INTRODUCTION

As fruitful in its work for peace as in its work for war, through the multiplicity of its operations, through their value and their results, is chemistry not in essence the powerful good fairy of progress and economic prosperity? Nowadays, there are few industries that have no need for its assistance, that have nothing to gain from its efficiency. Not only are the metallurgical industry for the transformation of metals, the glass and ceramic industries for the perfection of their processes, and the perfume industry for the composition of essential oils, unable to do without its support and advice; but also agriculture for its fertilizers, the food industries for product purity, and the therapeutics industry for drugs, are obliged to call on its services. Chemistry, nowadays, is the foundation of all industries. It is the science whose field of work is the broadest.¹

These words recall how essential may be the chemistry for the whole industry, and explain how important may have been the creation of the ‘office des produits chimiques et pharmaceutiques’ during the war. This speech, delivered by Paul Kestner to the first session of the Society of Industrial Chemistry (Société de Chimie Industrielle) in March 1918, describes chemistry and its main uses. It also shows how industrial chemistry had become so important.² In wartime, the organization of the chemical industry had many strategic consequences. The experience of chemical organization during the First World War proved useful to France.

In France, chemical mobilization was necessary to satisfy both military and civilian needs. Under these conditions, French industry succeeded in overcoming its dependence upon German enterprises and technical devices, and established new methods of production and management. Mobilization for civilian needs, provided a way for the State to promote new organizations, both public and private, once the war was over.

CHEMISTRY IN WARTIME

In tracing wartime chemical industries, one may distinguish between the organization of production for military needs, involving explosives and poison gases,³ for which the War Ministry was responsible, and the organization of production for
civilian needs. In 1914, the general pattern of the chemical industry in France was distinguished by a low degree of state interventionism, and also by a remarkable lack of concern about the need for state control. Politicians appeared quite divided on the merits of interventionism. On the one hand, political radicals had a programme for promoting solidarity and tariff protection for insufficiently developed businesses (like dyes), or for activities with endemic financial difficulties (like railways). The nature of French parliamentary government also acted to slow down rapid change or development in economic policy. On the other hand, French enterprises and professional unions rivalled for control of the market. Some of them, like the Comité des Forges, were famous.

In the early months of the war, the French government devised a new economic system to make up for lost industrial areas in the north and east occupied by the Germans. On 20 September 1914, Alexandre Millerand explained the terms of this ‘economic mobilization’. The rules governing the granting of contracts for military supplies were redefined; and contract holders were regulated, in order to obtain better execution of agreements. In addition, skilled workers sent to the front were recalled to the factories, beginning in October 1914. Some professional unions negotiated military contracts with the government. The Comité des Forges became a main contract holder, and remained so until the end of the war.

The new economic policy of France developed as the war progressed, and successive administrations assisted in the emergence of a war economy. In the summer of 1916, new men come to power: Etienne Clémentel, Albert Thomas, and Louis Loucheur. Clémentel was a Radical who had little influence, but he relied on the support of the administrative services and industrial organizations, and came to wield greater and greater influence. Albert Thomas was a Socialist, and held the post of Under-Secretary of State for Armaments (Sous secrétaire d’État à l’armement). This was a difficult office: Thomas had to manage the production of arms, and had to find solutions to armament factory strikes in 1917. The revolution in Russia also made it difficult for a Socialist to remain in office. Thomas was obliged to find common ground with the ambitious Louis Loucheur, who was in charge of armament manufacturing. Loucheur replaced Thomas in the government headed by Clemenceau, which came to power in November 1917.

With these changes, came new rules and laws to define ‘interventionism’. Imports were more and more controlled, and some products were even prohibited. Consortia came to manage the links between State and industry, by collecting information and organizing the purchase and sharing of raw materials and other goods between industries, the first of which was established in 1917. These organizations were initially responsible for managing shortages in raw materials; later they became intermediaries, linking government and industry to organize production, integrate industry, manage prices and share profits. During the last year of the war, government control over the economy reached its height, and the government authorized itself, from February 1918, to make all decisions relating to production, distribution and trade.