

Chemical Synthesis and Society

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The History of Chemical Synthesis from mid-19th until mid-20th Century is an adequate object for the study of the interactions between society and progress in science. Economy, political structures, internal and international conflicts have left their marks on the development of Chemistry not only as a science, but also as an art, a craft and an industry. Inversely the scientific discoveries and inventions have also shaped society. Chemical industries were shaped by War and Peace, where 'War' includes economic sanctions and the consequent policies of economic autarchy, so common between the 1st and 2nd World Wars. 'Peace' supposes the existence of a global network of friendly trade partnerships. 'War' in this broader sense favoured research and development of heavy chemical industries, based on domestic coal, for agricultural and military self-sufficiency of Germany from 1914 to 1945, eventually used to prepare the 2nd World War. Times before and after this age of conflict were more favourable to basic science and the production of high added value chemicals, such as dyestuffs, pharmaceuticals and innovative materials, which also allowed, to replace after 1945 highly polluting and energy wasting carbochemistry by petrochemistry based on oil and natural gas imports.

Other interactions with society involve philosophy, art and social conditions of welfare and freedom, which stimulates the disinterested and pluralistic quest for the advancement of knowledge, as well as individual initiatives in economy and all other kinds of human activity. For the analysis of these aspects it is particularly enlightening to consider the differences in the development of organic synthesis, specially of dyestuffs between Britain, France and Germany in late 19th and early 20th Century.

References

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