

Jean Gérard, Secretary General and Driving Force of the International Chemical Conferences between the Wars

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The numerous positions that the chemical engineer Jean Gérard (1890-1956) occupied before the Second World War gave him power on a scale that led contemporaries to refer to him as a linchpin, or “cheville ouvrière” in the world of chemistry. His tenacity, far-sighted aims, and organizational skills were the foundation of his success. Here, I examine his activities as secretary general of IUPAC and his crucial role in the foundation of the International Office of Chemistry (IOC).

1. Jean Gérard and the Birth of IUPAC

The International Union of Pure and Applied chemistry (IUPAC) was established as an inter-allied association from which the Central Powers were excluded, in accordance with the decision taken by the Interallied Scientific Academies at meetings in London and Paris in 1918. At a further meeting in Brussels in July 1919, the International Association of Academies (IAA) was dissolved and immediately replaced by the International Research Council (IRC), working under an executive committee and with Britain’s Arthur Schuster as secretary general.¹

In chemistry, the French, notably the chemist Charles Moureu and the chemical engineer Jean Gérard, played a key role in formulating the statutes of the future Union. These were discussed at a meeting of the Allied chemists in London in July 1919 and then immediately submitted to the IRC in Brussels.² On 28 July, the transformation of the Interallied Confederation into the International Union was formally approved, with Moureu as its president and Gérard as secretary general.

The Union endorsed the core priorities of the old International Association of Chemical Societies (IACS) that had been created in Paris in 1911.³ Of the IACS’s aims, the Union took up again not only the reform of nomenclature but also documentation in all its aspects, notably the standardization of abstracts and journal titles, the provision of bibliographical tools, and the proper choice of languages. IUPAC’s aims, however, went beyond those of the IACS, to embrace several activities that had previously been the responsibility of the pre-war international congresses of applied chemistry.⁴

¹ Frank Greenaway, *Science International. A History of the International Council of Scientific Unions* (Cambridge: Cambridge University Press, 1996).

² See Danielle M.E. Fauque, “French chemists and the international reorganisation of chemistry after World War I”, *Ambix*, **58** (2) (2011): 116–135. For the history of IUPAC, see Roger Fennell, *History of IUPAC, 1919-1987* (Oxford: Blackwell Science, 1994).

³ Brigitte Van Tiggelen, and D. Fauque, “The Formation of the International Association of Chemical Societies”, *Chemistry International*, **34** (1) (2012): 8–11.

⁴ On the Congresses of applied chemistry, see Duncan Thorburn Burns & Hendrik Deelstra, “The origins and impact of the international congresses of applied chemistry, 1894-1912”, *Microchim Acta*, **172** (2011): 277–283. D. Thorburn Burns & H. Deelstra, “Establishing a vital tradition: the series of international congresses of applied chemistry, 1894-1912”, *Chemistry International*, **33** (4) (2011): 11–14.

2. Jean Gérard (1890-1956): the Making of a Manager

Jean Gérard was born in Nancy on 16 April 1890, the son of a tanner, Edmond Gérard, who was also a philanthropist.⁵ He began his academic career, from 1911 to 1913, as a laboratory assistant in chemistry in the science faculty in Nancy, but then moved to the university's Institut chimique, where he worked as an assistant to Victor Grignard, winner of the Nobel Prize for Chemistry in 1912. Grignard respected Gérard for his skill as an analyst and in 1915 brought him to Paris to undertake war work on poison gases in his laboratory at the Sorbonne.⁶

Gérard's contacts with other laboratories engaged in war-related research led to a meeting with Camille Matignon, professor of chemistry at the Collège de France, who had risen to become one of France's leading chemists. As a prominent figure at chemical congresses before 1914 and someone whose interests embraced both pure and applied chemistry, Matignon had built up an extensive network of international contacts in the industrial as well as the academic world. He introduced the young Gérard (now 26) to his friend Paul Kestner, an industrialist from near Lille. Gérard and Kestner soon discovered a common interest in seeking to create the conditions that would allow chemists and industrialists to collaborate in the reconstruction of France after the war. To that end, in 1917, they established the Société de chimie industrielle (SCI), modelled on Britain's Society of Chemical Industry (BSCI), of which Kestner had long been an enthusiastic member.⁷

Founded during the war, the French SCI benefited in particular from the support of the Ministry of Trade and Industry, as part of its policy of strengthening the links between science and industry. The society's programme outlined three main aims: 1. The creation of a comprehensive chemical library; 2. The establishment of an information service for chemists and manufacturers; 3. The publication of a journal, *Chimie et Industrie*, that would serve as a source of information across the whole field of chemistry, pure and applied. The SCI, along with the BSCI, had encouraged the foundation of the new international union of chemistry, and both bodies were to be centrally involved in the preliminary discussions that led to the establishment of IUPAC in 1918 and early 1919.⁸

This new institutional context presented rich opportunities for Gérard, who saw it as a means of advancing a wider plan that he had been contemplating for some time. His plan was for the reorganization of chemical documentation in accordance with the universal classification prescribed by the International Institute of Bibliography (IIB) that had functioned under Paul Otlet in Brussels since 1895. An immediate measure was the installation of IUPAC in the premises of the SCI at 49 rue des Mathurins in Paris. The French Federation of Chemical Societies (FNAC), the national body that represented France in IUPAC, was also installed at the same address, with Gérard again much to the fore as FNAC's secretary general and Moureu as president. This move was to have decisive consequences both for chemistry and for Gérard's future career. The three bodies were to remain together, always under Gérard's watchful eye, until the Second World War.

⁵ D. Fauque, "Un ingénieur chimiste de Nancy et la chimie internationale dans l'entre-deux-guerres: Jean Gérard (1890-1956)", *Bull. ENSIC*, (174) (2009): 11.

⁶ Roger Grignard, *Centenaire de la naissance de Victor Grignard* (Lyon: Audin, 1972), p. 74.

⁷ For the history of the SCI, see Ulrike Fell, "Quelle liaison entre la science et l'industrie? La Société de chimie industrielle entre les deux guerres, 1917-1939", in U. Fell (ed.), *Chimie et industrie en Europe. L'apport des sociétés savantes industrielles du XIX^e siècle à nos jours* (Paris: Éd. des Archives contemporaines, 2001), p. 69-95; U. Fell, *Disziplin, Profession und Nation. Die Ideologie der Chemie in Frankreich vom Zweiten Kaiserreich bis in die Zwischenkriegszeit* (Leipzig: Leipziger Universitätsverlag, 2000). For the BSCI, see Robin Mackie and Gerrylynn K. Roberts, "Un secteur à part? Les chimistes industriels et la Society of Chemical Industry dans le contexte de la communauté chimique britannique", in Fell (ed.) (2001) (note 7), 127-147.

⁸ See Fauque (note 2).

3. Jean Gérard: Secretary General

The IUPAC statutes of 1919 laid down that the Union's business should be conducted by a Council, with the support of a secretariat and a permanent office. By article 7, the Council was to devolve executive power to a bureau consisting of the president, four vice-presidents, and a secretary general. Members of the bureau were to be elected every three years by a majority vote, none of them, however, being eligible for immediate re-election, with the single exception of the secretary general, who could be re-elected any number of times and so could hold the post indefinitely.⁹ Gérard made the most of this dispensation, which allowed him to remain as secretary general until 1944. His most demanding task was to keep the Union's commissions working, a responsibility that involved him in maintaining the flow of correspondence between the various officers, in particular with the president. The volume of paper-work that this entailed was immense.

Article 11 of the statutes also allowed for the creation of a consultative committee made up of delegates, representing the different areas of the chemical industry, who were to be available for consultation on «chemical questions». This provision was never properly implemented, and it disappeared when the regulations were revised in 1928. But Gérard achieved the same end through the SCI's congresses of industrial chemistry, which he organized from 1921. These congresses quickly became international affairs at which senior figures from IUPAC were often present. Matters bearing on the chemical industry and related issues discussed within the Union would commonly be aired in meetings or congresses of the SCI as well. This was especially the case where questions of industrial property and liquid fuels were concerned.¹⁰

Another important element in IUPAC's structure was the International Conference of Chemistry (CIC), an event that brought together the Council and representatives of IUPAC's commissions. From 1921 until 1928 these conferences took place annually. Thereafter, under the revised statutes, they were held every two years, with the exception of 1932, when the conference was replaced with three meetings of the Council. CICs invariably lasted two or three days, usually beginning with a reception offered by the host nation, continuing with a programme of scientific lectures, visits to places of scientific, industrial, or touristic interest, and concluding with a conference banquet.

At any CIC the first meeting of the Council began with a report on the Council's activities since the last Conference. General reports on the work of the Union were always prepared by Gérard before being sent on to the president for comment and any amendment. No meeting passed without Gérard's being warmly thanked. This might have been a simple formality, but his correspondence with successive presidents points rather to a close, productive collaboration. While Gérard was flexible and responsive to the Council's views, he was also good at conveying his own wide-ranging vision of the future of the Union and its interactions with other international organizations. His involvement was relentless and it took many forms, often discreet but always efficient, notably in his determination to secure Germany's admission to the Union from 1925.¹¹

Here, I shall mention just two areas that particularly concerned him: 1. The management of the commissions; 2. The foundation of the International Office of Chemistry.

⁹ Union internationale de chimie pure et appliquée, *Comptes-rendus de la n^e conférence internationale de la chimie* (Jean Gérard), 1920 à 1938, cited hereafter with an indication of the year and city as 'CR-CIC city year'. The proceedings were undated but invariably appeared a few months after the conference, under the imprint of the Union, and with Gérard's name as publisher. Here, CR-CIC Rome 1920: statutes, 58–59.

¹⁰ D. Fauque, "Les congrès de chimie industrielle dans l'entre-deux-guerres: vitrine des relations entre l'industrie, la science et la politique", *L'Actualité chimique*, (380) (2012): 39–44.

¹¹ I addressed the German question, in particular the discussions of whether and when Germany should be allowed to join the Union, in my paper at the symposium. This material is being prepared for publication elsewhere.

4. Managing the Commissions

The first IUPAC conference, held in Rome in 1920, provided an opportunity of assessing the Union's achievements so far and presenting a programme of future activities. Provision was made for a number of specialized commissions, several of which had already existed before 1914.¹² The oldest commissions were those for the nomenclature of organic chemistry (1889),¹³ analytical chemistry (1900), atomic weights (1902), and tables of constants (1909). Newer ones concerned industrial property and bibliographical documentation.

It was always arranged that commissions should meet during conferences. They were expected to submit their reports well in advance to Gérard, as IUPAC's secretary general, in time for them to be printed and distributed to the IUPAC delegates. But problems were soon evident, as Gérard explained at the 1924 conference in Copenhagen. A first requirement, which he advocated in the interests of efficiency, was that commissions should respond more promptly to the correspondence they received from the secretary general.¹⁴ Secondly, Gérard identified the fact that commissions had no permanent president as a real weakness, one that he wanted to see rectified.

In response to Gérard's concerns, a list of the commissions' presidents for the next three years, agreed upon by correspondence, was submitted to the General Assembly for ratification at the Copenhagen conference. The problems, however, were not resolved. At the Washington conference in 1926, Ernst Cohen, as IUPAC president, laid out the shortcomings, in particular a structure that prevented the commissions from working effectively. As he insisted, experts in the commissions' various areas were frequently absent, so that the conclusions and recommendations coming from them lacked authority.¹⁵ Advocating one possible remedy, Cohen quoted a letter from the British Federal Council (BFC) which requested that resolutions should be distributed in writing before each annual conference. The BFC saw this as a way of facilitating the work of the Bureau and providing a permanent record that might otherwise (as the BFC put it, rather brutally) lie forgotten on some library shelf.¹⁶

In his remarks at the Warsaw conference in 1927, Cohen returned to the question of the commissions. His assessment remained uncompromising: in his words, « The level of activity in certain commissions stands at absolute zero ».¹⁷ In response to the contention of some members that the practical value of their contribution was negligible, Cohen argued that the Union should concentrate its efforts on projects that were both urgent and feasible: « Our science is too noble and life is too short for us to expect the ablest among us to undertake a type of work whose usefulness is in most cases dubious ».¹⁸

At the 1928 conference in The Hague Cohen, now at the end of his term as IUPAC president, was as uncompromising as ever: « You all know that the Union's methods of working have been seriously criticized in some circles ». That point, he said, had been recently conveyed in an article in the December 1927 issue of *Industrial and Engineering Chemistry*.¹⁹ In the name of the British Federal Council, Sir William Pope intervened.²⁰ For him, the Union was in imminent danger. It had been conceived as the foundation for a true chemical congress, but now it was very far from that. Instead of the original plan for groups

¹² Thorburn Burns & Deelstra (note 4).

¹³ On the nomenclature of organic chemistry, see Pieter E. Verkade, *A history of the nomenclature of organic chemistry* (Dordrecht, Boston, Lancaster: D. Reidel C^y, 1985), a translation of a series of French texts originally published in *Bull. Soc. Chim. Fr.* (1966–1969). See E. Hepler-Smith in these proceedings.

¹⁴ CR-CIC Copenhagen 1924: p. 27.

¹⁵ CR-CIC Washington 1926: Cohen, 13 September, p. 10–11.

¹⁶ Cohen (note 15), 10.

¹⁷ CR-CIC Warsaw 1927: Cohen, 5 September, p.10.

¹⁸ Cohen (note 17), 11.

¹⁹ CR-CIC The Hague 1928: Cohen, 18 July, p.14. "Editorial", *Ind. Eng. Chem.*, **19** (12) (1927).

²⁰ CR-CIC The Hague 1927: Council meeting, 18 July, p. 21.

of experts that would present authoritative reports, what had emerged were commissions of very diverse character, some functioning irregularly, some not at all. Pope's view was that certain commissions should be laid down, while the others should be urged to do what was expected of them. There should be no substitute members: it was for the appointed permanent members to do the work. According to both Pope and Cohen, the statutes and regulations needed to be reviewed. Cohen's criticisms had their effect. In the course of the conference, new statutes and regulations were adopted.²¹

Two years later, in 1930, the Union changed its name to *Union internationale de chimie*.²² Henceforth, a conference was to be held every two years (an annual conference not leaving enough time for adequate preparation). As the delegates agreed, the mounting of a congress had become an urgent necessity, the last congress of applied chemistry having taken place as long ago as 1912 in Washington. The Spanish proposal to receive the congress in Madrid in 1932 was accepted.

The 1930 conference took place in the course of the universal exhibition in Liège. During the previous winter, the members had voted by correspondence in favour of admitting Germany to the Union, and the German chemists were invited to the Conference. They duly attended and, with Fritz Haber as head of their delegation, were welcomed with applause.²³ Gérard had engaged in intense correspondence with IUPAC members, with a view to ensuring that Germany would be received cordially. It was also reported that Bulgaria had become a member in 1928 and that Hungary, Sweden, and the USSR had been invited.

The 1930s were to be beset with difficulties both for the Union and for Gérard's role in it. Most of the difficulties arose from the economic crisis of 1929 and its repercussions in the early 1930s in France and in Spain, where it proved impossible for either the congress or the annual conference to be held in 1932. The IRC was disbanded in 1931, replaced by the new organization ICSU. There were many instances of cooperation between ICSU and other international organizations, especially the International Institute for Intellectual Cooperation (IIIC) and the associated International Committee for Intellectual Cooperation (ICIC), on such questions as tables of constants, atomic weights, radioactive constants, and bibliography. The Union also developed its own relations with these bodies, which were not always easy. As I point out below, the closest contacts seem to have been with ICIC's sub-commission on bibliography.

Gérard was invariably a member of the delegations representing the Union in its exchanges with the IRC and later with ICSU. In these delegations he was always close to the president, sometimes acting in his place. And, it was he who wrote on the Union's behalf to the general secretaries of the International Union of Physics and the IIIC.

The last three conferences before the war were held in Lucerne in 1936 and in association with the congresses in Madrid (1934) and Rome (1938). In these years a number of new commissions were created, and a major change occurred when the headquarters of the SCI, the FNAC, and IUPAC were all transferred to the Maison de la Chimie, with Gérard as its head, in 1934.

5. The International Office of Chemistry

Since the end of the nineteenth century, the question of chemical documentation had been a constant concern among scientists. An important response was that of Paul Otlet at the IIB; his proposal was for a universal system of classification (CDU). In France, General Hippolyte Sébert applied this system in the Bureau Bibliographique de Paris (BBP), a Parisian

²¹ CR-CIC The Hague 1927: Council meeting, 21 July, p. 42; General Assembly, 21 July, p. 54; new statutes, 56-59; new regulations, 60-62.

²² CR-CIC Liège 1930: Council meeting, 15 September, p.17.

²³ CR-CIC Liège 1930, (note 22), 18.

bibliographical office linked with the IIB. Gérard was familiar with the work of the BBP and may well have seen the BBP as a model for an International Office of Chemistry supported by IUPAC.

UPAC's Commission on Bibliography and Documentation was a body that particularly engaged Gérard's attention, because of its significant international ramifications. Its objectives included the establishment of agreed systems for bibliographical references and the presentation of abstracts, an international agreement on a programme of documentation, the compilation of an exhaustive corpus of chemical knowledge, and the preparation of a comprehensive bibliography, as reported on by Gérard and approved at the Rome conference of 1920.²⁴ The permanent office, what was to be called the « Office international de chimie », would be funded by financial contributions that had yet to be secured (art. 9 and 10).

Reports on the work of the Commission were submitted by I. F. Donker-Duyvis in 1922 (Lyon) and 1923 (Cambridge), then in 1924 (Copenhagen) by Matignon, in his capacity as the commission's president.²⁵ At this last meeting, it was decided that a special conference of government-appointed delegates and experts would be organized. Gérard and Donker-Duyvis were to be in charge of the planning, and the aim would be to agree on international conventions and in due course a fundamental restructuring of the provision for documentation.

A number of events outside IUPAC were at work in this sudden acceleration of interest. The League of Nations had finally approved the creation of the ICIC, with its headquarters in Paris and members appointed as distinguished representatives of their various fields rather than of the nations to which they belonged.²⁶ In Geneva in August 1922, the vice-president of the ICIC, Gilbert Murray, specified the Committee's three objectives: to resume exchanges between universities, to resurrect and promote international relations in science and scholarship, and to improve the quality of bibliographies, notably in the sciences. The sub-committee on bibliography (a special section of the ICIC) approached several international associations, asking them to turn their attention to provision in their various fields.

The objectives of the ICIC overlapped with those of a number of the international unions and even of the IRC. It was also a competitor with the International Union of Universities and, in bibliography, with Otlet's IIB in Brussels and the Dutch Institute of Documentation (IID), under Donker-Duyvis in The Hague.

In 1924, at the Copenhagen conference, it was announced that the Commission on Documentation had completed its preparatory work, and that the plan for an International Office of Chemistry had been discussed. It now remained for the plan to become reality. Predictably, Gérard emerged as a prominent figure at this next stage, organizing a series of specialized international meetings between 1924 and 1926 that must have served to clarify the terms of the future agreement.

The plan for the International Office of Chemistry (IOC) made a quest for support, both financial and political, essential. There was also the question whether the wider public could be won over. Gérard's answer was an international celebration that would impress the world! On the IUPAC Council he had the support of the president Ernst Cohen and the other members of the Commission on Documentation, including Jean Timmermans (from Belgium), the future IUPAC president Einar Biilman (Denmark), and Friedrich Fichter who was to host the IUPAC conference in Switzerland in 1936.

²⁴ CR-CIC Rome 1920: 22 June, p.25; statutes (art. 3), 57; regulations, 62–63.

²⁵ CR-CIC Lyon 1922: Donker-Duyvis, "Rapport présenté au nom du Conseil national des Pays-Bas et de l'Institut néerlandais de documentation", 93–105. CR-CIC Cambridge 1923: Donker-Duyvis, "Rapport général présenté à la commission", 95–97. CR-CIC Copenhagen 1924: Matignon, "Rapport général", 58–61.

²⁶ See Jean-Jacques Renoliet, *L'Unesco oubliée. La Société des nations et la coopération intellectuelle (1919-1946)* (Paris: Publications de la Sorbonne, 1999).

From 1925, diplomatic moves were made on a variety of fronts. Gérard, predictably, was the prime mover. His tactic was to alert major figures in the university world, politics, and industry to the benefits that would flow from the celebration of the centenary of the birth of Marcelin Berthelot that he was intending to mount in Paris in 1927. A meticulously planned national and international subscription was to raise the funds for the construction, in Paris, of a Maison de la Chimie. Conceived as a truly international centre, the Maison de la Chimie was to house the Office, along with its various services, including a centre for documentation, congress facilities, and a vast international library.

The Berthelot celebration duly took place between 23 and 26 October 1927, immediately after the Congress of industrial chemistry, held in Paris from 16 to 22 October, both events being organized by Gérard. The official celebration involved ceremonies at locations associated with the life of the « great savant », ending at the Panthéon in the presence of the President of the Republic, ministers, and diplomatic delegations and other foreign representatives.²⁷ Finally, on 27 October, what had always been conceived as a major goal of the centenary was fulfilled in the form of a conference in the Ministry of Foreign Affairs to discuss the creation of the International Office of Chemistry. The outcome was an international convention specifying the functions of the Office and its eventual installation in the future Maison de la Chimie.²⁸

Of the responsibilities of the Office, the only one to be given concrete form was the provision for chemical documentation. As chapter II of the 1920 regulations stipulated, such an office was to function as a formally constituted institution, a status that made it natural for the Union to have its headquarters in Paris and hence for Jean Gérard to exercise control over all the Union's different activities. Such a degree of centralization was unacceptable to some other IUPAC members, and in 1928, when the statutes were reviewed, it was decided that the location of the Union's headquarters would be voted on every four years. By now, all mention of a permanent Office had disappeared.

Seven years later, in 1934, the Maison de la Chimie was inaugurated in the rue St Dominique, an elegant street close to ministries and the Palais-Bourbon, the home of the National Assembly. With Gérard as the overall administrator, it housed the SCI, the SCF, the FNAC, and IUPAC. In a complex administrative structure, in which Gérard held the title of director general, the functions of the International Office of Chemistry, an administrative entity, overlapped to some extent with those of the SCI's Office of Documentation, which incorporated the associated technical services necessary for information management.²⁹

The reports that Gérard submitted to the International Conferences of Chemistry in Madrid (1934), Lucerne (1936), and Rome (1938) convey the immense contribution of the Office to such cutting-edge technologies as photocopying, microphotography, and microfilming (done on 35mm film perforated on both sides and with a 24mm-wide image, as recommended by the Office in 1935).³⁰ The work of the Office also included consideration of the best practices in information management, the tasks of « documentalists », international indexes, and equipment, all of them matters that extended beyond the realm of chemical documentation alone.³¹ This was a world of new, advancing techniques on which Gérard reported to successive IUPAC conferences. He also made a significant contribution to planning the

²⁷ *Centenaire de Marcelin Berthelot, 1827-1927* (Paris: Imp. Vaugirard, 1929), p. 706: the subscriptions received to 28 December 1930 amounted to 24 895 242 francs.

²⁸ Charles Normand, «Création de l'Office international de chimie», *Chimie et Industrie*, **18** (5), (1927): 926–932.

²⁹ These included services for photography, microfilming, photocopying, the preparation of files on demand, a technical centre for testing, etc. Also a publishing company, the SOPRODOC (Société de productions documentaires) was managed by Gérard in the basement of the Maison de la Chimie.

³⁰ CR-CIC Lucerne 1936: Gérard, 64–75.

³¹ CR-CIC Rome 1938: Gérard, 44–52.

World Congress on Universal Documentation in 1937 in Paris and then, in 1938, to the meeting of leading experts in documentation, said to have been « stimulated by the IOC », that took place in Rome during the congress of chemistry.³²

It is hard to imagine that in the 1930s the Union would have been so committed to the cause of documentation had it not been for Gérard's powerful position, all mention of the Office having disappeared from the statutes and regulations since 1928. The Union's priorities were now turning quite markedly towards pure chemistry.

Eventually, heightened international tensions and then the war put an end to further development of the Office. The prospects of the Maison de la Chimie, too, changed. After the war, for a host of reasons, the Office was no longer up to its various tasks.

Conclusion

In 1940, Gérard made the crucial decision to support the Vichy Regime. He remained at the head of the institution to which he was most attached, the Maison de la Chimie. In 1944, following the Allied victory, he was obliged to resign as secretary general of IUPAC and administrator of the Maison de la Chimie. After an absence of four years, however, he returned to his post at the SCI, and by 1950 was organizing the exhibitions known as *Salons de chimie* held at the Palais des Congrès in Paris, near the Porte de Versailles. He was still involved in this work when he died on the eve of one of the salons in 1956.

Gérard's leadership qualities and the organizational efficiency that he brought to bear on a variety of national and international ventures were nothing less than astonishing. He had an immense capacity for work and was always ready to act, and almost invariably act successfully. He appeared as the model of a manager applying rational principles of work to the goal of collaborative intellectual endeavour; it was this that made him a driving force in everything he touched, a linchpin or "cheville ouvrière", as he was called in many reports.

It is true that in histories of the CNRS, a new organization that was to play a fundamental role in the political as well as the scientific life of the country from the 1930s, Gérard has been interpreted as a hostile force.³³ The fact remains, however, that the SCI owes him a profound and enduring debt. His foundation of the IOC was also important as a central element in what became, in 1932, the Union française des offices de documentation (UFOD), a body of which he was both founder and first president.³⁴ The UFOD built strong links with the IIC, and in this context the IOC was widely regarded as an example to be followed in the establishment of offices of documentation everywhere.

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³² CR-CIC Rome 1938: Gérard (note 32), 44.

³³ Denis Guthleben, *Histoire du CNRS de 1939 à nos jours. Une ambition nationale pour la science* (Paris: Armand Colin, 2009). Nicolas Chevassus-au-Louis, *Savants sous l'Occupation* (Paris: éd. Perrin, 2008): 135–141 (222).

³⁴ On the UFOD, see Sylvie Fayet-Scribe, *Histoire de la documentation en France. Culture, science et technologie de l'information, 1895-1937* (Paris: CNRS Éditions, 2000).