and design the skeleton before starting to realize his model. That is why, eager to build the small model of the schooner “La Jacinthe”, I have had to restore graphically the skeleton from the few elements provided by J. BOUDRIOT in the historical notes of the monograph, and so, I have been able to build an original skeleton model. In other cases concerned about the need to specify his choice in order not to build the same model as every body, the model-maker will change the name of the model, in fitting the relevant decoration.

A friend of mine has realized a very nice model of the schooner “La Topaze” according to the plans of her sister-ship “La Jacinthe”. Myself, starting the model of a brig on “Le Cygne” of J. BOUDRIOT, I have modified the decoration after having found the genuine design to represent “Le Cyclope”, but an incredible thing happened, at the first exhibition where I presented her, the only other one was as well another Cyclope, whose author who later became a friend of mine, Doctor LABAT, had led the same proceeding as me.

SAIL

Then frame? Not frame? This is a question of judgment and didactic will. But remains the choice of sail representation: with sails set, or without? By agreement, (in model-making, everything is often a matter of convention) I consider that a skeleton model, and particularly with an open skeleton to show the inner fittings should be represented without sails set. The whole sails set is rather intended for a model ready to navigate with hull shut by the complete planking.

Although here as well, exception to the principle could be found. For example, I have built a chebec in frame, leaving the port side non planked, including decks and castles to have the frame visible. But I have represented her having all sails set, estimating that such a particular ridding not very known having lateen sails on lateen yard represented nothing unless her sails were rigged. And so, the appearance of the mode on her starboard side shows a chebec ready to sail and allows to understand the working of these sails and their rigging.

As well, my model in frame of the schooner “La Jacinthe” bears the complete sail: I did not imagine that it could be possible to represent the rigging of a topsail schooner without installing all the genuine sails. For the classical square-rigger, this type of sails is so well known that I think that the representation of a model without sails is often preferable, allowing to see better details views of the deck and keeping in mind that in all cases the whole sails manoeuvres are represented even if the sails are not installed.

To make an end with the choices of representation of the sails, there is to say that the model-maker will be able to choose in some cases for particular disposals. For example, instead of showing the ship backward wind with her yards square braced, a beating to windward representation would be more interesting. The sails are athwart ship and it will be possible to rig the staysails which are not used with a backward wind, and so, show the ship putting on the best show one can have in a light wind. At this time, it would also be possible to install the stunsails but this type of representation is rather seldom, the model-makers shrinking from adding the difficult of accomplishment of this type of sail.
STAGING

This last point permits me to call up the possibility of particular staging. Indeed, the model-maker providing that he is well documented will be able to pick-out a staging personifying his choice. Here are two examples.

The presentation of the model of bomb ketch “La Salamandre” conducted me to a particular staging: in order to make understandable the bombardment role of the galliot, I represented her anchored and ready for the fray. To do so, she is brought to a single anchor upon the cable of which another rope was clapped. By heaving and veering these and setting steadying sails, the entire vessel could be pointed to the target. Range was achieved by the size of the charge, the timing of the explosion by the length of the fuse.

The mortars are on their location. One of them, ready to fire, the other one is still lying in its transportation site, the place of the mortars is being cleared. The tarpaulin which protect them at sea has been taken off, and the frame which support it partially removed.

As to the masting, if the sail have been folded, it have not yet partially been unrigged, which should have according to me led to an uneaesthetic representation. I had to pick-out this presentation estimated that the usual presentation of the vessel at sea could not display all the characteristics of the bomb ketch, all the more under sails where mortars and crafts are put back in place under shelter of a tarpaulin covering the whole deck.

Another particular staging is represented by my model of “La Belle Poule”. I have chosen to show the frigate bringing to, being abeam under reduced and opposite sails putting her crafts at sea to go and drop an anchor. The reduced sail shows the lower sails taken up on their yard, the topgallants lowered on their top, a jib hauled down in the net of the bowsprit roughly moored as well as the staysails. The jollyboat is moored alongside the board. The pinnace hung to its pulley blocks is getting ready to be put at sea to release the launch still moored which is necessary to drop the big anchor hung to the port davit.

PAINTING

When attacking upon the construction of the model, another choice is going to be done. What workmanship is to be carried?

Model in natural wood, or painted model? For the natural wood, this is the trend frame model-making, which presents two versions: the “Belgian School”, of “all pear tree”, or the version that I am using with some other fellow members: to mix species to try to find out the tint of the epoch scenery. From which the presence close to the unavoidable pear tree, ideal wood for frame and hull planking, of ebony for the black painted parts, belts, yards, masting elements, blocks, and of box-wood kept for sculptures and decoration, as well as for its texture perfectly fitted for very fine sculptures and its colour which reminds the “Naples yellow” whose decoration was painted with because a lack of gilt much to costly to be used on a large scale.

Another species of wood can be added, for example maple-wood for decks whose boards were scoured every day, so perfectly scratched and whitened.

But painting has its followers. It can be considered as an additional worry to keep close to reality, to rediscover the colours which trimmed the vessels in the reality of old time. And some of these painted models are pure masterpieces. I would with pleasure quote the magnificent model of a 64 guns vessel “Le Protecteur” currently on the verge of completion by our friend Pierre GIRAUD whose fineness of execution on colours harmony make her a true art object.
THE PERSONAL TOUCH

All these choices that a model-maker carries on make each model a single one, and one can find on each of them the personality of its author, his workmanship in the sense of organ makers of old. I often noticed to what extend two models of the same vessel at the same scale, constructed with the same documentation, by two different model-makers, can be different. Some of my friends claim that they recognize my models amid other at the first glance in an exhibition in saying: “This is a Frölich”, as one would say “This is a Vlaminck, or a Renoir”. I feel flattered by this fact, but I see in it the evidence that model-making can so reach Art!

AN ART OF EXECUTION?

Among the disparagers of this artistic aspect of model-making, an argument is often presented. “Model-making would only be an art of execution”. These one say: “there is no creation, it is just construction, the execution of an object from an accurate design, industrial manufacturing in a way”. They deny what I just explained: if it were just execution, two models from two different model-makers, constructed with the same care, from the same documentation should be strictly the same. However, we have seen that it is not the case, and there is to look very carefully to establish the similitude of both models.

Let’s avow that the model-makers work is far from this of a painter for example, who creates a picture from his own imagination. The model-maker starting from accurate plans creates the model in volume, but this volume is already defined in three dimensions by three-dimensional geometry, and mathematics data of the plan. I prefer to say that the model-maker interprets the plan even if he has regard for accuracy and rigour. He interprets as the violinist or the pianist interprets a score. From the same notes, the same notation, the same instrument, two musicians are to provide different interpretation in their sonority, their cadence, their phrasing. That’s why one could stay indifferent to one of the interpretations and enthusiastic over the other one. I remember having been in a tumult of feeling with a particularly innovating and attractive version of “The Four Seasons” of Vivaldi, interpreted by a baroque Italian group whose version renewed and revolutionized the audition of this work of art, so far very well known.

Thus seen, model-making is certainly an art.

INVENTIVENESS

If model-making is not a creative art, it is an art of inventiveness. All the model-makers would confirm. There is always to invent solutions, to create processes, to tune methods. At every moment, the model-maker when realizing his model ask to himself these questions. How will I do? How will I proceed? And each time, an answer will rise, invented or selected from a colleague, during one of these quarterly meetings where every one in the “Musée de la Marine” in Paris, bring his model being constructed for a friendly and fruitful confrontation made of exchanges, knowledge and experience. And these answers to problems of realisation will never lose sight of the aim sought: to show with the greatest accuracy and historical faithfulness a reality of the old time, whose beauty will never be away.