

PAST AND COMING REVOLUTIONS AT SEA

GENERAL CONCLUSION

BY

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Mister Chairman,
Ladies and Gentlemen,
Dear Colleagues,

Now, as this colloquium is coming to an end, someone has to conclude. I, perhaps, have saved you from listening to a bad paper, since none was given by myself. But I really could not escape from drawing a general conclusion, so I am afraid you will have to put up with me for a while.

It is true, the author of the general conclusion has the advantage to have the last word. If I am enjoying this unimpeachable situation, it must be the spirit of Emperor Joseph II floating over this tribune. Joseph II went down in history as an enlightened despot ; but he also was the son of the Emperess Maria Theresia, who founded this Academy in the 18th century. This only to explain how comfortable my position is, knowing that I will not be contradicted. And even when it would happen, I still could implore the imperial protection.

I could pay myself off and discharge myself easily, by summarizing each paper, trying to quote everyone, so nobody has to feel dissatisfied, except myself, since I cannot quote my own words.

But this would not resolve the question, how to captivate you in this late, last hour, after three well-filled days, four sessions, five discussions and twenty eminent speeches. I am afraid I am simply unable to compete with them.

However, a final conclusion cannot be avoided, since — in a sense — the question of the existence of one (or more) industrial revolutions was raised from the very beginning by our President, professor Charles Verlinden. In fact, indirectly, it was the challenge of this colloquium, so the question needs to be answered.

Allow me to quote again Georges Unwin (1924) : "When, on looking back, we find that the (industrial) revolution has been going on for two centuries and had been in preparation for two centuries before that, we may begin to doubt whether the term, though useful enough when it was first adopted, has not by this time served its turn". Immediately, I now have to quote Professor Verlinden himself (1989) : "It is now

evident that the rapidity of change has been exaggerated. The changes were not merely industrial, but also social and intellectual. The word 'revolution' or even the plural thereof implies a suddenness of change that is not characteristic of economic processes". So far, Prof. Verlinden.

In a sense, almost all speakers have underwritten at least part of Professor Verlinden's thesis by having agreed to deliver a paper fitting into the general theme of this colloquium : the papers have dealt with a large variety of topics, connected not only with industrial changes, but with social and intellectual ones too. Professor Verlinden also warned for the dangers of overlooking continuity, since a long period of industrial and economic change precedes the continental industrial revolution of the last decades of the 18th and the first of the 19th century. A wide range of papers put forward arguments for a continuity, a slow motion of technical adaptations bringing about improvements in shipbuilding, in working conditions at sea, (and) even in naval warfare.

Indeed, if the introduction of steam engines revealed itself to be a revolution at sea, as a consequence, of course, of the industrial revolution onshore — call it the conventional revolution for pedagogical reasons — the evolution from simple expansion, superheating and reheating of steam took its time. Propulsion techniques then stagnated until compound engines were introduced from the mid-19th century on. The turbines introduced at the end of the same 19th century were not really satisfactory for low speed. This explains their application being limited to navy torpedo boats and Channel ferries, for example. And although Diesel-engines did economize on fuel, in the beginning they did not manage to overcome the difficulties created by their construction when reaching the level of 2000 HP ; in other words, when there was a need for bigger installations. The problem was resolved only after a wide range of technical improvements had been made. But when generalized after the Second World War, besides the thermic saving of 11%, they also enabled savings of another kind to be made, by drastically reducing the number of the crew, particularly "below deck" labour.

Launching motorships seems not to have affected the shipyard industry, but rather the labour market for seafarers, because of a lower demand for labour in more sophisticated ships, while at the same time the knowledge of the few had to increase, to become highly specialized. Applications of electronics, computers and automation nowadays have not brought about a new wave of unemployment among seafarers, although the new technologies require more but qualified engineering people on board. Nor should we forget the competition with air traffic, almost completely eliminating passenger traffic at sea on long-distance routes and the mailing services too.

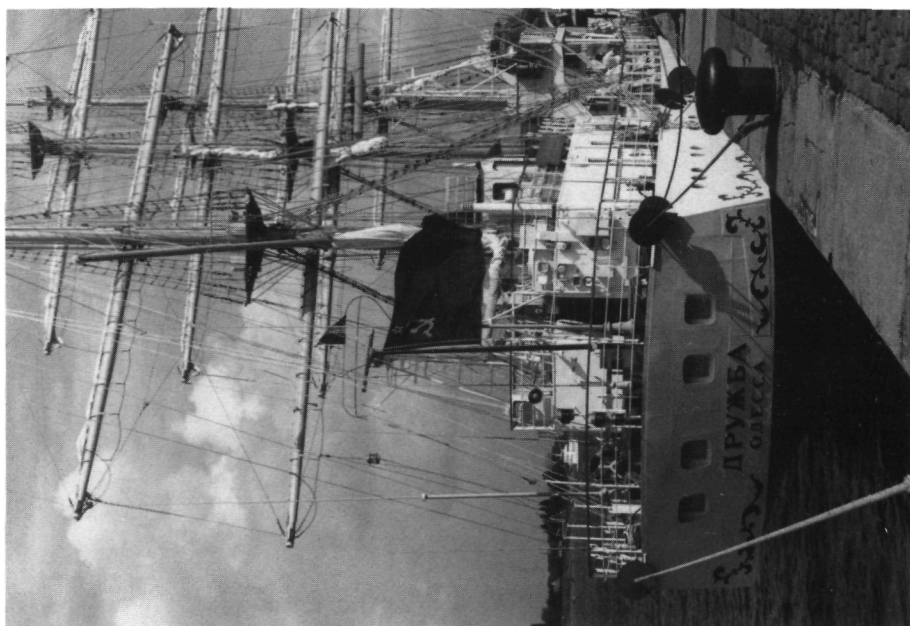
But bright shipowners succeeded and still succeed in coping with new competitors. It might be remembered that not a few shipowning companies are shareholders, not only in inland shipping and road transport companies, but in air chartering as well, or just set up branch offices for this purpose.



At the left, the frigate "Libertad", training ship of the Argentinian Navy, built at the very beginning of the 20th century (1 and 3). At the right, the Russian "Drouzjba", built in 1986 (2 and 4). Apparently, no great differences do emerge over a period of about one hundred years. (*Photo C. Koninckx, 1987*).



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Some of these severe changes in the maritime world sometimes came about very suddenly, and often very frequently. If we focus for a moment on lighter industry, as opposed to more conventional heavy industry in general, you will agree with me that here too we are confronted with industrial revolutions, though perhaps of another kind compared with that starting at the end of the 18th century. But there is no reason to weaken the essential significance of this, since it resolved bunkering problems, increasing the speed of the ships, loading and unloading in port, saving on wages by reducing the size of the crew etc.

Revolutions or not, any discussion depends on one's interpretation of how sudden a revolution has to be, to be considered as such. When Antwerp was one of the fastest growing ports in Western Europe at the end of the 19th century, as Professor Fischer demonstrated, becoming one of the principle entrepôts for recruitment and, at the same time, one of the most important centres for introducing or laying down new working conditions, was it not because of a sudden revolution, depending on industrial development, of course? Call it a local industrial revolution, but so it was.

When fishing was thoroughly transformed by being speeded up, as Dr. Pfister argued, did not the fishing industry experience a revolution too? When containerization accelerated loading and unloading facilities in the harbours, as so well illustrated by Messrs. Van Leeuw and De Leeuw, you will concur, a new revolution was started.

Once again, when using the term revolution, it always depends on how sudden we agree a revolution has to be. I venture to assert, contradicting the President, that, first and foremost, a revolution marks a change compared to what went before, a turning point in the traditional movement and not necessarily so suddenly, just as the earth twice a year reaches turning points in or during its revolution around the sun. So it frequently happened and indeed still does in the maritime world. Moreover, every time, of course, revolution was coupled with industrial changes as a result of new techniques or improvements on those already acquired.

The colloquium dealt with a large range of themes or topics in the maritime field, but not all by any means. Because we are limited in time and the number of speakers, some aspects were overlooked.

Indeed, we did not mention the recent conversion of shipyards; in fact, shipyards were converted to the construction of drilling-platforms, semisubmersible or jackups, petroleum-, petrochemical and chemical plants, fossil- and nuclear-power plants as well as all kinds of industrial facilities, offshore and onshore. As a consequence of the switch, supply- and support-ships have been launched during the last few decades. But we did not touch on this. Other new types of ships have emerged on the scene. We did not take up the brand-new invention of sucktugs, introducing new methods for stringing, towing or shifting, making bunches or clusters completely superfluous, cutting towing service tariffs by 20%. The use of suckboats has already passed the experimental stage and is becoming common not only in Yokohama (Japan), where it originated, but even in Rotterdam.

making it independent of any other air supply. Liquid oxygen is used, while carbon dioxide waste is drastically reduced. Moreover, submarines equipped with the Stirling system are more silent. Who knows, maybe they will replace nuclear-powered submarines once and for all.

Therefore, the theme of Captain O'Donnell's lecture, I guess, will be of greater importance in the coming years, since the interest for the first submarines and/or submersibles will increase gradually. This strikes the importance of the item as well in the framework of the industrial revolution in general. However, the industrial revolution, or an industrial revolution, is not starting when the first submarine is launched (and not sinking immediately), but when it demonstrates to be of use, with reduced risks for the crew but profitable too for trade or other rentable purposes. Just as no railway industry did start an industrial revolution when the first steam engine performed one hundred yards to explode afterwards ; but it did so, when a steam engine could track wagons loaded with a cargo from one point to another, say from one town to another, demonstrating that it was a rentable innovation.

En cette année 1989, les historiens surtout ont à souffrir d'indigestion de colloques et de congrès consacrés à la Révolution Française. Les organisateurs de ce colloque espèrent ne pas en avoir rajouté davantage. Nous n'avons d'ailleurs jamais eu le sentiment d'avoir choisi un thème inutile.

Si nous jetons un coup d'œil sur l'histoire des congrès internationaux d'histoire maritime, force est de constater que, pour la première fois, la révolution industrielle au sens large du terme fut mise en évidence dans sa relation avec le milieu maritime. Le sujet est vaste, trop vaste pour l'avoir épuisé en un seul colloque. Mais on peut toutefois se féliciter de l'avoir plus qu'effleuré. Pour l'histoire maritime, il est capital d'aborder les périodes plus rapprochées de l'histoire, afin notamment d'être d'utilité aux contemporains. Car, en effet, le débat entre historiens d'une part et officiers, ingénieurs, armateurs ou autres spécialistes du monde marin d'autre part, ne peut qu'avoir un apport bénéfique. Si l'historien se cantonne parfois trop dans le passé, dans notre cas nous avons largement débordé ce stade. Peut-être que le rappel de certaines expériences techniques, de certains développements de jadis, de toute une série d'adaptations, que ce soit dans la construction navale, l'organisation du travail à bord des navires, l'aménagement des ports, le perfectionnement de la manœuvre, incite ça et là à de nouvelles expériences et à de nouvelles perspectives.

Si ce colloque en une certaine mesure y est parvenu, il n'aura pas eu lieu en vain. À ce moment-là, les organisateurs et vous tous ici présents nous en retirerons pleine satisfaction.

Au nom du Président du Comité Scientifique Belge d'Histoire Maritime, je tiens à remercier vivement et sincèrement tous les orateurs, les présidents de séances, mais aussi ceux qui, par leurs interventions, ont enrichi le débat qui, je le concède bien volontiers, est loin d'être clos.

On behalf of the President of the Belgian Scientific Committee for Maritime History, I am greatly indebted to all lecturers, to the chairmen of the working sessions, and to those who participated in the discussions.

I am especially grateful to the Royal Academy of Sciences hosting this colloquium ; without its patronage it would never have been launched as easily as it was, nor have enjoyed the success it has.