

«IL MANQUE UN ANNEAU A LA CHAINE»:
THE BRAVE EXPERIMENT OF THE ‘SCIENTIFIC PROPERTY’

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Abstract: Between the Twenties and Thirties of the Twentieth Century, the theme of ‘scientific property’ reaches its peak of interest among the European legal science. It is the most visible part of a short path winding between the last two decades of the Nineteenth Century and the first decade of the twentieth century, a path full of intersections with crucial issues of contemporary legal history. The main characters of this story are the new forms of intellectual activity that contribute in a sensational way to delineate the physiognomy of modernity, marked by the increasingly impetuous trait of the scientific and technological development. From the first attentions addressed to the rights of *savants* on their *œuvres ou découvertes scientifiques* (with the project of an international convention drafted by Francesco Ruffini for the League of Nations) until the dissolution of the interest in this issue, mainly juxtapositions - between social and economic forces, but also among the different conceptions of ‘law’ - and theoretical contrasts, as well as political ones, stand out inside national and European scientific discourse. This is a conflict that, on the one hand, has inevitably precluded the ‘scientific property’ the outlet to the *ius positum*, while on the other hand, it has made it a sort of valuable experimental laboratory for the jurist.

Keywords: Scientific property; contemporary legal history; intellectual property; League of Nations; Italian legal science

Between the Twenties and Thirties of the Twentieth Century, the theme of 'scientific property'¹ reaches its peak of interest among the European legal science. It is the most visible part of a short and secluded path (winding between the last two decades of the Nineteenth Century and the first decade of the twentieth century), that seems to have left very few traces of itself, especially in the normative field. However, it is a path full of intersections with crucial issues of contemporary legal history, therefore circumscribed in time, definitely peculiar, but not restricted.

¹ SOCIETE DES NATIONS (SDN), COMMISSION DE COOPERATION INTELLECTUELLE (CCI), doc. A. 38. 1923 XII (hereinafter also referred to as *Rapport Ruffini*); REALE ACCADEMIA NAZIONALE DEI LINCEI, *Discussione intorno al progetto del socio Francesco Ruffini sulla proprietà scientifica* (per brevità anche *Discussione Lincei*), Roma, 1924; N. Stolfi, *La tutela della proprietà scientifica*, in «Rivista internazionale di filosofia del diritto», IV (1924), pp. 286-299; C. Vivante, *La tutela della proprietà scientifica innanzi la Società delle Nazioni*, in «Nuova Antologia di lettere scienze ed arti», CCXXXIV (1924), pp. 80-85, and in «Monitore dei Tribunali», LXV (1924), I, p. 241; E. Venezian, *La tutela della proprietà scientifica*, in «Studi di diritto industriale», 1924, pp. 19-25; J. H. Wigmore – F. Ruffini, *Scientific Property*, in «Illinois Law Review», XXII (1927), pp. 355-378; INSTITUT INTERNATIONAL DE COOPÉRATION INTELLECTUELLE (IICI), *La 'Propriété Scientifique' ou de le droit du savant sur l'exploitation économique de sa découverte*, Paris, 1929; S. P. Ladas, *The Efforts for International Protection of Scientific Property*, in «The American Journal of International Law», XXIII (1929), n. 3, pp. 552-569; COMMISSIONE NAZIONALE ITALIANA PER LA COOPERAZIONE INTELLETTUALE (CNICI), *La tutelle de la propriété scientifique*, Roma, 1930; M. Falco, *La fase più recente del movimento per la tutela della proprietà scientifica*, in «Rivista del diritto commerciale», XXVIII (1930), I, pp. 726-734; A. Jannoni Sebastianini, *La proprietà scientifica*, Roma, 1930; A. Manes, *La protection de la propriété scientifique à l'aide de l'assurance*, in «La coopération intellectuelle», II (1930), pp. 97-107; E. Piola Caselli, *La cosiddetta proprietà scientifica e la sua protezione pratica*, in «Rivista del diritto commerciale», XXIX (1931), I, pp. 191-212; A. Giannini, *Sulla tutela della scoperta scientifica*, in «Rivista del diritto commerciale», LII (1954), p. I, pp. 226-237; S. P. Ladas, *Patents, Trademarks, and Related Rights. National and International Protection*, vol. I, Harvard, 1975, pp. 1849 foll.; D. P. Miller, *Intellectual Property and Narratives of Discovery/Inventions: the League of Nations' Draft Convention on 'Scientific Property' and its Fate*, in «History of Science», XLVI (2008), pp. 299-342; G. Galvez-Behar, *The Propertisation of Science*, in «Comparativ. Zeitschrift für Globalgeschichte und vergleichende Gesellschaftsforschung», XXI (2011), pp. 80-97; A. Sciumè, Vivante e Ruffini 'legislatori': questioni di metodo nel progettare la migliore tutela della proprietà scientifica, in «Afferrare...l'inafferrabile». I giuristi e il diritto della nuova economia industriale fra Otto e Novecento. Atti della Giornata di studi storici e giuridici. Brescia, 11 maggio 2012, A. Sciumè – E. Fusar Poli (eds.), Milano, 2013, pp. 41-51.

The main character of this story is the scientist's work; even better, protagonists are the new forms of intellectual activity that contribute in a sensational way to delineate the physiognomy of modernity, marked by the increasingly impetuous trait of the scientific and technological development. Between the end of the Nineteenth Century and the start of the Twentieth Century, sensational discoveries and inventions from shattering practical applications obtain, from time to time, superficial enthusiasm (with some excess of confidence), or a more speculative attention. The myth of progress and the aspiration to the cultural and economical superiority of a nation take nourishment from them.²

It is in such a context that the 'scientific property' dawns on the horizon of the European jurist, with its supranational implications, its dogmatic and, at the same time, practical contours, its ancestral burden on property issues, together with the inevitable connections with the business and production world, in the new perspective of 'company' and 'enterprise'³, market and competition⁴. That is why, from the first

² F. Migliorino, *Ragione, probità, benevolenza. I miti borghesi di Angelo Majorana*, in *Il "giureconsulto della politica". Angelo Majorana e l'indirizzo sociologico del diritto pubblico*, G. Pace Gravina (ed.), 2011, pp. 69 foll.; L. Benadusi, *Il Mito della scienza*, in *Storia d'Italia. Annali 26: Scienze e cultura dell'Italia unita*, Torino, 2011, pp. 157 foll.

³ F. Cornelutti, *Valore giuridico della nozione di azienda commerciale*, in «Rivista del diritto commerciale», XXII (1924), I, pp. 156-173; M. Rotondi, *La nozione giuridica dell'azienda*, in «Rivista del diritto commerciale», XXII (1930), I, pp. 31 foll.; M. Ghiron, *Sulla dottrina giuridica dell'azienda*, in «Il Foro Italiano», LIX (1934), IV, pp. 108 foll.; M. Casanova, *Beni immateriali e teoria dell'azienda*, in «Rivista del diritto commerciale», XLII (1945), I, pp. 76 foll.; A. Vanzetti, *Trent'anni di studi sull'azienda*, in «Rivista del diritto commerciale», LVI (1958), I, pp. 32 foll.; S. Amato, *L'impresa nell'evoluzione storica del diritto commerciale. Strutture sistematiche e modelli normativi*, in «Materiali per una storia della cultura giuridica», XVIII (1988), f. I, pp. 25-59; P. Grossi, *Itinerari dell'impresa*, in «Quaderni fiorentini per la storia del pensiero giuridico moderno», XXVIII (1999), pp. 999 foll.; E. Marchisio, *Sulle 'funzioni' del diritto privato nella costituzione economica fascista. Contratto, impresa e concorrenza*, Macerata, 2007, pp. 24 foll.; F. Mazzarella, *Percorsi storico-giuridici dell'impresa. Dall' "entreprise" all' "Unternehmen"*, Palermo 2012; Id., voce *L'impresa*, in *Enciclopedia italiana di scienze, lettere ed arti. Ottava appendice: Il contributo italiano alla storia del pensiero. Diritto*, Roma, 2012, pp. 438-445; Id., *"Afferrare" l'economia. Percezioni e proiezioni dell'impresa nel diritto dell'età industriale*, in *«Afferrare...l'inafferrabile»*, pp. 171 foll.

attentions addressed to the rights of *savants* on their *œuvres ou découvertes scientifiques* until the dissolution of the interest in this issue, mainly juxtapositions (between social and economic forces, but also among the different conceptions of 'law') and contrasts (theoretical and dogmatic, but also political) stand out inside scientific discourse. A conflict that, on the one hand, has inevitably precluded the 'scientific property' the outlet to the *ius positum*, while on the other hand, it has made it a sort of valuable experimental laboratory for the jurist.

The inverted commas that graphically enclose the phrase 'scientific property' (also adopted in the official documents and the contemporary literature) evoke those preliminary conceptual difficulties that Francesco Ruffini⁵ himself, promoter of the effort on this subject within the League of Nations⁶ in 1923, wants to preliminary highlight in the *Rapport* with which he supports his proposal for an international convention. Once the invitation of the League to deal with the thorny problem has been accepted, Sen. Ruffini uses this term only for "*amour de brièveté*", for brevity's sake. He considers it more allusive than its definition, because it has the benefit of simplifying and immediately letting the connection emerge with the wider and more comprehensive category of *propriété intellectuelle* of French ancestry⁷, and at

⁴ T. Ascarelli, *Teoria della concorrenza e dei beni immateriali. Lezioni di diritto industriale*, Milano, 1956; A. Jannarelli, voce *Mercato e concorrenza*, in *Enciclopedia italiana di scienze, lettere ed arti. Ottava appendice: Il contributo italiano alla storia del pensiero. Diritto*, Roma, 2012; A. Monti, *La concorrenza sleale e gli esordi del diritto industriale nell'Italia liberale: verso una teoria generale della concorrenza?*, in «Afferrare...l'inafferrabile», pp. 109 foll.

⁵ G. Solari, *La vita e l'opera scientifica di Francesco Ruffini (1863-1934)*, in «Rivista Internazionale di Filosofia del Diritto», XV (1935), pp. 203 foll.; G.S. Pene Vidari, *Francesco Ruffini*, in *L'Università di Torino: profilo storico e istituzionale*, F. Traniello (ed.), Torino, 1993 pp. 431-434.

⁶ G. Prezzolini, *La cooperazione intellettuale*, Roma, 1928; C. Schmitt, *Der Nomos der Erde im Völkerrecht des Jus publicum Europaeum*, Köln, 1950, trad. it., *Il Nomos della terra*, Milano, 1991, pp. 306-334; G. Conetti, *La costituzione delle organizzazioni tecniche nella Società delle Nazioni*, Milano, 1979; Id., *Società delle nazioni*, Milano, 1990; I. Garzia, *L'Italia e le origini della Società delle nazioni*, Roma, 1995; E. Costa Bona, *L'Italia e la Società delle Nazioni*, Padova, 2004.

⁷ E. Fusar Poli, *Forme giuridiche dell'immateriale. Creazioni dell'intelletto e vis poetica del diritto*, in *Il diritto come forza. La forza del diritto. Le fonti in azione nel diritto europeo tra*

the same time, the "*opposition aux deux autres termes de Propriété littéraire et artistique et de propriété industrielle*"⁸.

When the theoretical ambition around the Thirties gives away to the more pressing demands and concerns of the industrial world, the choice in terminology will rightfully represent the same shift in the centre of gravity of the matter. And there will be a shift from the 'scientific property' to the *droits des savants*; namely, from the attempt to identify a new *genus* ascribable to the diverse family of intellectual property, to the – much less ambitious – concern of isolating and explaining the economic rights (remuneration or prizes) to acknowledge the scientist.

Going back at the dawn of the official story and the Ruffini *Rapport*. In the rows (and between the lines) of the document that opens the way for the debate, not only a draft convention, but also and especially the fervour and fears can be read of those who are aware they are putting their hands on a legally untouched issue, preliminarily balancing the interests, in order to preselect those deserving of protection. All of this, with the additional difficulty of the supranational perspective inevitably linked to national ones. The problem to deal with is, in fact, 'global' by its nature, because it is physiologically compromised with the fluidity of the market and governed by the object's typically 'immortal' nature, to use an adjective dear to those who at the time looked up to the German doctrine and in particular to Joseph Kohler. A convention promoted by the League of Nations is, therefore, the ideal solution for reconciling the plan of heterogeneous national laws with the international one, in order to achieve a desired harmonisation of regulations. After all, this kind of intervention multiplies exactly in the context of the intellectual property: the Paris Convention (1883) on patents and Berne's (1886) for the law on copyright gave the phenomenon a go.

Ruffini adopts the way of the "*internationalité*" advocated by the League of Nations, but does not abandon the bare question to the comparison (and conflict) between the delegates. He avoids the difficulties

medioevo ed età contemporanea, A. Sciumè (ed.), Torino, 2012, pp. 111-149 and *passim*; L. Moscati, *Napoleone e la proprietà intellettuale*, in «Rivista di diritto civile», LII (2006), 2, pp. 179-197.

⁸ *Rapport Ruffini*, p. 1.

of a predictably lengthy and complex research of the highest common divider between the represented countries, articulating his own detailed convention text (the *Projet*), which acts as an advanced working draft. He also adds a meticulous reconstruction of the first hints of interest to the 'scientific property' (starting from the Congress of the *Association littéraire et artistique internationale*, 1878⁹) and the concrete reasons for this growing attention to the *Rapport*.

The Convention draft, presented to the *Commission de Coopération Intellectuelle della Société*, is aimed at bridging the major shortcoming of a whole system. It is intended to provide a protection for the benefit of the activity of scientific research that is excluded from "*protection assurée aux œuvres de l'industrie, de l'art et de la littérature*" (article 3 of the *Projet*) and, up to that moment, lacking its own legal dimension. The law must ensure that the scientist are guaranteed the economic fruits of their intellectual work, namely a percentage of the value that the discoveries or inventions - in any branch of science they are performed - must be attributable to their possible practical application and utilization in the industrial environment. A regulatory intervention in this sense would be in a "reason to distributive justice"¹⁰, filling a major gap of the legal system: "*un anneau manque à la chaîne assurant aux créateurs de l'esprit une juste reconnaissance*", Ruffini writes¹¹.

The physiognomy of the law under construction is identified with a "*droit d'auteur sur les avantages économiques*" deriving from the exploitation of the discovery; this right is a *redevance* granted for the whole life of the scientific discovery's author (and for fifty more years for the benefit of their heirs), payable regardless of administrative formalities and paperwork. There are essentially two surveyed models to reference in the development of the draft convention and the legal arguments presented (the 'handles'¹² to which Ruffini is gripping elements): copyright¹³ is the elective paradigm, but

⁹ *Rapport Ruffini*, pp. 10-11.

¹⁰ *Discussione Lincei*, p. 54.

¹¹ *Rapport Ruffini*, p. 1.

¹² Ivi, p. 53.

¹³ L. Moscati, *Sul diritto d'autore tra codice e leggi speciali*, in «Rivista del diritto

industrial property rights offer more appropriate and effective tools in order to define the aspects related to patrimonial rights, decidedly prevailing in the concerns of the *Commission*¹⁴.

Once the grounding principles exposed in Rapport have been approved during the fourth meeting of the League of Nations held in September 1923, Ruffini's project is transmitted "*à tous les gouvernements*" to adopt its comments within the following Assembly, with the goal of achieving a definitive text of convention to be submitted to the contracting States' ratification¹⁵.

However, the feedbacks are largely sceptical, when not openly negative.

The opportunity to ensure scientists with an even remuneration for their intellectual work appears to be the only common platform, but the real solution proposed by Ruffini seems to clash with reality¹⁶. In the light of the responses received by the Secretariat of the League of Nations, the Commission is unable to draw any conclusions. They can only detect that the creation of a real new right is under discussion, the application of which is particularly difficult for irreconcilable differences as to its nature, and even prior to that, about its reason for existence.

Invoking the need to consider the interests of the business world involved, a *Conférence d'experts*¹⁷ is summoned: it is just the first in a series of repeated consultation initiatives that, led by well-intentioned resolute purposes, are exhausted in official anodyne and unproductive documents¹⁸. No analytical report will be accountable here, just a highlight on the fact that, for every international intervention occasion on the text

commerciale», (2001), 9-10/11-12, pp. 655 - 681 and in *Iuris Vincula. Studi in onore di Mario Talamanca*, vol. V, Napoli, 2001, pp. 496-527; Ead., *Alle radici del droit d'auteur*, in *Studi di Storia del diritto*, F. Liotta (ed.), Bologna, 2007, pp. 262-341.

¹⁴ F. Mazzarella, *Diritto e invenzioni. Un'introduzione storica*, in «Rivista italiana di storia del diritto», LXXXIII (2010), pp. 68-138; E. Fusar Poli, *Centro dinamico di forze, passim*; Ead, *Forme giuridiche dell'immateriale*, pp. 111 foll.

¹⁵ SDN, CCI, doc. A. 29. 1924. XII, p. 1.

¹⁶ Ivi, p. 7.

¹⁷ Ivi, p. 8.

¹⁸ IICI, *La 'Propriété Scientifique'*; E. Fusar Poli, *Centro dinamico di forze*, pp. 173 foll..

initially prepared by Ruffini, the problem of the definition of a legal status for the 'scientific property' becomes increasingly ornamental, almost a hindrance in the perspective of a rapid shared solution to be translated into the drafting of a law.

Meanwhile, at national level the debate at the *Accademia dei Lincei* (held in four sessions, from January to April 1924)¹⁹ is particularly indicative of the contrasts, also on a theoretical base, entrained to the theme of the 'scientific property'. The *Accademia* is asked to convey the position of the Italian Government with respect to exploratory questions set by the League of Nations in a document. Participating in the tight confrontation are scientists of institutional relevance (among whom mathematicians Vito Volterra and Federigo Enriques, the physicist and Minister of National Economy Orso Mario Corbino), economists and, among the exponents of the national legal science, Vittorio Scialoja²⁰, Cesare Vivante²¹, Vittorio Polacco²², together with Ruffini himself²³.

The "crisis of scientific work", as seen at the start of the debate, is traced back to the economic difficulties after the World War I: despite Italy is living a fast and wide-ranging process of industrialization²⁴, it still "brings up the rear for what the means of research are concerned, indispensable and predominant factors of scientific discoveries"²⁵. Thus, the need arises

¹⁹ A. Sciumè, Vivante e Ruffini 'legislatori', pp. 42 foll.

²⁰ E. Stolfi, voce Vittorio Scialoja, in *Enciclopedia italiana di scienze, lettere ed arti. Ottava appendice: Il contributo italiano alla storia del pensiero. Diritto*, Roma, 2012, pp. 397-400.

²¹ A. Rocco, *L'opera scientifica di Cesare Vivante*, in *Studi di diritto commerciale in onore di Cesare Vivante*, I, Roma 1931, pp. XI-XIX; A. Asquini, Cesare Vivante, in «Rivista del diritto commerciale», XLII (1944), 1, pp. 109-13; P. Grossi, *Scienza giuridica italiana. Un profilo storico, 1860-1950*, Milano, 2001, pp. 27 foll.; A. Monti, Angelo Sraffa. Un 'antiteorico' del diritto, Milano, 2011, *passim*; A. Sciumè, voce Cesare Vivante, in *Enciclopedia italiana di scienze, lettere ed arti. Ottava appendice: Il contributo italiano alla storia del pensiero. Diritto*, Roma, 2012, pp. 446-450; Id., Vivante e Ruffini 'legislatori', *passim*.

²² P. Grossi, *Scienza giuridica italiana, passim*; Id., "Il coraggio della moderazione". *Specularità dell'itinerario riflessivo di Vittorio Polacco*, in *Assolutismo giuridico e diritto privato*, Milano, 1998, pp. 69-126.

²³ *Discussione Lincei, passim*.

²⁴ A. Padoa Schioppa, *Saggi di storia del diritto commerciale*, Milano, 1992, p. 202.

²⁵ *Discussione Lincei*, pp. 4 and 21; E. Fusar Poli, *Centro dinamico di forze*, p. 163.

for a law that will support the new inputs and hopefully accompany the nation towards a new phase of recovery and development.

However, the question seems slippery as well as incandescent for its timeliness, if judged by its blurred and mobile legal contours. In particular, with his intervention in the course of the 5 March 1924 plenum, Cesare Vivante highlights the reasons for his opposition to the project. Citing his *La tutela della proprietà scientifica innanzi la Società delle Nazioni* [Safeguarding scientific propriety in front of the League of Nations], published in the same year on the pages of the "Nuova Antologia" (and, immediately after, on the "Monitore dei Tribunali")²⁶, he almost looks for a confrontation at a distance with Mr Ruffini. The latter will reply *verbis* in front of the *Lincei* and *scriptis* always from the pages of the "Nuova Antologia", via *Scienza e Industria*²⁷, an article that even from the title wants to evoke the essential terms of the comparison-clash of interests and forces underlying the 'scientific property'.

Vivante strongly argues a position that seems to be perfectly consistent with his "experiential method"²⁸, where the acute sensitivity to the actual datum joins the attention to the systematic and fitting aspects in-between the normative rule. Nourished by a thorough knowledge in the field, gained while participating in the parliamentary projects at the beginning of the century on the reform of the patent law²⁹, this method leads him to approach the 'scientific property', and the ontological question that it subtends with critical sensibility, since a convincing answer to the preliminary question about the existence of a true 'new right' has still to be provided.

In this regard, Vivante flatly says that "the relationship between the theoretical invention theory and the industrial application lacks the

²⁶ C. Vivante, *La tutela della proprietà scientifica*, pp. 80-85.

²⁷ F. Ruffini, *Scienza e industria*, in «Nuova Antologia di lettere scienze ed arti», CCXXXIV (1924), pp. 289-301.

²⁸ A. Sciumè, Cesare Vivante, pp. 447-448; P. Grossi, *Scienza giuridica italiana*, p. 53.

²⁹ MINISTERO DI AGRICOLTURA, INDUSTRIA E COMMERCIO. UFFICIO DELLA PROPRIETÀ INDUSTRIALE, *Atti della Commissione Reale, istituita con Decreto 8 ottobre 1906 per studiare e proporre le riforme da introdurre nella legislazione vigente sulla proprietà industriale*, vol. I: *Privative industriali*, Roma, 1909.

elemental character necessary to a legal protection, i.e., the possibility of an asset evaluation"³⁰. In addition to this, it would expose the Italian industry "to the burden of an unpredictable percentage" (which would furtherly deprive it), and to the deleterious effects of a dangerous incentive to secrecy of scientific discoveries. Therefore, if it can be permissible in the abstract, in terms of justice, to reward the work of the scientist economically, in practice, the road of regulatory protection seems improbable: "The law must not be just right; it should be living, i.e. capable of implementation"³¹.

After all, historical facts confirm the lack of access to the effective legal protection offered by the discipline of patents. The 12 March 1855 Sardinian Law n. 782 "On the patents for inventions and industrial discoveries", which became law of the Reign of Italy³², excludes the discoveries not immediately susceptible of industrial application from its aegis, similarly to what happens in all the European laws on the subject. Courts' jurisprudence has jealously guarded the restrictive interpretation of this exclusion along the decades.

Vittorio Polacco brings his personal legislative experience in the related field of literary and artistic property as proof of his observations and engages himself in the Ruffini project's defence. He confirms the undeniable "objective legal consistency" of the "scientific principle" and the "scientific discovery"³³ to be linked to all those goods (immaterial goods) which are the subject of intellectual property covered by the law at the time. On the one hand, there may be agreement on the fact that it is a potential object of legal attention. But it is still evident, on the other hand as well, echoing Vivante's arguments, that "the law presumes a cause-effect relationship " and such a relationship is no-reciprocal between "the work of the inventor of the scientific principle" and its industrial implementation; in fact, "a number of scientific discoveries that hinder, intersect, and complete each other converge to a single industrial application".

³⁰ *Discussione Lincei*, pp. 24-26 e 28.

³¹ C. Vivante, *La tutela della proprietà scientifica*, p. 241.

³² F. Mazzarella, *Diritto e invenzioni*; E. Fusar Poli, *Centro dinamico*, pp. 39 foll.

³³ *Discussione lincei*, pp. 35.

Therefore, we are talking about a "social interest", Vivante concludes, "but we cannot speak of a right"³⁴. The different treatment accorded to industrial inventions with respect to the scientific discoveries, excluded from the legislation protection, is not a systematic inconsistency, unfavourable outcome of neglect (or short-sightedness) of the legislator, but the natural outcome of precise economic reasons: the "common consortium of men" benefits from patents, the fundamental informative effects of patenting being considered. The exclusive property rights on mere scientific discoveries would encourage, if anything, the secrecy on the part of the scientist: they would not share the *redevance* with those who would finalize their discovery, and would not make their knowledge available to the public (including competitors)³⁵.

These are the sharp positions expressed by Vivante.

Vittorio Scialoja (Italian delegate to the League of Nations, at the time) arbitrates the disagreement by suggesting a compromise solution between the opposite theses by Ruffini and Vivante, advancing the idea of the recognition of a 'reward' or a 'prize' to the scientists, rather than a remuneration. A Solomon-like proposal that, on the one hand, would like to offer a reward to the new leading actors of modernity, and, on the other hand, would not scathe the international route and good light that it has contributed to pour on Italy, protagonist together with Ruffini of a debate of singular amplitude and resonance³⁶.

At the end of the *Accademia dei Lincei*'s work, the narrowness and vagueness of the linking points between the heterogeneous interventions in the course of the meetings at Palazzo Corsini and, at the same time, the obvious contrast between the abstract need of justice and the search for practical and feasible regulatory solutions, emerge as a matter of fact:

"The R. Accademia Nazionale dei Lincei [...] recognizes the compliance of the principles of fairness and justice to the basic concept according to

³⁴ Ivi, p. 47.

³⁵ C. Vivante, *La tutela della proprietà scientifica*, p. 81; A. Sciumè, *Vivante e Ruffini 'legislatori'*, pp. 46-47.

³⁶ *Discussione Lincei*, p. 43.

which, by developing the protection of intellectual property, it is to assign the discoverers of a scientific truth a remuneration, may it be pecuniary, from the income of patented inventions based on that truths. But realizing, at the same time, the serious difficulties of a technical and legal order relating to the suggested legal provisions, it expresses the view that the project should be, under such respect, widely reviewed, and it hopes that, in the meantime, the Government of the King will study the opportunity of further measures to better promote and compensate for the national scientific work"³⁷.

Similar, if not stronger, doubts are expressed a few days later by the *Società italiana per il progresso delle scienze*, in the course of its thirteenth meeting, which takes place in Naples between 29 April-2 May 1924. The communication submitted by Ruffini himself raises a debate full of conflict and dissension (both among jurists and between jurists and 'technicians') which lasts for two plenum sessions and one juridical section. Here also, the work concludes with the predictably generic recognition stating: "Justice and the social benefits are to recognize the discoverer of a theoretical principle with the right to participate in the profits of the inventions that have their necessary foundation on that principle"³⁸.

Against such vague and, so to speak, prudent conclusions at national level, the interest at international level is kept alive, but changes its perspective. Once the veil on the dominant position of the interests of industry is lifted, the approach to the question seems to have moved to the search for a compromise between the economic reward of the scientist and the exploitation of scientific discovery in the productive cycle³⁹. The investigation of the opportunities and practical feasibility of a protection (with the identification of specific rules) for the intellectual work of the

³⁷ Ivi, p. 62.

³⁸ N. Stolfi, *La tutela della proprietà scientifica*, pp. 286-299; A. Casella, *Di un acerbo progresso: la Sips da Volterra a Bottai*, in *Una difficile modernità*, A. Casella – A. Ferraresi – G. Giuliani – E. Liguori (eds.), Pavia, 2000, pp. 37-89.

³⁹ L. Laboccetta, *La protezione della proprietà intellettuale come elemento di predominio economico nel mondo moderno. Rapporto tenuto nella XIX riunione della società italiana per il progresso delle scienze. Bolzano-Trento, 7-15 settembre 1930*, Roma, 1931.

scientist becomes preliminary ruling with respect, not only to the issues of terminology, but also to those of dogmatic and systematic grading.

The definition of the exact legal contours of the elusive subject is no longer interesting. The increasing incidence of the *Comité économique* of the League of Nations and the opinions expressed by the *Chambre de Commerce Internationale* focus rather on the fears of European companies. The latter look to economic rights, possibly allocated to the scientists for the industrial exploitation of their discoveries, as a new economic burden, increasing those already deriving from the exploitation of patented inventions.

Thus, the convention draft finds a further obstacle on his road, a new and decisive question indicated by the *Comité*: the provision of a suitable protection of the company through insurance, to provide a guarantee covering the risks arising from industrial exploitation of scientific discoveries governed by the convention still to be approved⁴⁰.

The following new exploratory survey comes to an end in 1930 with an increasingly uncertain, inevitable, and decisive slowdown in the journey towards the convention, revealing, however, new knots to unravel. On the one hand, in fact, it proposes a new legal problem (what is the insured risk and what its peculiar nature?), on the other, the unknown of actuarial nature (how to evaluate the risk in probability terms?).

Eduardo Piola Caselli⁴¹ gets more and more involved on each front opened in the field of intellectual property, and is called to increase the Italian contribution at an international level in a decisive way. To him, the theme of the insurance has "moved the problem from the legal field to the technical-practical insurance field", complicating it further due to the unpredictability of risks to be addressed "in an unknown matter, in which predicting tables are missing"⁴².

Despite the obvious doubts, Piola Caselli becomes the promoter of the all-Italian initiative, which sees the participation of Del Vecchio, Solmi,

⁴⁰ A. Manes, *La protection de la propriété scientifique*, pp. 97-107.

⁴¹ C. Melloni, *Eduardo Piola Caselli, magistrato e giurista*, in «Le carte e la storia», XIV (2008), 2, pp. 128-148; E. Fusar Poli, *Centro dinamico di forze*, pp. 172-173 e passim.

⁴² Promemoria del 12 dicembre 1929, in ARCHIVIO CENTRALE DELLO STATO (ACS), *Piola Caselli Eduardo (PCE)*, box 6, fasc. 11.

Riccobono, Anzilotti and, again, Scialoja⁴³, launching a solution to the insurance problem, which is based on the key points of the controversial fascist corporate experience. This is the project of *Consorzio italiano assicuratori rischi scoperte scientifiche*, articulated by the *Commissione nazionale italiana per la cooperazione intellettuale* (national homologous of the League of Nations' Commission), which becomes the special venue of a magniloquent celebration of the Fascist New Era⁴⁴. The collectivist approach adopted is far from Ruffini's one, in so far as it distributes the economic cost of the 'scientific property' "*sur toutes les économies, soit de production que de consommation*" benefiting, even potentially, from the progress generated by discoveries themselves⁴⁵. The collectivist-corporatist mechanism, or rather the intervention of Confederations and the control of the State, is suggested as an ideal model, suitable to ensure a fair balance between remuneration of authors of discoveries and the economic possibilities of the subjects required to pay this remuneration. The goodness of the corporative system newly established by the regime finds its validation: in theory, it demonstrates its adaptability and ability to bridge the gaps in the legal structures, especially when collective interests of an economic nature are concerned.

⁴³ CNICI, *La tutelle de la propriété scientifique*, Roma, 1930; ACS, PCE, box 20. fasc. 39.

⁴⁴ C. Vivante, *L'autonomia del diritto commerciale e il sistema corporativo*, in «Diritto e pratica commerciale», 1929, I, pp. 115 foll. e Id., *La penetrazione dell'ordinamento corporativo nel diritto privato*, in «Diritto del lavoro», 1931, I, pp. 437-444; O. Abbamonte, *I giuristi e l'economia corporativa. Il contributo all'affermazione dei valori economici nel ventennio fascista*, in *Annali 1997. Quaderni dell'Istituto giuridico della Facoltà di Economia dell'Università della Tuscia*, Viterbo, 1998, pp. 18 foll.; P. Cappellini, *Il fascismo invisibile. Un'ipotesi di esperimento storiografico sui rapporti tra codificazione civile e regime*, in «Quaderni fiorentini per la storia del pensiero giuridico moderno», XXVII (1999), pp. 175-282; G. Cazzetta, *L'autonomia del diritto del lavoro nel dibattito giuridico tra Fascismo e Repubblica*, in «Quaderni fiorentini per la storia del pensiero giuridico moderno», XXVIII (1999), t. I, pp. 511-629; G. Santomassimo, *La terza via fascista. Il mito del corporativismo*, Roma, 2006; I. Stolzi, *L'ordine corporativo. Poteri organizzati e organizzazione del potere nella riflessione giuridica dell'Italia Fascista*, Milano, 2007; S. Cassese, *Lo Stato fascista*, Bologna, 2010; A. Gagliardi, *Il corporativismo fascista*, Roma-Bari, 2010, pp. 132 foll.

⁴⁵ CNICI, *La tutelle de la propriété scientifique*, p. 27.

The Italian proposal, which seems overly focused on the provisions of detail relating to the *Consorzio*, does not dissipate, however, any shadows in relation to the insured risk, which it defers to the chimeric international convention. Once the doubt about the linking of the specific case to an insurance case is neglected, what is important is the development, with the system of mutual insurance, of a suitably wide redistribution of the economic burden for the remuneration of scientists; this is achievable even going well beyond the known forms of voluntary insurance.

The international appreciation for the Italian proposal aims more at the Italian commitment than at its substance, too circumscribed in objectives and conditioned by the peculiar corporate system. But the soft acknowledgment can be justified in the light of the priority given in the meantime by the general issue of the intellectual work, which partially overlaps with the themes discussed here, especially with regard to the issues on the incentives to research and the protection of the creative activities carried out within the framework of an employment relationship, be it salaried or self-employed⁴⁶.

In the same way, the story of the rights of scientists is read nationwide from this new perspective around the Thirties, which well applies to the fascist setting. The socio-economic development of the nation becomes the prominent goal featured, by moving the objective from the recognition of an individual right for the scientist (who, more and more frequently, works in team in the laboratory), to the guarantee of a successful coordination between the worlds of science and industry, to the advantage of the wealth and national 'progress'. The history of the *Consiglio Nazionale delle Ricerche*⁴⁷ is a perfect example of this attention and becomes part of the discussion about 'scientific property' as an anchor of a process that, from the scientific

⁴⁶ A. Giannini, *Sulla tutela della scoperta scientifica*, pp. 226-237.

⁴⁷ G. Fioravanti, *Il Consiglio nazionale delle ricerche e il suo archivio (1923-1950) presso l'Archivio centrale dello Stato*, in *Gli archivi per la storia della scienza e della tecnica. Atti del convegno internazionale, Desenzano del Garda, 4-8 giugno 1991*, t. I, Roma, 1995, pp. 307-328; R. Simili, *Scienza, tecnologia e istituzioni in Europa. Vito Volterra e l'origine del Cnr*, Roma-Bari, 1993; *Per una storia del Consiglio nazionale delle ricerche*, R. Simili – G. Paoloni (eds.), Roma-Bari, 2001; R. Maiocchi, *Gli scienziati del Duce: il ruolo dei ricercatori e del CNR nella politica autarchica del fascismo*, Roma, 2003.

discovery carried out in laboratories and research centres for this purpose, arrives to its necessary industrial exploitation.

The latter phase of the history, the arrival point of this route, is perfectly represented in Eduardo Piola Caselli's writings and legislative commitment. *La cosiddetta proprietà scientifica e la sua protezione pratica*, published in 1931⁴⁸, outlines the contrasted international affair of the 'scientific property' and casts a fleeting shadow on the national regulatory framework. As - there argues Piola Caselli - there is "a relationship of succession and lead or connection"⁴⁹ as well as a common denominator between discovery and patentable invention, the essential requirement of the 'industrialisation', a new and autonomous right, which is complementary to patent protection, may not be recognized to the scientist. However, nor the need can be neglected for some form of protection of the scientific discoveries considered in themselves, as history shows that they represent, much more than inventions, a potential source of national wealth⁵⁰. The solution is to "reconsider the problem of scientific property under certain new points of view", or rather through a general wider framework of work and related public incentives.

A few years later, in his *Il regolamento giuridico delle invenzioni e l'autarchia* (1939)⁵¹ Piola Caselli, now soaked in the autarkic culture and fascist technocratic aspirations⁵², will zoom with effective synthesis in the need for the protection of the entire "creative process of discoveries and inventions"⁵³. Scientific-technological innovation will be recognized a strategic role in industrial and production system and the State will be appointed to promote and support "the possession and use of this key of power"⁵⁴.

⁴⁸ «Rivista del diritto commerciale», XXIX (1931), I, pp. 191-212.

⁴⁹ Ivi, p. 201.

⁵⁰ Ivi, p. 206.

⁵¹ E. Piola Caselli, *Il regolamento giuridico delle invenzioni e l'autarchia*, in «Scienza e tecnica», III (1939), f. 1, pp. 3-16.

⁵² A. Aquarone, *Aspirazioni tecnocratiche del primo fascismo*, in «Nord e Sud», XI (1964), 52, pp. 109-128.

⁵³ Ivi, p. 6.

⁵⁴ Ivi, p. 3.