

Patents, War and Peace. The resilience of the international patent order through the First World War

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In the late 19th century, after having long been controversial, patents became one of the tools for the organisation of industrial capitalism as it was entering a new phase. An international order was emerging for so-called industrial property (notably trademarks and patents), and for intellectual property more broadly (which also includes copyright). Seemingly the preserve of a group of experts, this integration of a mostly European space was also economic in nature.¹ Indeed, patents were becoming a strategic tool on various markets in the hands of large multinational firms. In other words, the internationalisation of industrial property was a kind of market integration, which, then as now, was not without its contradictions and opponents. When the First World War broke out, it interrupted this ambivalent dynamic. It was far from clear whether the conflict would stop or even reverse this internationalisation completely, or whether the wartime alliances and measures would bring about new cooperation and provide new opportunities for integration. By moving beyond the study of the text of laws and international treaties, focusing instead on their negotiation and on their actual implementation, this article argues that the result of the conflict was a subtle readjustment of this particular institution of European industrial capitalism.

The internationalisation of industrial property was based on a set of principles that facilitated applying for patents in different countries.² These principles were promulgated by the International Convention for the Protection of Industrial Property of 1883, or Paris Convention.³ Two stood out. First, the principle of national treatment required member states to act towards applicants and patentees from other member countries as they would towards their own citizen or subjects. In other words, this principle forbade any explicit discrimination against foreigners. The second important rule provided for a time period of six months, the period of priority, during which people and

¹ On these questions, the work of Johan Schot on “technocratic internationalism” and the “hidden integration of Europe” has been influential, as reflected in the *Making Europe* book series. On the economic nature of these processes and the role of organised business, see the forthcoming special issue of *Business History*: P. EICHENBERGER, N. ROLLINGS, J. M. SCHAUFELBUEHL, “The brokers of globalization: Towards a history of business associations in the international arena”, *Business History*, published online September 2022, pp. 1-18, DOI: [10.1080/00076791.2022.2112671](https://doi.org/10.1080/00076791.2022.2112671).

² For recent overviews of the internationalisation of patents, see G. GOODAY, S. WILF (eds.), *Patent Cultures: Diversity and Harmonization in Historical Perspective*, Cambridge, Cambridge University Press, 2020; Y. KOULI, L. LABORIE, “Inventing Foreign Patents in Globalising Europe”, in: Y. KOULI, L. LABORIE (eds.), *The Politics and Policies of European Economic Integration, 1850–1914*, Cham, Springer International Publishing, 2022, pp. 73-104.

³ Y. PLASSERAUD and F. SAVIGNON, *Paris 1883: genèse du droit unioniste des brevets*, Paris, Litec, 1983.

companies could validly apply for a patent on the same invention in different member states, using the date of the first filing for all subsequent applications. This rule prevented the rejection of applications or the revocation of patents as lacking novelty merely on the ground that an earlier patent had been granted and published in another country. National treatment and the right of priority were thus fundamental building blocks for the transnational use of patents.

These two principles, and the Paris Convention more broadly, represented only a minimal foundation for an international patent order. However, the ambition of those supporting a greater international integration was often frustrated. For instance, the resolutions of the first two conferences that were to improve the provisions of the Convention, taking place in Rome in 1886 and in Madrid in 1890, were never ratified and thus never entered into force.⁴ The results were different at the next conference in Brussels in 1897. Further internationalisation of the patent system was reached by adjourning the conference and reconvening only three years later, once unanimous agreement had been reached by diplomatic means on the more contentious issues.⁵ Importantly, the period of priority was extended to twelve months, which represented an important change to allow Germany to join the Union.⁶ Because the German Patent Office examined patent applications extensively, the original period of priority of six months had been seen as too short: a company that had filed for a patent in Germany might not know at the end of the period of priority whether its request would be granted, and it was often reluctant to file internationally under these circumstances. Thanks to this change, in 1903, Germany joined other major industrial states such as France, Belgium, the United Kingdom,⁷ and the United States in the Paris Union. Austria-Hungary followed suit in 1909.

One organisation most likely played a role in the results achieved between 1897 and 1900 at the Brussels conference. AIPPI, the *Association internationale pour la protection de la propriété industrielle*, was the voice of those who supported a greater internationalisation of patents. Resulting from the project of obtaining both changes in the Paris Convention and the accession of Germany and Austria to the Union,⁷ AIPPI was founded in May 1897 with the stated goal of “propagating the idea of the necessity of the international protection of industrial property” and of furthering the existing international conventions.⁸ Its founding committee gathered not only lawyers and patent agents, but also executives from those industries for which international patenting clearly mattered: mechanical and electrical engineering (Krupp, Schneider, Siemens), as well as to the

⁴ S. RICKETSON, *The Paris Convention for the Protection of Industrial Property: a commentary*, Oxford, United Kingdom, Oxford University Press, 2015, § 4.01-4.17.

⁵ The resolutions are printed in *Union internationale pour la protection de la propriété industrielle, Actes de la Conférence réunie à Bruxelles du 1er au 14 décembre 1897 et du 11 au 14 décembre 1900*, Berne, Bureau international de l'Union, 1901, pp. 410-412.

⁶ M. SECKELMANN, *Industrialisierung, Internationalisierung und Patentrecht im Deutschen Reich, 1871-1914*, Frankfurt a.M., V. Klostermann, 2006, pp. 222-226.

⁷ A. OSTERRIETH, J. WECHSLER (eds), *Berichte und Verhandlungen der Deutsch-Oesterreichischen Gewerbeschutz-Conferenz am 12. und 13. October 1896 zu Berlin*, Berlin, Carl Heymanns Verlag, 1896, p. 68.

⁸ *Annuaire de l'Association internationale pour la protection de la propriété industrielle*, 1897, p. 27. On the importance of patents for mechanical and electrical engineering, see e.g. N. CHACHEREAU, *Les débuts du système suisse des brevets d'invention (1873-1914)*, Neuchâtel, Éditions Alphil-Presses universitaires suisses, 2022, pp. 273-278, 298-314; for the chemical industry, e.g. J. P. MURMANN, *Knowledge and competitive advantage: the coevolution of firms, technology and national institutions*, Cambridge, Cambridge University Press, 2006.

chemical industry, especially in synthetic organic chemicals (Cassella, Hoechst, Agfa).⁹ Furthermore, they had found allies in branches interested in other types of industrial property, such as trademarks and indications of sources.

On one point, these circles had however failed to realize their vision by 1914. Many countries made it compulsory to put the invention into practice, to “work” or “exploit” the patent. This was usually not the object of a verification, but competitors could and did use that argument in court to obtain the revocation of patents. “Working” or “exploiting” often meant manufacturing within the country. For companies intending to benefit from patents in many nations, complying with such a requirement was impractical and costly, while disregarding it represented a sword of Damocles on their property rights. AIPPI gatherings repeatedly expressed the wish that the principle of compulsory working ought to be abandoned, but they faced fierce resistance. Protectionist politicians opposed it, as well as industries confronted with powerful and patent-savvy foreign competitors. In this context, the 1897 gathering of the AIPPI had settled on proposing that revocation because an invention was not worked should not happen during the first three years of the patent.¹⁰ Introduced by the Brussels conference of the Paris Union, that provision was a far cry from the goal of these internationalist circles. They even experienced a major setback in this matter. In 1907, the United Kingdom abandoned its liberal policy and introduced a clause of compulsory working and another one allowing the government to impose compulsory licences. This change, at the insistence of prominent representatives of its chemical industry, was a response to the dominance of German competitors.¹¹

An international patent order thus undoubtedly existed by 1914. It was centred on Europe, with important transatlantic connections, and constituted an important element in the international development of capitalism. However, it was not an integral internationalisation, and was fraught with tensions that were to take new dimensions with the conflict¹².

I. Patents in the turmoil of war, between nationalism and internationalism

The outbreak of the First World War during the summer of 1914 represented a major disruption to this international patent order. The mobilization of men, coupled with economic and communication difficulties between belligerent countries, impeded the work of the different players of the industrial property systems. AIPPI could no longer hold its yearly meeting. More generally, patent agents and professional patent consultants found it increasingly difficult to correspond with their colleagues in other countries. Between 1914 and 1918, the annual average number of patent applications fell in certain countries (France, Germany, Austria) by 40% in comparison to the years between 1910-1913.¹³ Specialists discussed whether the Paris Convention was still in effect from a legal point of

⁹ *Annuaire de l'Association internationale pour la protection de la propriété industrielle*, 1897, pp. 21-23.

¹⁰ *Ibid.*, pp. 66-71, 98-99.

¹¹ A. FLEISCHER, *Patentgesetzgebung und chemisch-pharmazeutische Industrie im deutschen Kaiserreich (1871-1918)*, Stuttgart, Deutscher Apotheker Verlag, 1984, pp. 190-192; J. P. MURMANN, *op. cit.*, pp. 185-192.

¹² G. GALVEZ-BEHAR, “The 1883 Paris Convention and the Impossible Unification of Industrial Property” in G. GOODAY, S. WILF (eds), *Patent Cultures...*, *op. cit.*, pp. 38-68

¹³ Authors' calculations based on the figures given by P. J. FEDERICO, “Historical Patent Statistics”, *Journal of the Patent Office Society* 46 (3), 1964, pp. 89-171.

view. This became a moot point, as belligerent countries stopped respecting the principles of the convention, without formally leaving the Union. Indeed, during the war, the dynamics of international cooperation and economic nationalism were reconfigured –but not suppressed– by new geopolitical motivations.

The war as an economic opportunity

Besides legislation that provided relief to their owners by suspending or extending various legal deadlines, patents were affected by two types of special wartime measures, that both were part of a broader set of discriminatory actions taken against so-called enemy aliens, i.e. nationals of enemy states, or sometimes even people residing or having origins in these countries.¹⁴ First, there was legislation affecting the legal status and the assets of enemy aliens and of their businesses. Warring states promulgated that holdings and corporations of enemy aliens were to be registered, placed under State supervision or sequestered.¹⁵ In some instances, this could affect industrial property, as when French administrators of sequestered companies were allowed to use their patents or trademarks.¹⁶ Moreover, sequestration could lead to liquidation. While there were isolated cases based on the early rules,¹⁷ warring states began to liquidate enemy-owned companies systematically in the second half of the war.¹⁸ The United Kingdom did so in January 1916. It also provided that patent applications from enemy subjects would be transferred to the custodian of sequestered assets, who could then become owner of the granted patent. Germany reacted in July 1916 by winding up British companies, and then French ones in March 1917.¹⁹ France refrained from a systematic liquidations of sequestered assets –this would come after the armistice– but its administration hoped that a “discreet” policy of liquidation could be pursued through the judiciary.²⁰ The United States amended their own Trading with the Enemy Act twice in 1918, in March to empower the Alien Property Custodian to liquidate sequestered property, and in November to specify that this applied to patents and trademarks.²¹

In addition, all belligerents passed new rules that applied specifically to industrial property and affected international patenting.²² Most warring countries stopped granting patents to enemy aliens.

¹⁴ D. L. CAGLIOTI, *War and citizenship: enemy aliens and national belonging from the French Revolution to the First World War*, Cambridge, Cambridge University Press, 2021.

¹⁵ *Ibid.*, pp. 160-171. J. W. GARNER, «Treatment of Enemy Aliens», *The American Journal of International Law*, 1918, 12 (4), pp. 744-779.

¹⁶ A. REULOS, *Manuel des séquestres. Recueil des lois, décrets, instructions et circulaires sur les séquestres des biens allemands et austro-hongrois*, Paris, L. Tenin, 1916, p. 24.

¹⁷ See for France: A. DEPERCHIN, «Le juge et les biens allemands en France pendant la Première Guerre mondiale», in S. AUDOIN-ROUZEAU (ed.), *La politique et la guerre: pour comprendre le XXe siècle européen : hommage à Jean-Jacques Becker*, Paris, A. Viénot - Noesis, 2002, pp. 82-93, here p. 89. H. CURTH and H. WEHBERG, *Der Wirtschaftskrieg. Die Maßnahmen und Bestrebungen des feindlichen Auslandes zur Bekämpfung des deutschen Handels und zur Förderung des eigenen Wirtschaftslebens. Vierte Abteilung: Frankreich*, Jena, Fischer, 1918, pp. 275-284.

¹⁸ D. L. CAGLIOTI, *op. cit.*, pp. 209-223.

¹⁹ F. MÄCHTEL, *Das Patentrecht im Krieg*, Tübingen, Mohr Siebeck, 2009, pp. 238-239. R. POIDEVIN, «La mainmise sur les biens ennemis pendant la Première Guerre mondiale», *Francia. Forschungen zur Westeuropäischen Geschichte*, 1974, vol. 2, pp. 566-579.

²⁰ A. DEPERCHIN, *op. cit.*, pp. 89-90.

²¹ K. STEEN, «Patents, Patriotism, and “Skilled in the Art” USA v. The Chemical Foundation, Inc., 1923-1926», *Isis*, 2001, 92 (1), pp. 91-122, here p. 99.

²² S. P. LADAS, *The International Protection of Industrial Property*, Cambridge, Cambridge University Press, 1930, pp. 724-728. P. JOHNSON, «Mr Patent goes to war! Industrial property and the breakdown of the international order

Even more importantly, all belligerent countries enacted legislation that allowed the State to suspend or cancel patents owned by enemy aliens, to work them, or to grant licenses. The United Kingdom passed its relevant acts in 1914, in the first weeks of the war. Russia, France, and Germany enacted their own measures respectively in March, May and July 1915. Austria and Hungary followed suit one year later. Finally, after having entered the war in April 1917, the United States included similar measures in its Trading with the Enemy Act enacted on 6 October.

The measures taken by belligerent states, while broadly similar, did not matter to the same degree. Generally speaking, one can say that the patents were most affected by the dynamic of economic warfare in the United Kingdom and in the United States. In the United Kingdom, the Board of Trade received a little over 1000 applications between 1914 and 1920, and granted 822 licenses.²³ These licenses often concerned the same invention, so that there were fewer patents affected: by mid-1918, licenses had been granted on 314 patents.²⁴ Accounting for the shorter time span, the situation in the United States was quite similar. Applications for licenses concerning 145 patents were filed between October 1917 and June 1918. At that point, licenses on 128 patents had been granted, ten applications were still pending, and only seven had been denied.²⁵

These numbers, when compared with the tens of thousands of patents granted to Germans in the decade before the conflict, seemingly indicate a mild application of the wartime measures. This comparison is misleading. It is true that these laws specified that licences were to be granted only if they were in the “public interest”, and that the motivation was not always economic warfare or nationalism. For instance, the United Kingdom and the United States allowed companies to produce drugs that could no longer be imported from Germany, such as Novocaine, a local anaesthetic, or Salvarsan, an anti-syphilitic needed to respond to the spread of venereal diseases among soldiers and civilians.²⁶ Nevertheless, American and British authorities and industry clearly took advantage of the war and granted licenses on some of the most valuable patents to strengthen their national industry, a fact that was also underlined by German lawyers.²⁷ Coal-tar dyes accounted for many of the licenses. Other licensed patents came from the mechanical industry, among which Krupp.²⁸

In France, the statute apparently did not result in any activity. No decree granting licenses was ever published in the *Journal officiel*, and contemporaries were not aware of any application of the

during World War 1», in P. S. MORRIS (dir.), *Intellectual property and the law of nations, 1860-1920*, Leiden, Brill Nijhoff, 2022, pp. 150-179.

²³ *Report of the Comptroller-General of Patents, Designs and Trade-Marks, 1914-1920*.

²⁴ R. LUTTER, «Krieg und gewerblicher Rechtsschutz», *Markenschutz und Wettbewerb*, June 1919, 18 (9), pp. 128-134, here p. 130. Twelve of those licenses were free, in the other cases the licensees had to pay a modest fee. On the application of the 1916 amendments, see *La Propriété industrielle*, 30 September 1918, p. 106.

²⁵ *Annual Report of the Federal Trade Commission for the fiscal year ended June 30, 1918*, Washington DC, Government Printing Office, 1918, pp. 42-43.

²⁶ K. J. WILLIAMS, *British pharmaceutical industry, synthetic drug manufacture and the clinical testing of novel drugs, 1895-1939*, PhD Thesis, University of Manchester, 2005, p. 152. D. COOPER, «The Licensing of German Drug Patents Confiscated During World War I: Federal and Private Efforts to Maintain Control, Promote Production, and Protect Public Health», *Pharmacy in History*, 2012, 54 (1), pp. 3-32. J. STEWARD et N. M. WINGFIELD, «Venereal Diseases», *1914-1918-Online International Encyclopedia of the First World War*, 23 September 2016, online: DOI: 10.15463/IE1418.10968.

²⁷ A. SELIGSOHN, “Die gewerblichen Schutzrechte Deutscher in England”, *Deutsche Juristen-Zeitung*, vol. 22, 1917, col. 84-86.

²⁸ R. LUTTER, op. cit., p. 130. *Annual Report of the Federal Trade Commission*, op. cit., pp. 44-47.

law.²⁹ The restraint in granting licenses was in line with the caution and discretion in matters of liquidation. In all likelihood, this attitude reflected the fact that there were many French-owned assets in the German Empire, especially in Alsace-Lorraine. This worry about retaliation led to some moderation.

The Central Powers remained similarly cautious. German lawyers and industrialists agreed that they had less to gain from obtaining compulsory licenses or confiscations than they had to lose from retaliatory actions taken by the Allies.³⁰ Accordingly, the Central Powers rarely applied their decrees. In Germany, between the enactment of relevant measures in July 1915 and the end of 1918, only 32 patents were compulsorily licensed.³¹ This small number was further limited by the fact that the authorities later revoked eleven of those licenses.

The discussions about international patents between allies

The war did not only suspend the international working of the patent system, it also inspired new venues for international economic cooperation.³² In June 1916, an economic conference was held by the Allies in Paris. The French and the British advocated for a bold cooperation, aiming not only at coordinating ongoing economic warfare, but also at weakening the position of the German economy after the war. Three sets of actions were discussed: those that were only planned for the duration of the war; “transitional” measures for the immediate reconstruction after the conflict; permanent measures of mutual assistance and coordination. At the conference the delegates endorsed, as part of this last type of cooperation, the project of harmonizing “as much as possible” legislation concerning patents, trademarks and indications of origin. “Technical delegates” were to prepare the measures that could lead to such a harmonization.³³

This project was certainly reminiscent of previous endeavours. The French attorney Georges Maillard wrote to the Minister of Commerce, in response to his appointment as one of the technical delegates, that it was “a happy opportunity for [him] to work, under exceptionally favourable circumstances, towards a goal [he had] always held dear”. He even hoped that “many of the difficulties that arose in a Conference such as that in Washington [would] be overcome in the smaller circle of the Allies”.³⁴

The parallel was not completely unfounded. Sure, when the “Conférence des délégués techniques” gathered in Paris between 14 and 16 December 1916,³⁵ some of the delegates were new to these international gatherings, such as Charles Drouets, director of the French National Office of

²⁹ A. DESCHAMPS, *Régime normal et régime de guerre des inventions et des brevets en France*, Paris, Giard & Brière, 1917, p. 91. F. MÄCHTEL, op. cit., p. 234.

³⁰ F. MÄCHTEL, op. cit., pp. 243-247.

³¹ “Beschränkung von gewerblichen Schutzrechtenfeindlicher Staatsangehöriger”, *Blatt für Patent-, Muster-, und Zeichenwesen*, 1919, pp. 3-4.

³² A. TOOZE, *The deluge: the Great War and the remaking of global order, 1916 - 1931*, London, Penguin Books, 2015, pp. 199-205.

³³ *Conférence économique des gouvernements alliés tenue à Paris les 14, 15, 16 et 17 juin 1916. Programme, Délégations, procès-verbaux des séances et acte de la Conférence*, Paris: Imprimerie nationale, 1916, p. 89.

³⁴ Archives nationales (AN), Pierrefitte-sur-Seine, F¹² 8112, Georges Maillard to the Ministry of Commerce, 25 October 1916.

³⁵ Ministère des affaires étrangères (MAE), Archives diplomatiques, La Courneuve, 75 CP COM 207, Ministère des Affaires étrangères, *Conférence des délégués techniques en matière de propriété industrielle*, Paris, Imprimerie nationale, 1918.

Industrial Property since 1913.³⁶ But many were familiar figures. The United Kingdom had sent the director and the vice-director of its Patent Office, William Temple Franks and Alfred J. Martin. Both had been present at the conference of the Paris Union in Washington in 1911, where they had already met some of the other delegates of the Paris conference: the Italian Emilio Venezian, the Belgian Jules Brunet and the French Georges Maillard.³⁷ Yet more significantly, almost half of the French delegates had attended at least one of the AIPPI meetings.³⁸ Two had even been on its executive committee for years: the barristers André Taillefer and Maillard himself.

Two major issues concerning patents were discussed during the 1916 conference.³⁹ First, the Allies were to introduce compulsory licensing instead of revocation as a sanction for a patent not being worked in the country. This was a major shift, especially since the proposals had been prepared by France, who had repeatedly rejected any such move before the war. To be sure, the proposal still allowed each country to revoke or expropriate a patent if its exclusionary power led to abuses.⁴⁰ However, an internal “explanatory note” of the French Ministry of Commerce made clear that this would only apply as a last resort.⁴¹ The technical delegates agreed to this proposition. Plausibly, the practice of the wartime licenses had contributed to this result, as had the heightened nationalism of the time. Compulsory working could create employment, but it did not help the national industry, as the production remained controlled by foreign –or enemy– patentees.

The second main proposition was the creation of a central inter-Allied patent office that would receive applications and optionally examine them. For the French, the goal was once again to weaken Germany. Before 1914, the German Patent Office had gained a special status in the European patent system. Because of the good reputation of its examination, obtaining patents in Germany was deemed necessary to reassure investors on the value of their inventions. The creation of the inter-Allied patent office was aimed at supplanting the Berlin *Patentamt*, that was accused of unfairly exploiting its position. Nonetheless, this creation would have been a significant step towards a greater internationalization, going beyond the multinational patenting made possible by the Paris Convention.

Any illusions about the possibility of cooperating more easily between Allies than in the Paris Union were quickly dispelled. Besides France, only Belgium, that hoped to welcome the new administration in Brussels, strongly supported the project. The Italian, Russian and British delegates objected that the office would only be useful if it examined the applications, rather than if it only dispatched the applications to the various countries, but Britain and Russia refused to give up their national examination.

The conference of technical delegates was nevertheless significant. First, the seriousness with which some members of the Entente envisioned patent cooperation contrasted with the discussions

³⁶ *La Propriété industrielle*, 31 July 1932, p. 127.

³⁷ Union internationale pour la protection de la propriété industrielle, *Actes de la Conférence réunie à Washington du 15 mai au 2 juin 1911*, Berne, Bureau international de l’Union, 1911, pp. 167-170.

³⁸ *Annuaire de l’Association internationale pour la protection de la propriété industrielle*, 1897-1913.

³⁹ MAE, 75 CP COM 207, MAE, *Conférence des délégués techniques*, op. cit., pp. 5-12, 15-22, 25-35.

⁴⁰ The French text read on this point: “chaque pays conservera le droit de révoquer ou d’exproprier le brevet en cas d’abus du monopole dûment constaté”.

⁴¹ AN, F¹² 8112, “Brevets d’invention. I- Obligation d’exploiter et license obligatoire. Note explicative”.

of the Central Powers. Also in 1916, the lawyer Albert Osterrieth and the patent agent Maximilian Mintz, both famous specialists and former colleagues of Maillard and Taillefer in the AIPPI, gave speeches in Berlin, Vienna and Budapest, advocating for harmonization and greater coordination in matters of industrial property between Germany and Austria-Hungary. However, such projects did not enjoy official support. Furthermore, they took place once again in reaction to the projects of the Entente.⁴² Second, the technical conference was not unlike the main economic conference that had taken place in June. In both cases, while the resolutions never came into force legally speaking, they remained an important reference point for many of the actions of the Allies in the following years.⁴³

II. The Treaty of Versailles and industrial property: a complex compromise

When the negotiation of the peace treaty between the Allied Powers and Germany opened on 18 January 1919, it brought some objectives of the 1916 conferences back to the forefront, but in a completely different context. With the end of the combats, the priority was no longer to define common measures of economic warfare, but to consider the long term. Moreover, the presence of the United States, whose policy towards “enemy assets” was particularly offensive, changed the nature of the discussions between the Allies. Indeed, the policy of the United States intensified between the armistice and the opening of the peace discussions. After the aforementioned second amendment to its Trading with the Enemy Act in November 1918, the Alien Property Custodian liquidated Bayer’s American subsidiary, including its patents, in December. In February 1919, it inspired the creation of the Chemical Foundation, a semi-official organization to which the remaining sequestered German chemical patents were sold on 10 April 1919.⁴⁴

Given that neither France nor even Great Britain had gone so far, it was clear that the negotiation would have to deal with the diverse positions of the Allied Powers. While the peace treaties could nevertheless have established a new institutional system for industrial property, albeit one excluding Germany, they did not do so. On the other hand, contrary to a tenacious misconception that still figures in recent overviews, it must be stressed that the Treaty of Versailles did not expropriate or cancel German patents either.⁴⁵

The dual motivation behind the provisions on industrial property

Given the measures that had affected patents and trademarks in the previous years, it was clear that the peace negotiations would have to deal with industrial property. Other issues were more pressing, and the agenda of the economic commission was set only in early March. It was divided in

⁴² A. OSTERRIETH, “Der Ausbau des gegenseitigen gewerblichen Rechtsschutzes zwischen Oesterreich-Ungarn und Deutschland”, *Gewerblicher Rechtsschutz und Urheberrecht*, vol. 21, Nr. 8-10, pp. 201-210; M. MINTZ, “Vereinheitlichung der in Oesterreich, Ungarn und Deutschland auf dem Gebiete des gewerblichen Rechtsschutzes bestehenden Verfahrensformen”, *Gewerblicher Rechtsschutz und Urheberrecht*, vol. 21, Nr. 8-10, p. 210-214.

⁴³ G.-H. SOUTOU, *L’or et le sang: les buts de guerre économiques de la Première Guerre mondiale*, Paris, Fayard, 1989, pp. 304-305.

⁴⁴ K. STEEN, *The American synthetic organic chemicals industry: war and politics, 1910-1930*, Chapel Hill, The University of North Carolina Press, 2014, p. 164-165.

⁴⁵ D. COLON, *Histoire, Ire: nouveau programme*, Paris, Belin éducation, 2019, p. 296 ; G. BERSTEIN and S. BERSTEIN, *Dictionnaire historique de la France contemporaine: 1870-1945*, Editions Complexe, 1995, p. 796 ; D. ORLOW, *A History of Modern Germany: 1871 to Present*, Routledge, 2016.

various sub-commissions, one of which was tasked with discussing industrial property. Its meetings gathered familiar figures, including quite a few men who had attended the 1916 conference, such as the British patent comptroller William Temple Franks, the Belgian law professor de Visscher, and the Italian senior civil servant Venezian. France was represented by Charles Lyon-Caen, another academic lawyer specialist in international and commercial law, who was assisted by Charles Drouets, the director of the French Office of Industrial Property (Drouets had also been present in 1916 and ended up participating in most of the sessions of the sub-commission). The delegate of the United States, Joseph Baily Brown, a patent lawyer from Pittsburgh, contrasted with the other members by his much more modest rank.⁴⁶

The discussions of these men, based on two quite similar drafts, a British and a French one, followed two major principles.⁴⁷ On the one hand, many provisions aimed at restoring the international patent order. On the other hand, the goal was also to weaken German industry, and thus to ensure that some actions taken during the conflict would remain in force. While there was an agreement on these broad principles, there were divergences between countries, depending on the type and extent of their wartime measures, the importance of patents in their political economy, and even their situation at the end of the war.

It was quickly agreed that the international conventions of Paris and Berne should be reestablished. The commission also adopted the principle of restoring the industrial property rights of the nationals of all the belligerents. It was furthermore decided that (former) rights holders would have one year after the entry into force of the peace treaty to pay renewal fees and take any other action needed to restore their industrial property. This decision was reached despite tense exchanges between British and French delegates. The former wished this grace period to be only six months, so as to return to normalcy as quickly as possible, whereas France and Belgium insisted for a longer delay, to take into account the devastation and dire economic state of their countries.⁴⁸

Another clause stipulated a general amnesty for any infringement of patents and trademarks that had occurred during the war or that would occur in the year following the ratification of the peace treaty.⁴⁹ In a sense, this provision also contributed to restoring an international patent order, because it allowed to start over by avoiding the multiplication of post-war lawsuits, and because it applied reciprocally to both victors and vanquished. Indeed, a preliminary draft of the economic clauses prepared by the French Minister of Commerce, transmitted to Clemenceau on 31 December 1918, had argued that this could be considered “a sort of general compensation for the damages that may have been suffered by both sides.”⁵⁰

⁴⁶ A graduate of the Pittsburgh Law School, Joseph Baily Brown was recruited in August 1918 by the State Department to study the effects of the war on the international industrial property system. He then left for Europe, and in particular Switzerland, to learn about German practices. He was attached to the U.S. Commission to Negotiate Peace on January 25, 1919. US NARA, RG 256, General Records, 184.1/Br-Bull (microfilm M820, roll 257, f^o 244)

⁴⁷ MAE, *Conférence de la Paix, 1919-1920. Recueil des Actes de la Conférence, Partie IV, Commissions de la Conférence, B, Questions générales, VII, Commission économique, 2^e fascicule*, Paris, *Sous-commissions*, Imprimerie nationale, 1933.

⁴⁸ *Ibid.*, p. 565-566 (4 April 1919).

⁴⁹ *Ibid.*, p. 525 (13 March 1919).

⁵⁰ AN, F¹² 8104, Avant-projet des clauses économiques des préliminaires de paix, 31 décembre 1918 (our translation).

Nevertheless, this amnesty was ambiguous, revealing the entanglements between the goals of restoring an international patent system and of shaping it at the expense of German industry. Given the asymmetry in the number of patents held abroad by nationals of Germany and of the Allied powers, this provision was rather beneficial to the latter. Indeed, German lawyers later were divided in their assessment, some seeing it as an act of piracy, others as adequate and positive.⁵¹ In the discussions of the commission, it was the representative of the United States that contested the clause, arguing that it led to an unconstitutional act of depriving patent holders of their rights without any compensation.⁵² This argument about the respect of property right was cast in another light by the fact that the US Alien Property Custodian was preparing to sell sequestered patents to the newly founded Chemical Foundation. In that sense, the opposition of the United States to the amnesty likely aimed at preserving the future value and power of the liquidated patents. In the end, it was decided that this reciprocal amnesty would not apply to the relationship between Germany and the United States.

The divergent extent of wartime actions against enemy-owned patents thus largely shaped the positions in the negotiations concerning industrial property. This is also manifest in the handling of wartime measures in the treaty. In December 1918, the French preliminary draft of the economic clauses had already stated that it was “appropriate to provide for the maintenance of the special measures taken by these countries in virtue of their wartime legislation”. It further insisted on the special French position:

“But since France has not taken any special measures of this kind with regard to the rights of the enemy, it cannot be accepted that such a provision could have reciprocal effects and that measures taken in enemy countries against the rights of the French could be maintained without compensation to our nationals.”⁵³

Not having taken any general measures against enemy-owned patents, the French government felt that if wartime actions taken by Germany were also declared legitimate and legal, it would be penalized, unlike its allies, who had implemented aggressive policies. This did not turn out to be a controversial position. In Versailles, the sub-committee agreed that wartime decisions by the Allies, such as compulsory licenses, suspensions or revocations, would remain in force, but that this was not reciprocal: the same decisions taken by the Central Powers would be reverted.

However, the cited preliminary draft had gone further:

“Furthermore, it is essential, in order to avoid a new German hold on the industries of the allied or associated countries, to stipulate that these countries retain the right to limit or restrict the industrial property rights of enemy nationals on their territory, as the needs of national defense or the public interest may require.”⁵⁴

In other words, for the French Ministry of Commerce, the return to the *status quo ante* had to be balanced by a containment of German industrial property. France thus wished to obtain control on “all future industrial property”, a wish shared by Great Britain in the discussions of the sub-commission.⁵⁵ The representative of the United States criticized the clause, arguing that it was “impossible to claim the right to deal with inventions which might develop in the future, and which

⁵¹ F. Mächtel, op. cit., p. 300.

⁵² MAE, *Conférence de la Paix, 1919-1920*, op. cit. p. 567 (4 Avril 1919).

⁵³ AN, F¹² 8104, Avant-projet des clauses économiques des préliminaires de paix, 31 décembre 1918 (our translation).

⁵⁴ *Ibid.*

⁵⁵ MAE, *Conférence de la Paix, 1919-1920*, op. cit., p. 533 (15 March 1919).

[did] not yet exist.”⁵⁶ This divergence reflected the varying extent of the actions that had already been taken.

On 8 April 1919, the Economic Commission agreed on the draft articles on industrial property to be inserted in the treaty⁵⁷. Before closing the deliberations, Clémentel advocated for the creation of a Central Inter-Allied Patent Office and asked the Commission “to express the opinion that it would be opportune for the technical experts of the Allied and Associated States to study the question of the creation of such an Office as soon as possible.”⁵⁸ The Economic Commission adopted this proposal, thus reinforcing the French objective of a reframing of the international patent system at the expense of German industry.

The links between the clauses on industrial property and other economic clauses

The provisions on industrial property cannot, however, be understood without mentioning other economic and financial clauses, such as the provisions on the liquidation of enemy property.⁵⁹ In general, liquidations by all belligerents were considered final but former owners would be compensated. However, this principle was framed asymmetrically, since direct compensation, or even restitution in some cases, was provided for nationals of the Allied countries, whereas the proceeds of the liquidation of Germans’ property were integrated into the payment of reparations (German nationals were however to be compensated by their own government). In addition, while they provided for the immediate lifting of the sequestration of property of their nationals in Germany, the Allies reserved the right to retain sequestered enemy assets, or even to liquidate them.

This opened up a possible contradiction between the provisions on liquidation and those on industrial property. Because the draft on industrial property was based on the principle of restoring existing rights, despite many exceptions, would the former German owners of a liquidated company be able to recover the patents and trademarks that had been sold with it? Such a prospect was a concern for those like Francis Garvan, the new Alien Property Custodian, who wished to protect the interest of the American chemical industry. They were even more concerned because a partial lifting of the blockade, allowing export of German chemical products to the United States, was being considered to allow Germany to pay for foodstuffs and deal with a humanitarian crisis.

For this reason, both the British and the American representatives on the liquidation sub-committee successfully proposed to give an explicit priority to the liquidation of enemy assets over the restoration of industrial property rights.⁶⁰ The American representative in the sub-committee, Bradley Palmer, who was also the APC's representative in Paris, was responding to the instruction Garvan had cabled him: “Dont forget provision about all chemical patents applied in Germany since beginning 1914. This is essential for our protection.”⁶¹

⁵⁶ *Ibid.*, p. 534 (15 March 1919).

⁵⁷ MAE A Paix 355, Conditions économiques de la paix, Commission économique, p. 87 (8 April 1919).

⁵⁸ *Ibidem*, p. 88.

⁵⁹ N. MULDER, « ‘A Retrograde Tendency’: The Expropriation of German Property in the Versailles Treaty », *Journal of the History of International Law / Revue d’histoire du droit international* 22 (4), 2020, pp. 507-535.

⁶⁰ US NARA, RG 256, General Records, 181.172101/10, Subcommittee on Liquidation of Enemy Businesses (microfilm M820/roll 157, 607)

⁶¹ US NARA, RG 131, Paris Peace Conference Cable, UD5, Garvan to Palmer, 9 April 1919.

The German reaction and the Allied response

The German delegation responded as vigorously to the economic clauses presented on 6 May 1919 as they had on other points. They did not fail to notice the connection between the provisions on liquidation (Articles 297 and 298) and those on industrial property (Articles 306 to 311). The German delegates saw the principle of restoration of rights as “seriously compromised”, even “stripped of all practical value” by “a series of exceptions, provided exclusively for the benefit of the Allied and Associated Powers”.⁶² Indeed, in their understanding, the allied and associated powers had reserved for themselves the possibility “of appropriating without compensation and for an indefinite time the fruits of the German spirit of invention”.⁶³

In their reply to the German delegation in mid-June 1919, the Allies refused most demands, such as granting reciprocity regarding the right to maintain special war measures. However, they agreed to one significant concession. The Allies accepted that national defense or the public interest would be the only reasons for which intellectual property rights acquired after the entry into force of the treaty could be compulsorily licensed, used, or otherwise restricted. Furthermore, a clause was added to organize compensation for such impingement on industrial property rights.⁶⁴

The Treaty of Versailles was definitively concluded on 28 June 1919. While its final clauses on industrial property are concentrated in the seventh section of the economic clauses, many relevant provisions are disseminated in other sections. All are the result of a difficult compromise that followed a double logic: on the one hand, upholding the wartime measures regarding industrial property, and on the other hand, using the industrial property rights of German nationals as collateral for the settlement of reparations. The Treaty of Versailles itself did not expropriate German patents: it reserved this possibility, in particular for France, which had not yet taken any major measures in this area. It offered the United States and Great Britain the possibility of not having their war measures called into question, and gave France a means of pressure.

The Treaty of Versailles thus created a compromise between the different lines of action of the Allies and even allowed the United States to be exempted from some provisions. Far from being a factor of convergence, it is above all a tool for managing diversity. Therefore, it cannot be seen as the basis for a revision of the pre-war system.

III. Rebuilding the international patent order

In the early 1920s, it was still unclear how the complex compromise of the peace treaty would affect post-war international patenting. For instance, in his preface to a 1921 book on the matter, French professor of international law Antoine Pillet expressed his “great apprehensions” about the future of the clauses of the peace treaties devoted to industrial, literary and artistic property⁶⁵. According to him, these provisions revealed themselves in hindsight to be internally inconsistent, even in contradiction with the international order guaranteed by the Paris and Berne Union.

⁶² AN, F¹² 8119, Remarques de la délégation allemande sur les conditions de la paix, p. 13 (our translation).

⁶³ *Ibidem*, p. 14.

⁶⁴ « The President of the Peace Conference to the President of the German Delagation » in *Papers Relating to the Foreign Relations of the United States, The Paris Peace Conference, 1919*, vol. 6 p. 990.

⁶⁵ A. PILLET, « Préface » in G. CHABAUD, *La propriété industrielle, littéraire et artistique et les traités de paix*, Nancy-Paris-Strasbourg, Berger-Levrault, 1921, p. X.

In fact, the application of the treaties –starting with that of Versailles– was upset by the absence of ratification of the United States. However, this withdrawal simultaneously opened up the possibility of returning to the perspectives of Franco-British collaboration mentioned at the 1916 conference of experts. Such projects failed however. As economic and technological exchanges resumed and compromises were found in matters of reparations, the international patent order was gradually re-established on the basis of established institutions such as the Paris Union.

Implementing the measures against German industrial property

The provisions of the peace treaty about patents had been a compromise between those, like the United Kingdom and the United States, that had already taken wide-reaching war measures, and those, especially France, that still considered taking such measures against German-owned industrial property. Given its relatively passive attitude during the war towards held by Germans patents, the French government might have used the provisions of the Treaty of Versailles more extensively. In October 1919, an act was passed to liquidate systematically the sequestered assets.⁶⁶ In the absence of extensive research on the matter, it remains very difficult to assess its impact on patents. On the other hand, we can estimate that the special measures restricting German industrial property were remarkably modest in France. Although two decrees specified in 1920 how the government could expropriate patents “likely to be of interest to national defence or to be of public interest” and to determine the compensation to be paid to their owners, they apparently did not give rise to any large application.⁶⁷

Indeed, the policy aimed at catching up technologically with Germany did not make effective use of the provisions of the Treaty of Versailles on industrial property. For example, when the French government undertook to encourage the development of a synthetic nitrogen industry on the basis of patents held by BASF, no compulsory licence or expropriation was used. First, the negotiations with BASF were initiated even before the treaty was signed. Moreover, as Michaël Llopert noted, the agreement of 11 November 1919 between the French Government and BASF transferred the know-how on the production of synthetic ammonia but also of the patent, as explicitly stated in Article 3 of the Agreement⁶⁸. While in Great Britain, Brunn, Mond & Co was granted a licence on the basis of the provision of the peace treaty, without discussions with the German patent holder, in France, the

⁶⁶ « Loi relative à la liquidation des biens faisant l’objet d’une mesure de séquestre de guerre », *Journal officiel de la République française. Lois et décrets*, 8 octobre 1919, p. 11623.

⁶⁷ « Décret relatif à l’application des dispositions des articles 306 et 309 (sic) (Partie X. section VII, propriété industrielle) du traité de paix du 28 juin 1919 avec l’Allemagne » [15 janvier 1920], *Journal officiel de la République française. Lois et décrets*, 22 janvier 1920, p. 1154 ; « Décret complétant le décret du 15 janvier 1920 relatif à l’application des articles 306 et 310 du traité de paix du 28 juin 1919 avec l’Allemagne » [24 février 1920], *Journal officiel de la République française. Lois et décrets*, 26 février 1920, p. 3158. The implementation of these decrees should have given rise to other decrees of which only one trace has been found (see note 70).

⁶⁸ M. LLOPART, « Le caractère ambivalent de la prudence dans les relations industrialo-étatiques : le cas de l’ammoniaque synthétique (1919-1924) », *Entreprises et histoire*, 2018, 92 (3), p. 26 ; M. LLOPART, *Entre l’État, l’usine et le marché : le « problème de l’azote » en France : retour sur les débuts controversés d’une entreprise publique durant l’Entre-deux-guerres, l’Office national industriel de l’azote (1924-1940)*, PhD dissertation, Toulouse 2, 2020 ; « Rapport fait au nom de la Commission des finances chargée d’examiner le projet de loi, adopté par la Chambre des députés, comportant approbation et faculté de cession d’une convention en vue de la fabrication de l’ammoniaque synthétique », *Impressions : projets, propositions, rapports. Sénat*, Paris, Imprimerie du Sénat, 1924, p. 38.

patent was indeed the object of negotiations with its German holder.⁶⁹ The provisions of the peace treaty was certainly a leverage for the French government to obtain the agreement of BASF, but the latter also had non-negligible assets since it remained the depositor of the “tricks of the trade” that patents do not allow to acquire.

In fact, it was not until 1923 that two patents taken out by the *Gesellschaft für drahtlose Telegraphie* (Telefunken) were subject to an implementation of the treaty.⁷⁰ These two patents protected respectively a receiver for wireless telegraphy and telephony (French patent #456 788) and a system of coupling of the grid circuits of a three-electrode lamp (French patent #467 747). Both had resulted in a concession acquired in February 1921 by the Société française radioélectrique (SFR) and by the new Compagnie générale de télégraphie sans fil (CSF).⁷¹ This holding company, which had been created in January 1918 with a large investment from the Marconi company, agreed to a patent exchange with Telefunken in order to join a global patent pool. This transaction, which was considered later an “unusual bargaining”, was part of the structuring of the radio industry in France. This process depended largely on the pressure of the Marconi company, on the role of Telefunken, but also on initiatives of French actors, which had led to the creation in 1910 of SFR, and on the role of the State, which was determined to enforce its prerogatives in this field.⁷² The provisions of the Versailles Treaty thus allowed the French government to contain the influence of foreign interests and their monopoly power in this emerging industry. With the decree of 29 September 1923, the government took control of both patents, on which it offered licenses to any interested industrialist. CSF and SFR, which were the beneficiaries of the patents, challenged the decision in court, but the decision was confirmed in 1930.⁷³ In this case, the implementation of the Treaty of Versailles appeared as an asset used by the State in its desire to regulate a new industry, with a strategic scope and an international dimension.

The attempt to create an International Patent Office

This very cautious use of the Versailles Treaty provisions on patents by the French Government contrasts with its initiatives to restructure the pre-war international system. In particular, it still pursued its objective of creating an inter-allied patent office. In November 1919, France convened an international conference on the matter. The proposal had remained the same one since the conference of technical delegates in 1916. In addition to the constant goal of supplanting the Berlin

⁶⁹ W. ABELSHAUSER (ed.), *German industry and global enterprise : BASF : the history of a company*, Cambridge, Cambridge University Press, 2004, p. 186.

⁷⁰ « Décret retenant les brevets 467 747 du 27 janvier 1914 et 456 788 du 17 avril 1913 » [29 September 1923], *Journal officiel de la République française. Lois et décrets*, 9 October 1923, p. 9742. The procedure was modified by another decree on 31 October 1922 (*Journal officiel de la République française. Lois et décrets*, 6 November 1922, pp. 10814-10815).

⁷¹ *La TSF moderne*, 4 (34), April 1923, p. 303.

⁷² « Rapport fait au nom de la commission des finances chargée d'examiner le projet de loi portant fixation du budget général de l'exercice 1929 (Postes, Télégraphes et Téléphones », *Journal officiel de la République française. Documents parlementaires, Chambre des députés*, annexe n° 2274 à la séance du 31 juillet 1929, p. 828 ; P. GRISET, *Entreprise, technologie et souveraineté : les télécommunications transatlantiques de la France, XIX^e-XX^e siècles*, Paris, Éditions Rive droite, 1996, pp. 322-325.

⁷³ E. CHALVON-DEMERSAY (ed), *Recueil des arrêts du Conseil d'État*, Paris, Recueil Sirey, 1930, p. 25 [Ruling of 10 January 1930].

Patentamt, a preliminary study advanced new arguments.⁷⁴ First, such a patent office would give an idea of the value of the patent without having to adopt the system of prior examination in domestic legislation. Second, it allowed for the pooling of administrative resources since the constitution of such an organization was “a particularly costly and difficult thing, because of the prodigious documentation that [had] to be gathered.”⁷⁵ As such, it would help the new countries created by the peace treaties, which did not have sufficient means to pursue the creation of an equivalent administration at the national scale.

The conference opened on 17 November 1919 and brought together 26 countries. The Allied powers were present –the United States was represented unofficially–, as were several Latin American countries, such as Bolivia, Ecuador or Peru.⁷⁶ The discussions encountered two major obstacles. The first was the ambiguous position of Great Britain, which was considering the creation of a Central Patent Office, but on the scale of its own empire. The inter-allied logic promoted by France was thus in contradiction with the British imperial logic. The second stumbling block was the disagreement over costs and financing of the proposed office. The French proposal of replacing national fees with an international one aroused almost general opposition.⁷⁷ Similarly, several participants favored an examination limited to the search for prior art in previous patents, without taking into consideration a wider documentation. For Drouets, representative of France, such a limitation would defeat the purpose: he pointed out that, if this were to be adopted, “inventors [would continue] to go to *Gitschinerstrasse*”, since the Berlin *Patentamt* claimed to take into consideration “scientific and technical publications”: thus, “the goal pursued - which is to compete and supplant the German Office - would be missed.”⁷⁸

The preparatory conference of November 1919 ended in the first adoption of a text, but it took one year before another conference convened on 26 October 1920 to conclude a treaty. While twenty countries were present, it was impossible not to notice the absence of Great Britain, which had decided to pursue its imperial plans.⁷⁹ In the end, only six of countries signed the text of the arrangement.⁸⁰ At the same time, the *Patentamt* imposed administrative formalities on certain nationals of the former Allied countries that were contrary to the provisions of the treaty.⁸¹ While the project aimed at weakening the Berlin office, the *Patentamt* regained its influence. In this context, France abandoned its own project by not ratifying the arrangement despite the complaint of the French Minister of Foreign Affairs. By 1935 no country had deposited the instruments of ratification.⁸²

⁷⁴ MAE, 429 QO 311, Avant-projet d’arrangement pour la création d’un Bureau central international d’enregistrement et d’examen des brevets d’invention. Étude préliminaire, undated.

⁷⁵ *Ibidem*, p. 8.

⁷⁶ MAE, 429 QO 311, Conférence interalliée pour l’examen d’un avant-projet d’arrangement pour la création d’un Bureau central international d’enregistrement et d’examen des brevets d’invention, minutes of the meeting of 17 November 1919.

⁷⁷ *Ibid.*, meeting of 18 November 1919.

⁷⁸ *Ibid.*, meeting of 19 November 1919, p. 5.

⁷⁹ MAE, 429 QO 311.

⁸⁰ France, Belgium, Ecuador, Greece, Poland, Czechoslovakia, Romania and Siam.

⁸¹ MAE, A 355, Note of the French delegation to the conference of ambassadors, May 1920.

⁸² MAE, 429 QO 311, letter of the Ministry of Commerce and Industry to the Minister of Foreign Affairs, 10 April 1935.

A post-war international patent order on old foundations

Notwithstanding these attempts at keeping the advantage over Germany, the international functioning of patents was gradually restored. The changed context often spurred developments, but the Paris Convention nevertheless remained the foundation of the international patent order.

While the Convention had stopped having much effect between 1914 and 1919, the administration of the Paris Union, the International Bureau based in Berne, had continued working during the war, most importantly by publishing the periodical *La Propriété industrielle*. By the end of the war, it was thus ready to push for facilitating again the multinational use of patents. The proclamation of the restoration of the conventions in the Treaty of Versailles lent additional legitimacy to this project. In October 1919, as one of its very first actions after the war, the International Bureau proposed for all states member of the Paris Union to prepare an arrangement that would provide for more equal treatment of patent holders of various countries. The problem was that the provisions of the peace treaties, even those favourable to patentees, did not apply to neutrals. For instance, as mentioned, the treaties extended the deadlines to pay renewal fees, and take any other action needed to restore industrial property rights, by one year after their entry into force. Nationals of neutral countries could not benefit from this general rule and thus were at a disadvantage when it came to maintaining or restoring their foreign patents, since the extensions decided at the national level were often less generous. In Switzerland for example, the Federal Department of Foreign Affairs was made aware of this problem by a major patent professional and the association representing the interest of the mechanical and electrical engineering industry.⁸³ Such complaints, transmitted to the International Bureau by the authorities, led to the the arrangement proposed by the International Bureau, which was signed in Berne on 30 June 1920. Like the peace treaties, the arrangement extended, by respectively six months and one year after its entry into force, the period of priority and other legal periods such as deadlines for paying renewal fees.⁸⁴ The provisions of the peace treaty had spurred this action, but the solution took place within the framework of the old Paris Union.

Similarly, the discussions around industrial property that took place in new institutions such as the League of Nations, and more specifically in its economic committee, and in the International Chamber of Commerce (founded in 1919), were apparently a major motivation for older networks of specialists to take up their work again. Before that, the French members of AIPPI had gathered in 1919 because of the negotiation of the peace treaties. They created a formal association, the so-called French Group of AIPPI, and organised meetings with the delegates taking part in the peace talks. In the early 1920s, this French group, as well as the Belgian, German, Austrian and Swiss formal associations or informal networks of specialists all reconvened separately. Future research will be needed to shed light on the exact nature and dynamics of the interactions between the committees of the League of Nations, the industry property commission of the International Chamber of Commerce, and the various national “groups” of AIPPI and “associations”. It is

⁸³ Swiss Federal Archives, E22#1000/134#2430*, report of the Federal Political Department to the Federal Council, 16 December 1919.

⁸⁴ The text of the Arrangement is reproduced in *La Propriété industrielle*, 31 July 1920, pp. 73-74. For detailed discussions, see *ibid.*, pp. 77-82; S. P. LADAS, op. cit., pp. 752-755; F. MÄCHTEL, op. cit., pp. 313-315.

nevertheless already clear that one important goal of these groups was to obtain a new meeting of AIPPI, which took place in Zurich in June 1925.⁸⁵

Another goal of these experts reconvening was to discuss the upcoming conference of the Paris Union, to be held in The Hague in October 1925. Itself a major sign of the restoration of an international patent order, the conference furthermore highlighted in at least one regard the changes brought about by the war. Contrary to the conferences before 1914, The Hague brought about extensive changes to the text of the Paris Convention, renumbering its articles and integrating into it the interpretative provisions of the so-called “closing protocol”. Most relevant to the focus of this article was that member states agreed to further relax their requirements on compulsory working. The clause adopted by the delegates was remarkably similar to the resolution of the 1916 inter-Allied conference of technical delegates: revocation of the patent was only allowed if compulsory licenses were not sufficient “to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent”.⁸⁶ If defenders of a greater facilitation of the multinational use of patents, like AIPPI, finally saw their wish fulfilled, it was in small part due to the changes of the war. In particular, French delegates had become strong supporters of abandoning compulsory working.

This progressive resumption of discussions around the international patent order, and of international patenting activities, happened in parallel with, and was likely a part of, the broader development that led to the restoration of the European economic system, thanks to the Dawes Plan of 1924 that lightened the burden of the reparations on Germany by rescheduling their payment, and the Locarno Security Pact of 1926 that normalised relations between Western European countries. In 1930, the Young Plan further stretched and eased the schedule for German reparations, and put an end to the possibility offered by the Treaty of Versailles of expropriating or granting licences on German-owned industrial property.⁸⁷

Conclusion

On the surface, the First World War might seem a mere interlude in the international political economy of patenting. Indeed, in the long run, it did not make the dynamics of internationalisation any less ambivalent than they had been before 1914. While the period of the conflict was clearly characterised by a phenomenon of dis-integration, it was not monolithic. French and American wartime measures, for instance, were similar only on paper, but differed in their application. Furthermore, attempts at furthering integration did not disappear. And while the interwar period has often been described as an era of economic de-globalisation and fragmentation, the international patent order proved resilient. By the early 1920s, in France, the United Kingdom, the United States and Germany, the number of patent applications by nationals of the other major industrial powers

⁸⁵ *Schweizergruppe der internationalen Vereinigung für gewerblichen Rechtsschutz*, [1926], 1, pp. 10-11, 13-15. *Annuaire de l'Association internationale pour la protection de la propriété industrielle [...] 1925/1926*, Zurich, Buchdruckerei Berichtshaus, 1927, pp. 37-39.

⁸⁶ Union internationale pour la protection de la propriété industrielle, *Actes de la Conférence réunie à La Haye*, Berne, Bureau international de l'Union, 1926, pp. 431-435, 606. See also E. PENROSE, *The Economics of the International Patent System*, Baltimore, Johns Hopkins Press, 1951, pp. 78-86.

⁸⁷ F. MÄCHTEL, *op. cit.*, p. 332.

had more or less regained pre-war levels.⁸⁸ Meanwhile, attempts at regional, inter-allied integration failed, likely because technological and economic relationships with that Germany's industry did not allow to exclude it from a new patent order, but also in small part because of the subtle contradictory dynamics and strategies of the Allies. In the realm of industrial property, the war was clearly no "deluge".

Nevertheless, the conflict was not only interlude. It did bring about subtle readjustments. To understand them, one needs to look beyond the specific actions in the realm of industrial property. The war had also affected relative competitive positions in certain industries. Most importantly, many historians of the chemical industry see the war as a turning point for the countries of the Entente in the case of synthetic dyes and synthetic pharmaceutical compounds.⁸⁹ The domination of German businesses had been unmistakable before the war. While they remained extremely important after the war, they had new French, British and American competitors in these fields, often companies enjoying State support. This was in no way only the result of measures against industrial property. Indeed, it must be stressed that licencing did not transfer the technology and the know-how itself, a fact contemporaries were often confused about. Wartime measures against German-owned patents arguably only ensured that attempts to take up production would not be impeded by lawsuits after the conflict. Other actions undoubtedly mattered more: closer cooperation between academic scientists, industrialists, and the military, prohibitive tariffs against German imports made possible by the unilateral suspension by the Versailles treaty of the most-favoured-nation clause, and the liquidation of German factories.

These developments, including the violations of the Paris Convention, apparently helped somewhat paradoxically to achieve further internationalisation of intellectual property. The endeavours of internationalist circles had lost some of their fiercest opponents, who had become beneficiaries of wartime measures, such as the British chemical industry.⁹⁰ Thus, in this new context, the endeavours of internationalist circles had lost some of their fiercest opponents. This surely helps to explain why French and British representatives at the 1925 international conference at The Hague now officially supported the replacement of revocation with compulsory licencing as a sanction when a patent was not worked in the country. As such, the international patent order was not simply restored on its old foundations, but also experienced slight readjustments. Its resilience resided not in robustness, but rather in adaptability, allowing the ambivalent projects and processes of integration to get through the war.

⁸⁸ See the figures published in *La Propriété industrielle*, 1925, pp. 82, 106, 154, 195.

⁸⁹ L. F. HABER, *The Chemical Industry, 1900-1930: International Growth and Technological Change*, Oxford, Clarendon Press, 1971, pp. 184-198; W. J. READER, *Imperial Chemical Industries: a history*, vol. 1: *The Forerunners 1870-1926*, London, Oxford University Press, 1970, p. 252; K. STEEN, op. cit., pp. 287-288; J. SAKUDO, *Les entreprises de la chimie en France de 1860 à 1932*, Bruxelles, Peter Lang, 2011, pp. 217-246.

⁹⁰ For instance, Levinshtein took over a factory of Hoechst liquidated by the Board of Trade. L. F. HABER, op. cit., p. 193; W. J. READER, op. cit., p. 276.