ONE HUNDRED YEARS OF SCIENCE POLICY AND THE INSTITUTE OF CATALAN STUDIES

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The Institute of Catalan Studies (Institut d'Estudis Catalans, henceforth the IEC) was founded in 1907 by Enric Prat de la Riba with the aim of promoting scientific policy. The underlying rationale was that an institute promoting high culture would reinforce Catalonia's aspirations for political autonomy. Nonetheless, in addition to this original aim, the IEC has acquired a considerable degree of functional autonomy, indicating preferred directions for research and the dissemination of knowledge, and contributing greatly to the development of a Catalan scientific community. The autonomy of the IEC was unrestricted during the dictatorship of Primo de Rivera (1923-1930), although it received no public funding of any kind. During the Second Republic –covering the years 1931 to 1939 and including the Civil War– the IEC had premises in the Casa de Convalescència (attached to the old Hospital de la Santa Creu). During the Franco dictatorship, the IEC was taken to be defunct, although it was never, in fact, explicitly closed down, and continued to operate in semi-clandestine form. In 1963, Òmnium Cultural (a body promoting Catalan identity, culture and language), granted the IEC premises in the Palau Dalmases. The IEC thus acquired a certain public presence that enabled it to support the activities implemented by its subsidiary societies. In 1976, the IEC was publicly recognised by the governments of Catalonia and of Spain. In recent decades, in an academic context that is very different from that existing in the opening decades of the 20th century and against a very different political background, the IEC has battled to carve out a niche for itself in the Catalan research sector. However, although its success has occasionally been mixed, it recently celebrated its centenary, and the consensus is that its perspectives for the future can only be said to be favourable.

Keywords: Institut d'Estudis Catalans, science policy, research, centenary

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1. Introduction[1]

The Institute of Catalan Studies (Institut d'Estudis Catalans, or the IEC) was conceived by Enric Prat de la Riba, in 1907, as an instrument to develop and promote a Catalan research policy and to disseminate knowledge. The IEC has had a turbulent existence, so much so that in the 100 years since it was founded it has only functioned normally for around half that time –53 years in fact, covering the periods 1907-1923, 1930-1936 and 1977 to date. The role played by the IEC in research policy and in knowledge dissemination has thus had to adapt to constantly changing circumstances and to real possibilities for influencing political decisions at any given moment.

The fact that the IEC did not function normally for 47 of its 100 years does not mean that it remained inactive, however. During the dictatorship of Primo de Rivera (1923-1930) it functioned at well below full capacity, as it had no premises and received no public funding; private sponsorship, however, enabled it to issue a number of publications. During the Civil War (1936-1939), the IEC established its library in the Gothic naves of the old Hospital de la Santa Creu and its central services and subsidiary societies in the nearby Casa de Convalescència (attached to the hospital). Once the war was over, however, the new Francoist authorities expelled the IEC from these premises, thus temporarily interrupting its activities. In 1942, surviving members who had not died, gone into exile or joined the victors began to meet in private. The IEC thus survived until the end of the Franco dictatorship (1975) in a situation of 'public clandestinity': although it carried out its activities in private, it did not hide from the authorities nor did it request permission to hold meetings as required by the laws of the time. The fact that the IEC was a member of the Union Académique Internationale assured it of a certain degree of tolerance by the authorities. In the closing years of the dictatorship, moreover, this tolerance was extended to the subsidiary societies of the IEC, which had gradually become more active in the late 1960s and early 1970s.

[1] All excerpts from untranslated publications cited in this article have been translated by the translator of the article.

Such volatile and often adverse circumstances obviously affected the role played by the IEC in defining and implementing science policy in Catalonia. In the early decades of the 20th century, the IEC was the primordial instrument for implementing this policy, firstly in the hands of the Diputació (provincial council) of Barcelona and later in the hands of the Mancomunitat (commonwealth) of Catalonia. During Primo de Rivera's dictatorship the IEC limited itself to completing tasks already underway and to maintaining a testimonial willingness to act independently of any possible instructions issued by the Military Junta in regard to science policy.

The Institut d'Estudis Catalans (IEC), founded in 1907, was conceived by Enric Prat de la Riba as an instrument to develop and promote a Catalan research policy and to disseminate knowledge.

During the Second Republic (1931-1939), the Generalitat (autonomous government) of Catalonia was unable to identify a niche for the IEC; Republican leaders tended to view the IEC as an instrument of the Lliga Regionalista, which had been relegated to the opposition by the forces of the left as having a political ideology that was considered to be inappropriate for the times. Under Franco's dictatorship and in the early years of the transition to democracy, the role of the IEC was almost entirely testimonial. Successive Catalan governments under the restored Generalitat have also failed to locate the IEC within their research policies. However, in more recent years the IEC has taken the initiative itself with some success.

2. Catalanism and research

An interest in research was not a new element in the Catalanist movement of the early years of the 20th century.[2] By the middle of the 19th century, Catalan intellectuals had already begun to foster the Catalan language as a public means of expression and focal point for Catalan identity. These intellectuals manifested a great interest in Catalan literature, the history of the Catalan-Aragonese Crown and medieval art, which, along with Romanticism, was coming back into vogue. In this blossoming of cultural Catalanism with roots in Romanticism –which detractors disparagingly referred as 'floral' or 'flowery'– science soon began to feature as a differentiating element.

One of the earliest outcomes of this convergence between Catalanism and science was the foundation, in 1876, of the Catalan Scientific Excursion Association (Associació Catalanista d'Excursions Científiques), the first such society in Catalonia.[3] Apart from the political and cultural implications of the reference to 'Catalanist' in its name, there was also an explicit declaration of the association's mission to organise scientific expeditions. The idea was to combine the pleasures of outings to mountains and nature with activities that deepened knowledge of Catalonia and of its geography, history, flora, fauna, climate, etc. This is stated clearly in the first article of the association's regulations:

> "The Catalan Scientific Excursion Association, with headquarters in Barcelona, proposes to explore the territory of Catalonia with a view to recording, studying and preserving all that is remarkable in its nature, history, art and

[2] ROCA & SALAVERT, 2003.
[3] IGLÉSIES, 1964.

> literature in all their manifestations, as well as the typical customs and popular traditions of this country, and to disseminate this knowledge and encourage excursions in this our country so that it may be understood and loved."[4]

The scientific excursions initially focused on archaeology, art and folklore more than the natural sciences; in fact, it was in early writings of a historical bent in which the first indications of the convergence between Catalanism and science were to be found. As one example, in 1875 one of the founders of the Catalan Scientific Excursion Association, Josep Fiter i Inglès, published an essay entitled *La ciència astrològica a Catalunya*, describing the activities of Catalan astrologers since the 10th century. Excursionists to the fields of geography, meteorology, botany, zoology, geology and speleology also made important contributions; in 1899, the Catalan Natural History Institution (Institució Catalana d'Història Natural) was founded with the intention of "linking science with Catalanist policies –just as had been done previously with history, art, literature and even outings".[5] The young founders of the Catalan Natural History Institution soon sought out and recruited to their cause more experienced naturalists. One of the earliest of these was Norbert Font i Sagué (1874-1910), a geologist and cleric, one of the first speleologists in Catalonia and the author of one of the most ambitious works of the period. Published in 1908, this history of the natural sciences in Catalonia between the 9th and 18th centuries (*Historia de les ciencies naturals á Catalunya del sigle IX al sigle XVIII*) had a prologue as follows:

> "Political movements in Catalonia determine how its history is shaped, and this has served to increasingly stimulate its spirit; however, if the catalan rebirth had been, in theory, purely literary or historical, then today we could categorise it as comprehensive, as it is transmitted to all manifestations of life. The science movement, for all that it has been one of the last to manifest itself, is today in luxuriant and delicate bloom, in anticipation of the positive fruits of tomorrow; and, within the sciences, it is the so-called natural sciences which attract increasing numbers of cultivators and which offer the greatest promise."

At the turn of the 20th century there was a conviction that science was a distinctive and essential feature of Catalanism.

The fact that Font i Sagué should state so explicitly that the inclusion of science meant that Catalanism could now genuinely be considered to be 'comprehensive' merely demonstrates how deeply held was the conviction that science was a distinctive and essential feature of Catalanism.

3. The IEC as an instrument of Prat de la Riba's science policy

In the early years of the 20th century the Diputació of Barcelona was one of the main platforms for political action by the Catalanist movement. There was nothing new in a provincial council playing a leading role that went beyond its powers; this

[4] From the *Reglament de l'Associació Catalanista d'Excursions Científiques*. Barcelona: La Renaixença, 1879, p. 5.
[5] Camarasa, 1995; Camarasa, 2000, pp. 13-14.

same provincial council had played key roles in other events of the 19th century– as one example, in the Glorious Revolution of 1868 that led to the proclamation of the First Republic.[6] The Catalanist movement of the end of the 19th century was fully cognisant of the fact that town and provincial councils were not only ideal platforms for regenerating the political system resulting from the Bourbon restoration –rotten to the core– but also for defending Catalan identity and culture. The municipal elections of 1901 revealed how the influence of Catalan representatives of what were referred to as the 'dynastic' parties of Spain was starting to wan, with these parties being gradually displaced by new Catalanist-conservative and Catalan-Republican parties. One example of this new model of party of the masses was the Radical Republican Party of Alejandro Lerroux.

These parties soon made their presence felt in the Ajuntament (city council) of Barcelona, with their hegemony becoming a fact from 1905 on –despite the fact that mayors could only be appointed by royal order. Mayors, of necessity, had to be associated with the dynastic parties– and this naturally rendered ridiculous the whole notion of suffrage. Presidents of the provincial councils had to be elected, however, and so were chosen from among the nominees for administrative areas in the provinces. In April 1907, with the support of Solidaritat Catalana (a platform for Catalanist parties on both the right and left), Enric Prat de la Riba, leader of the Lliga Regionalista, was elected president of the Diputació –an event that represented a true milestone in this council's history.

In view of the circumstances in which he was elected, Prat de la Riba's programme of government was markedly unifying in its endeavour to include individuals representing all political leanings in his policies. These policies included, for example, not just the fostering of Catalan linguistic, historical and other cultural bodies, but also the development of the secondary rail network, the promotion of 'social economics' and an overhaul of the education system.[7] Prat de la Riba launched his programme immediately on being elected, and one of his earliest initiatives was the creation of the IEC. Although Antoni Rubió i Lluch, Josep Pijoan and Jaume Massó i Torrents were active in the development of the IEC project, it was Prat de la Riba who gave the IEC its definitive shape.[8] Included in the edited complete works (*Obra completa)* of Prat de la Riba was the agreement of 18 June 1907 by means of which the IEC was created.[9]

The text of the agreement commenced by explaining that "the *Renaixença*[10] in Catalonia and public acknowledgement of the Catalan personality" led to new obligations to be attended to by public corporations and particularly by the Diputació. It was acknowledged that, although the state might be contributing to the publication of the works of Ramon Llull –as just one example of a one-off activity– there was also a need to foster its interest "in the creation of scientific bodies" to meet emerging needs. The Diputació, meanwhile, would also have to respond to this need in accordance with its own capabilities. It remained unclear, however, how this could be done, and the text of the agreement raised doubts on the actions to be undertaken:

[6] Riquer, 1987-1988.
[7] Alberdi, 1980, p. 63 et seq.
[8] Balcells & Pujol, 2002, pp. 20-21.
[9] Prat de la Riba, 2000, Vol. III, pp. 356-359.
[10] The *Renaixença* (rebirth) was an early 19th century Romantic revivalist movement in Catalonia.

> "The first doubt to be raised is whether it is appropriate to increase staff numbers and the funds earmarked for existing scientific bodies, thereby expanding their scope for action, or whether it would be preferable to create a new entity which, precisely because it was new, would be obliged to demonstrate activity and would more naturally propose fertile initiatives. This doubt is resolved by the experiences of other countries that have found themselves in similar circumstances, and so it is considered preferable not to interfere with existing bodies but to create new bodies that would be more specialised and more adapted to contemporary demands."

The primordial aim, therefore, was what Prat de la Riba referred to as 'modernising actions', there being a preference –as in other countries– for traditional bodies to carry on as previously and for new bodies to be created to meet new demands. To reinforce this emphasis on the need for new institutions the agreement further stated:

> "The interests of science today require increasingly rigorous specialism and resources and a freedom of action which the older bodies, although complying adequately with their functions for regulating learning, are incapable of adapting to."

Evidently, as far as Prat de la Riba was concerned, existing scientific bodies were overly rigid and poorly adapted to contemporary society.[11] He concluded:

> "For this reason the time has come for the Diputació to take the initiative in regard to founding scientific study centres with concrete specialisms, whose purpose would not be to educate but to produce science and facilitate research so that we can directly learn about all that is near to us and not have to learn from foreigners conducting studies here."

The goal of the IEC would be research, with the idea being that Catalans –and not outsiders– would study what was their own. The new body would need to focus initially on the humanities.

Specialisation, in fact, was a distinctive feature of Catalanism. It should be emphasised, however, that the proposed new centre was not intended to be a teaching centre, and the reason was precisely because the Diputació itself was already very active in this area. The goal of the new institution would be research, with the idea being that Catalans –and not outsiders– would study what was their own. The new body would need to focus initially on the humanities:

> "The first step, as the most necessary, is to create a centre for historical and social criticism based on scientifically verified truths."

The new centre would study Catalan archives, forgotten classical Catalan authors and periods of Catalan history that were inadequately documented. It would initially have the mission of

[11] One of the bodies considered to be anchored in the past was the Royal Academy of Sciences and Arts of Barcelona (Reial Acadèmia de Ciències i Arts de Barcelona), the doyen of Catalan science societies. It has to be conceded, however, that this body had been undergoing a major overhaul since the end of the 19th century, in preparation for its 150th anniversary (Nieto Galan & Roca Rosell, 2000).

investigating and publishing historical, literary and legal works, and should have the possibility for subsequently expanding its scope to cover other moral sciences. Although the initial project excluded the natural sciences, the wording of the agreement in regard to possible fields of study by the IEC was, generally speaking, sufficiently ambiguous to subsequently permit –on the occasion of enlargement in 1911 and thereafter– a broader interpretation of its scope:

> "Hereby created is a centre of studies to be called the Institut d'Estudis Catalans, to have as its aim advanced scientific research into all elements of Catalan culture."

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The IEC in 1907 was composed of eight members[12] organised into four divisions: history, archaeology, literature and law (with the existence of the law division reflecting the personal interests of Prat de la Riba). Antoni Rubió i Lluch and Josep Pijoan were the first president and general secretary, respectively. Both were very different persons in terms of age, education and character; Rubió was a respectable university professor of 51, whereas Pijoan, who was the youngest of the eight members at 28, was a brilliant cultural activist. Prat de la Riba, as president of the Diputació, presided over sessions in which decisions with financial repercussions had to be taken. This relationship made the dependency of the IEC on the Diputació and Prat de la Riba's interest in controlling the recently created body patently clear.

The influence of the excursionists is reflected in the very first activity of the recently established IEC: the organisation, by Josep Pijoan, Josep Puig i Cadafalch, Joaquim Miret i Sans and Monsignor Josep Gudiol, of an excursion to the Pyrenees in search of unknown or half-forgotten monuments, paintings and documents. Organised scientific outings thus became a professional and subsidised activity of a public body in Catalonia.

In no time the earliest fruits in the form of publications were produced. At the end of 1907, the first of a series of fascicules on mural paintings (*Les pintures murals catalanes*), referring to the Romanesque church of Pedret, was published, authored by Josep Pijoan. Published shortly after was the first volume of a compilation of documents dating from the Middle Ages (*Documents per a la història de la cultura catalana medieval*) by Antoni Rubió i Lluch, and the first volumes of publications on Catalan coins (*Les monedes catalanes*), by Joaquim Botet i Sisó, and on Romanesque architecture in Catalonia (*L'arquitectura romànica a Catalunya*), by Josep Puig i Cadafalch. The repercussions of the Catalan mural and Romanesque architecture publications were far-reaching, contributing to the launch of research and other initiatives aimed at protecting this nearly forgotten artistic heritage. The publications of the IEC, in fact, made a key contribution to the recuperation of this heritage and to the avoidance of mass pillaging.

[12] Guillem M. de Brocà i de Montagut, Antoni Rubió i Lluch, Joaquim Miret i Sans, Jaume Massó i Torrents, Miquel dels Sants Oliver i Tolrà, Josep Puig i Cadafalch, Pere Coromines i Montanya and Josep Pijoan i Soteras. Brief biographies (in Catalan) are available in the website of the IEC (<www.iec.cat>). Some of the founders have articles published in the *Semblances* series (available from the same website).

The excavations that commenced in Empúries in 1908, under the auspices of the Barcelona Museum Board (Junta de Museus de Barcelona) and on the initiative of Puig i Cadafalch, marked a new milestone in the annals of the IEC. These excavations, which would eventually be taken over by the IEC's own Excavations Service, were reflected in the IEC's earliest yearbooks. The interest in art and archaeology also led the IEC to cooperate actively with the Madrid-based Spanish Board for the Advancement of Science and Research (Junta para la Ampliación de Estudios e Investigaciones Científicas), with which it jointly founded the Spanish Archaeology and History School (Escuela Española de Arqueología e Historia), based in Rome. Its first secretary was Josep Pijoan, who, due to the absence of the director, Menéndez Pidal, was put in charge of its establishment. The IEC also sent students on grants to Rome, among them future members like Francesc Martorell and Ramon d'Alòs-Moner.

As far as Prat de la Riba was concerned, the IEC had to act, from the outset, as an instrument for cultural renewal. In a matter of a few years it had become involved in important research projects and had published influential studies. Furthermore, thanks to many donations and to a deliberate policy of acquiring books and entire libraries, the IEC was soon able to propose the creation of a national Library of Catalonia (Biblioteca de Catalunya), which opened to the public in 1914.

The initial plans of the IEC had made no explicit mention of the natural sciences; however, it was not long before an enlargement of the IEC was proposed in this respect. This step, as commented earlier, represented no great difficulty given that the Catalanists had clearly adopted the sciences as a key element in their movement.

As far as Prat de la Riba was concerned, the IEC was, from the outset, to be an instrument for cultural renewal.

4. Enlargement in 1911

Towards 1910 the IEC had undoubtedly acquired maturity, but it faced a crisis due to the geographical distance separating it from its general secretary, Josep Pijoan, who had gone to Rome as head of the Spanish Archaeology and History School. Pijoan (along with Rubió) had been a key player in the foundation of the IEC and a main driving force in its early years of existence and consolidation. Taking advantage of a privileged relationship with José Castillejo, secretary of the Spanish Board for the Advancement of Science and Research, Pijoan had managed to ensure that the IEC played an instrumental role in the latter's policy for creating research centres, such as, for example, the Centre for Historical Studies (Centre d'Estudis Històrics) and the Spanish Archaeology and History School in Rome.

The minutes of plenary meetings held by the IEC in late 1909 and early 1910 and correspondence between Pijoan and Castillejo leave no room for doubt about the IEC's intentions. At a plenary session of the IEC held on 6 December 1909 (three months before the Centre for Historical Studies was created), Pijoan asserted that the recently constituted Liberal government in Madrid would "probably accept a proposal to found advanced study centres abroad",[13] adding that one such centre could well be a study centre in

[13] IEC Archives. Plenary minutes, Vol. 6, p. 109.

Rome, where the Spanish state had premises that were largely underused. Having heard Pijoan out, the plenary empowered him, together with Pere Coromines, to study the matter and to draw up a project for what would be the Spanish Archaeology and History School in Rome.[14] At a continuation of the plenary meeting held a week later, it was agreed that Pijoan and Coromines would address a letter to the Minister of State, Pérez Caballero, in which they would:

> "(…) propose the creation in Rome of a Spanish school, state that the Institute would assist insofar as was possible within its means, and indicate several facilities which he [the Minister] and the pensions board [Board for the Advancement of Science and Research] could contribute by agreement between them, with the ministry not being required to do other than make available the second floor of the Collegiata of Saint Montserrat in Rome, currently not being used."[15]

In 1910, Prat de la Riba pointed to the dawn of a period of consecration of Catalan as an instrument of change in the world of science.

In parallel with this official initiative, Pijoan was corresponding actively with Castillejo on the same subject. On 19 February 1910 –some weeks before the creation of the Centre for Historical Studies– Castillejo notified Pijoan that the Spanish Board for the Advancement of Science and Research had approved the proposal to create the Spanish Archaeology and History School in Rome and asked Pijoan if he wished to accompany Ramon Menéndez Pidal, theoretically to be the school's director, to prepare the premises in Rome.[16]

The creation of the Spanish Archaeology and History School in Rome led, therefore, to a distancing of Pijoan from the IEC.[17] This distance that became even greater after 1913; Pijoan became disheartened by the poor results reaped in relation to the efforts invested in the Rome project, the lack of empathy with Menéndez Pidal[18] and the overwhelming obstacles –primarily the persistently precarious budget– to converting the school into a centre of reference for foreign intellectuals established in Rome. He eventually emigrated to Canada (in 1913), only returning to Catalonia and Spain on infrequent visits thereafter.

In January 1910, in a speech as president of the Diputació, Prat de la Riba referred to the need to enlarge the IEC.[19] He further asserted that, apart from the objective value of the IEC in regard to key elements of the Catalan language and its art and history, it was also important from the patriotic viewpoint to internationalise the Catalan language and to consecrate it as an instrument of change in the world of science. Prat de la Riba then summed up as follows:

[14] IEC Archives. Plenary minutes, Vol. 6, pp. 110-111.
[15] IEC Archives. Plenary minutes, Vol. 6, pp. 113-114.
[16] Student Residence Archives. Josep Pijoan files, letter dated 19 February 1910.
[17] Pijoan's relationship with Teresa Mestres de Baladia, wife of a well-known industrialist (with whom she had three children), further marked his distancing from the IEC.
[18] Menéndez Pidal, who was also the director of the Centre for Historical Studies, returned to Madrid, thereby removing himself from the day-to-day difficulties of the Spanish Archaeology and History School. He had not agreed, furthermore, to the inclusion of the Catalan language in the publications of the school, despite the role played by the IEC in its foundation and the requests of Pijoan. IEC Archives. Plenary minutes, Vol. 10, pp. 19-20.
[19] "(...) we need to carry through another of the initiatives of the previous term: the Institute of Catalan Studies." PRAT DE LA RIBA, 2000, Vol. III, p. 473.

> "Let us, therefore, strengthen and conclude this act by creating a place of honour for a sciences section next to the history and archaeology sections. In this way we also contribute, in a positive manner, to our liberation from foreign tutelage, to no longer being what we have been to date, which is importers of the science of other peoples, but to being, rather, creators of science, given that science, as you are well aware, represents honour and wealth and the superiority and predominance of a people."[20]

The proposal for enlargement, however, was not implemented immediately. In January 1911 the journal *Cataluña* –a Spanish language platform for political and cultural Catalanism that aimed to establish a dialogue between Catalanists and Spanish-speaking intellectuals– published an extra double issue of 32 pages on Catalan youth ideals and activities (*El ideal y la actividad de la juventud catalana*).[21]

More importantly, the journal included a long article by Eugeni d'Ors on the subject of the renewal of the Catalan intellectual tradition (*El renovamiento de la tradición intelectual catalana*).[22] This text can be considered to be a manifesto for the *noucentista* generation –a Catalan cultural movement of the early 20th century that originated largely as a reaction against Modernism– which was about to take centre stage in Catalan politics. The article commenced by defining the cultural and political programme of the *noucentistes*, declaring that theirs was a project to restore Classicism and to accord due value to traditions, but without excesses and vulgarity:

> "Our generation, in its understanding of a Classical renewal, has known how to restore the tastefulness that has always characterised all Classicism, the taste for clear, transparent and efficacious ideas."[23]

Encapsulating this notion was a list of concepts formulated by Ors in opposition to the mostly Modernist concepts adhered to by the preceding generation:

> "Set against Romanticism, the immortal classical tradition; against the Bourgeoisie, the Trade Union or the Empire; against Liberalism, Socialism or socialisation; against Democracy, proletarianism on the one hand and aristarchy on the other; against Indifference, the universal restoration of religious *values*, the idea of religion as indispensable to the *unity* of mental life and, consequently, to the spirit; against Primarism, philosophy and science."[24]

Although this proclamation of Ors may appear confused and ambiguous, what is clear is that his subsequent shift to authoritarian and *espanyolista* sentiments from the 1920s did not at all contradict these earlier thoughts, and particularly the explicit statement in regard to primarism and science overcoming the 'primary spirit'. Ors later vindicated the use of Catalan in all areas of culture as an indispensable element for the full development of the language. He also pointed to a low level of scientific achievement as one of the weaknesses of the Catalan cultural tradition:

[20] Ibid., see previous footnote.
[21] The issue was dedicated to Prat de la Riba; its editorial stated as its goal to provide a glimpse into the Catalonia of tomorrow.
[22] Ors, 1911.
[23] Ibid., p. 2.
[24] Ibid., p. 3. Punctuation as in the original.

> "The lack of information in science matters, the lack of information on foreign intellectual movements, and the lack of information on our own past: here we have three other reasons for ideological sterility."[25]

Ors also analysed the research situation in Catalonia at the close of the first decade of the 20th century, concluding that the situation was not very promising and stating that science could never be a personal initiative but had to be a collective endeavour in which different people, nations and generations cooperated.[26] Speaking of his own research into critical thinking, ethics, aesthetics, logic and philosophy, and considering that, above all, what was needed was editorial services, he mentioned the IEC as a body for disseminating academic research. Another urgent need according to Ors was to ensure the availability of a modern library. Again he was pointing to the IEC, which was considering the creation of a library at that time. Ors then made the following statement:

> "Unite the laboratories and the libraries, for the sciences that need them. Without them [laboratories] it is impossible to do anything in several orders of knowledge. Our situation in this respect is disastrous."[27]

He then referred specifically to the difficulties of August Pi i Sunyer in regard to establishing a centre for physiological research under the auspices of the Municipal Laboratory of Barcelona (Laboratori Municipal de Barcelona), pointing out that similar difficulties were being experienced in other areas.

Pursuing a similar line of thought, Ors called for –in addition to libraries and laboratories– an overhaul of education in general and specifically of university education, in line with the conclusions of the Catalan University Congress of 1903. This overhaul would need to take into account the organisation of student exchanges abroad.

In another article in the same January 1911 issue of *Cataluña*, August Pi i Sunyer took up Eugeni d'Ors' analysis of the limitations of experimental research in Catalonia.[28] He commenced by pointing to a secular gap between the economic boom in Catalonia and "spiritual" manifestations, indicating that the stimulus to study was only just beginning to be perceptible. Nonetheless, a number of initiatives inspired hope in the future of science in Catalonia; as far as scientific renewal was concerned, one of these was the sound technical training (understood in the broadest sense) already available, i.e., the provision of professional training in both technology and science.

However, although Catalonia had individual scientists of note, what it lacked was science schools that provided individuals with guidance, direction and discipline. The fact that intellectuals tended to overlook what might be called their 'social mission' contributed to the lack of continuity between gifted individuals in Catalonia:

> "Ours is a problem of education, schools, teams, organisation; the scientific ideal for Catalonia is to study, to study again and to *do*,[29] knowing what we are doing, not doing things as routine, combining our efforts; in a word,

[25] Ibid., p. 4.
[26] Ibid., p. 5.
[27] Ibid., p. 5.
[28] Pi i Sunyer, 1911.
[29] Emphasis as in the original.

> preparing the instruments for mental work that today are totally lacking, just as not too long ago laboratory instruments were lacking. And thereafter ... to have great confidence [and] an inexhaustible and guileless optimism, without which no work is possible."[30]

The reference to the confidence of researchers suitably equipped with the means to do their work recalls what was referred to as the civil discourse of science, which represented an indispensable framework for the confident work of researchers.[31, 32]

In the light of this general statement, Pi i Sunyer reviewed the situation in the disciplines that were most familiar to him, pointing to evident progress. Analysed in particular was the biomedical science field, in which the Municipal Laboratory of Barcelona (managed by Ramon Turró) and the university laboratories played a key role. He also mentioned the establishment of the Fabra Observatory, attached to the Royal Academy of Sciences and Arts of Barcelona, and the Ebro Observatory, belonging to the Jesuits. Special mention was made of work in the geology field by Norbert Font i Sagué (who had recently died) and the foundation of the Maritime Biology Station (Estació de Biologia Marítima) of Palma de Mallorca under the management of Odon de Buén, a professor at the University of Barcelona. Finally, Pi i Sunyer also referred to the work of the Faculty of Pharmacy of the University of Barcelona and to the fact that Catalonia had mathematicians of note, particularly in the disciplines of mechanics and physics. It could be deduced from his conclusion, however, that the general feeling was that a huge amount remained to be done, and that the path to be followed would likely be mapped out by the science body that Prat de la Riba had referred to as so necessary.

It was quite likely that August Pi i Sunyer was aware of the imminent enlargement of the IEC and that Prat de la Riba was hoping to count both on him and on Eugeni d'Ors. The issue of *Cataluña* that contains these commentaries concluded with a brief epilogue by Prat de la Riba himself on the subject of continuity. Entitled *La santa continuidad*, the article underlined the need for an intergenerational handover. The article also thanked the contributors to the issue –whom Prat de la Riba saw as representing Catalan youth– for their efforts to develop all areas of knowledge, science and the arts.

In February 1911, the IEC was enlarged and reorganised into three divisions with seven members in each, namely, History and Archaeology, Philology, and Science.

The agreement to enlarge the IEC became effective in February 1911. Thirteen new members were admitted and the body was reorganised into three divisions with seven members in each: the History and Archaeology Division (almost identical to that of the initial IEC), the Philology Division and the Science Division (which included the social sciences and philosophy). With the exception of Pere Coromines (who joined the new Science Division), the eight founding members of the IEC joined the

[30] Pi i Sunyer, 1911., p. 16.
[31] Glick, 1994.
[32] Roca Rosell, 2007.

History and Archaeology Division. The Philology Division included three distinguished writers (Josep Carner, Àngel Guimerà and Joan Maragall), two clerics (Antoni M. Alcover and Frederic Clascar), a Greek professor (Lluís Segalà), and an engineer-turned-linguist (Pompeu Fabra). The Science Division was composed of a gynaecologist, two biologists, an engineer-physicist-mathematician, an economist, a naturalist and a philosopher.

The Science Division covered the natural sciences, the biomedical sciences, the exact sciences, the social sciences and philosophy.

The Philology Division had as its main aim to conduct research into the Catalan language; however, as an immediate goal to be achieved in as brief a time as possible, it was commissioned to develop a system for normalising the Catalan language. The first language standard (*Normes Ortogràfiques*) was published in 1912, thereby placing Catalan on the same level as all other languages whose spelling was standardised. Although this new standard was initially rejected by some intellectuals, within a few years it had become widely accepted. This division had also intended to publish a standard dictionary; however, the painstaking nature of lexicographical work combined with the adverse circumstances resulting from the Primo de Rivera dictatorship led to Pompeu Fabra eventually publishing a *Diccionari General de la Llengua Catalana* under his own name, in fascicules from 1925 and as a single volume in 1932.

The Science Division bore the distinctive stamp of Eugeni d'Ors, who, as well as being its secretary, also took over the post of secretary general of the IEC in the absence of Pijoan. The natural sciences, the biomedical sciences, the exact sciences, the social sciences and philosophy all coexisted in this same division. The justification for the creation of the Science Division was clearly provided by Prat de la Riba. Declaring that this new unit would foster the use of Catalan in science, leading to a 'comprehensive cultural renewal', Prat de la Riba dedicated a lengthy paragraph to depicting the links between 'science and public wealth', concluding that:

> "It has been said a thousand times in a thousand different ways: without original science in a country, there is no original industry; without original industry, there is no independent economic life. Any attempt to redeem us from slavery in this sense will be wasted unless we fight the evil at its foundations. The science of today represents the public wealth of tomorrow."[33]

For this reason it had been considered crucial to make the IEC more comprehensive:

> "(...) by creating a new body, the science section, which, located in the same shared premises as the existing history and archaeological sections and taking advantage of some of the methods and practices already developed and used therein, will complement the latter in the science order, thereby equipping a public body that has no desire to grant a distorted preponderance to one branch of human

[33] Prat de la Riba, 2000, Vol. III, p. 584.
[34] Ibid., p. 585.

knowledge over another with the necessary complexity."[34]

The Science Division was accorded a scope that covered not just the natural sciences and mathematics but also the social sciences and philosophy. Its initial composition reflected this principle, which also coincided with the ideas of Ors and –given the reality of Catalan scientific research at that moment in time– with the predominance of the biomedical sciences over physics and mathematics, the social sciences and philosophy.

The president of the Science Division, Miquel A. Fargas, was a professor of obstetrics at the University of Barcelona and also a senior member of Prat de la Riba's political party, the Lliga Regionalista. Of the other Science Division members, Ramon Turró, who had trained as a veterinary surgeon, was the director of the Municipal Laboratory of Barcelona which, under his management, had become the leading biomedical research centre in Catalonia. August Pi i Sunyer, who descended from a long line of doctors from the Empordà region in northern Catalonia, had been awarded a physiology professorship at the University of Seville in an open public competition, but had rejected it in order to continue his research at the Municipal Laboratory of Barcelona, where he was eventually appointed to an honorary physiology chair. He was made a senior professor in the Faculty of Medicine of the University of Barcelona in 1916.

Josep Bofill i Pichot was also a physician who, for health reasons, no longer practised. However, he had acquired a reputation as an entomologist, specialising in insects with negative effects on agriculture. Bofill i Pichot had been a disciple of Santiago Ramón y Cajal, with whom he had worked during his time in Barcelona. He had also been the president of the Catalan Natural History Institution on two occasions, resigning the post definitively shortly before becoming a member of the IEC. From 1909 he was also a member of the Royal Academy of Sciences and Arts of Barcelona. Esteve Terradas was a physicist, mathematician and engineer, and also a professor of acoustics and optics at the University of Barcelona. In 1909 he had been admitted to the Royal Academy of Sciences and Arts of Barcelona. His background and youth meant that he was upheld as the great hope of the physics, mathematics and engineering disciplines in Catalonia. Pere Coromines was a lawyer by training with links to left-wing Catalanism. He worked in the finance division of the Ajuntament of Barcelona, where he had made profound changes to the city's revenues system. His research covered the social sciences, mainly economics and sociology. Finally, Eugeni d'Ors, secretary of the Science Division and general secretary of the IEC, held degrees in law and philosophy, and had spent a number of years in different European countries. He became publicly known largely through his journalistic contributions (under the title *Gloses*, meaning 'notes' or 'glosses') to the Barcelona newspaper, *La Veu de Catalunya*. Ors is considered to have shown the way in the new *noucentista* aesthetic and intellectual style.

Table 1
IEC divisions

Division	Year created
History and Archaeology	1907
Philology	1911
Biological Sciences	1989[a]
Science and Technology	1989[a]
Philosophy and Social Sciences	1968[b]

[a] Created when the Science Division (created in 1911) was divided into two.
[b] Removed from the Science Division (created in 1911).

5. Achievements in the period to the death of Prat de la Riba (1911-1917)

Enlargement and reorganisation in 1911 launched a highly active period for the IEC, which, despite the obstacles posed by the outbreak of World War 1 in 1914, experienced no further major changes until after the death of Prat de la Riba in 1917. IEC implication in the research policy of the Diputació and, from 1914, in the Mancomunitat, was marked by major achievements, including the publication of seminal scientific works, the creation of subsidiary societies, the creation of departments and divisions within the IEC, the organisation of advanced study courses and exchanges, and the opening of the Library of Catalonia to the public.

In 1911, the Science Division commenced publishing a journal, the *Arxius de l'Institut de Ciències*, which was very ambitious in scope.

The Science Division got underway on 1 April 1911. Its first meeting led to an agreement to publish a scientific journal entitled *Arxius de l'Institut de Ciències*.[35] This journal was very ambitious in scope, with international contributions in the original language of the authors and with reports and sectoral reviews contributed by members.[36] That same year, Eugeni d'Ors participated in the 4th Philosophy Conference of Bologna and was able to recruit the Italian mathematician Giuseppe Peano as a contributor to the journal. Shortly thereafter, Esteve Terradas attended the Versammlung Deutscher Naturforscher und Ärzte, and, although he may not have recruited a contributor for the journal, his description of the meeting represents a key testimonial of the state of physics at that time. His review of Max von Laue's book on the relativity principle represented one of the earliest discussions of Einstein's theory in Spain.[37] As is evident, the rhythm of publication in the early years of the IEC was intense; however, it was not possible to maintain this rhythm and so the decision was eventually taken to issue smaller publications less frequently from 1916.

Other early publications of the IEC included fascicules on flora and fauna, for two series entitled *Flora de Catalunya* and *Fauna de Catalunya*. The proposals for these projects had originated in the first volume of the Science Division's yearbook (*Anuari de l'Institut de Ciències*), which had included key articles signed by Josep Bofill i Pichot and Eugeni d'Ors; one proposed the publication of what would be *Flora de Catalunya*, under the management of the distinguished botanist Joan Cadevall, and the other proposed the publication of what would be *Fauna de Catalunya*, with Artur Bofill i Poch and Manuel de Chia i Bajandas commissioned to produce a first fascicule on molluscs.

It was at the second meeting of the Science Division, on 5 May 1911, that Josep Bofill i Pichot had made the proposal –adopted by the members– to publish the work on Catalan flora that Joan Cadevall[38] had been working on for a number

[35] Roca Rosell & Casassas, 1995.
[36] The earliest fascicules, for example, contain reports by August Pi i Sunyer on physiological research in the first decade of the 20th century and by Esteve Terradas on relativity.
[37] Roca Rosell & Sánchez Ron, 1990.
[38] IEC Archives.Science Division minutes. Vol. 1, p. 9.

of years; Cadevall had, in fact, done most of his work on Catalan flora in the Spanish language and was now working on a translation to Catalan. The Science Division also agreed that Cadevall's original work should include illustrations and be modelled on *Flore de France* by Hippolyte Coste, edited by Paul Klincksieck; permission would be requested of the publisher, moreover, to reproduce illustrations for species common to France and Catalonia.[39] Àngel Sallent assisted with the translation and adaptation work, and was also responsible for writing notes on the etymologies and origins of the plant names.

Although the first fascicule of *Flora de Catalunya* was not issued until summer 1913,[40] the minutes of the Science Division record how, in September 1911, Cadevall and Sallent were already working on the publication and how they had received the first originals in October and November of that year. Publication was approved at a meeting of the Science Division in January 1912. In early March, Léon Lhomme,[41] the new editor of *Flore de France*, granted his permission to use the illustrations; shortly after Cadevall and Sallent delivered the materials necessary to complete what would be the first fascicule. The artist Pere Viver[42] provided the original drawings for colour plates of two endemic species and for black-and-white engravings of species not featured in Coste's work. By early May 1913 the first fascicule was ready but for some colour plates that had been commissioned from Casa Thomas. A lengthy printing strike further delayed publication, however, until the end of June 1913.

Fauna de Catalunya, under the management of Josep Bofill i Pichot got off to an even slower start, commencing with the issue of fascicules referring to molluscs and insects, and also one on coelenterates by Josep Maluquer i Nicolau. On 8 March 1912, the Science Division agreed to request Chia i Bajandas to present an extensive monograph on bivalve molluscs that examined the genus *Tapes* in depth.[43]

The publishing process for the earliest fascicules on fauna was also slow and laborious, given difficulties arising from the photographs that Chia i Bajandas wished to include; Josep Bofill i Pichot, moreover, insisted on including explanatory notes for technical zoology terms to make the descriptions more transparent. At the end of 1914, Artur Bofill i Poch corrected the galleys for the first fascicule on molluscs; however, the war in Europe affected the possibility of obtaining

[39] *Flore de France* was published by the Librairie des Sciences Naturelles in Paris between 1901 and 1906 to great acclaim, given its novelty in comparison to previous publications on the same subject in Europe. Its reputation survives to this day. In his editing, Paul Klincksieck, applied the model developed by the United States botanists Nathaniel L. Britton and Addison Brown in *An Illustrated Flora of the Northern United States, Canada and the British Possessions.*

[40] On 16 July 1913 Cadevall sent Carlos Pau a copy of this first fascicule (letter from Cadevall to Pau, contained in the Pau Collection in the Archives of the Barcelona Botanical Institute), and the second fascicule was published a year later. The last fascicule of the first volume was not issued until December 1914, however, and even then it was missing its colour plates. The second volume was issued between 1915 and 1919. Cadevall did not live to see publication of the third volume, as he died in November 1921. Primo de Rivera's dictatorship interfered with the publication of the remaining volumes, which eventually were published under the management of Pius Font i Quer between 1932 and 1937. Font i Quer himself was responsible for the work on gymnosperms and the German Werner Rothmaler contributed with an article on the pteridophytes, thus completing Cadevall's work with the only two groups that were missing. Font i Quer also included a glossary of obsolete or incorrectly used botanical terms that had featured in the earlier volumes.

[41] A nature enthusiast who was very knowledgeable about the Pyrenees, Léon Lhomme (1867-1949), was appointed to replace Klincksieck as head of the Librairie des Sciences Naturelles when the latter died in 1909.

[42] Pere Viver (1873-1917) was an exponent of the Modernist landscape school of Terrassa (near Barcelona). He was a brother of the artist Tomàs Viver (1876-1951), who had been director of the Municipal School of Arts and Trades of Terrassa, founded in 1886 on the initiative of Cadevall. Although the published engravings were not signed and the artist's name was not credited, the fact that the death of Viver was recorded in the minutes of the Science Division of 19 February 1918 would seem to confirm that he was, in fact, the artist.

[43] IEC Archives. Science Division minutes. Vol. 1, p. 122.

supplies of quality paper and this led to a postponement of some months in publication. Finally agreed on 10 March 1915 was the layout of the monographs for *Fauna de Catalunya* which would carry the subtitle *Monografies publicades sota la direcció de Josep M. Bofill i Pichot, membre de l'Institut de Ciències.* The first three monographs –on molluscs (an introduction followed by fascicules on Veneridae and Petricolidae)– were published in July 1915.

Also dating from this period were the earliest initiatives aimed at creating and publishing geographic and geological maps of Catalonia. On 18 June 1912 the Science Division agreed to ask the Geography and Statistics Institute (Instituto Geográfico y Estadístico) in Madrid for the publications necessary to be able to make a geographic map of Catalonia. It was not until 8 May 1914, however, that it was agreed to publicise vacancies for a tomographer and draughtsman for what would be the Geographic Map Service, with a closing date of 30 September for candidate applications. Finally appointed were José de Rivera as the topographer and Baldomer Pérez Mayol as the draughtsman.

Once the geographic map project was underway, a geology map project was launched. As early as 1913, in fact, Josep Bofill i Pichot had taken the necessary steps to obtain for the IEC a set of geology maps that had been created by Dr. Jaume Almera for the Diputació.[44] In early November 1914 the Diputació, aware that Almera was unable to continue mapping the province of Barcelona and that he had proposed his colleague Marià Faura i Sans as his replacement, commissioned the IEC to complete the map.[45] Faura presented his proposal for implementing the task in December, and Josep Bofill i Pichot was made responsible for reporting on the proposal to the IEC and the Diputació. The report was viewed favourably and the Geology Map Service was set up with Faura as its manager and with the same people who had worked with Dr. Almera as his staff, namely, the topographer Eduard Brossa and his assistant Josep Ramon Bataller (then a seminarian and a student of the natural sciences at the University of Barcelona). Appointments were formally confirmed on 28 June 1915.[46]

Another initiative of the Science Division was the Aerology Station of Barcelona (1912), proposed by Eduard Fontserè. Fontserè, who was a member of the Royal Academy of Sciences and Arts of Barcelona, had recently taken charge of the Meteorology and Seismology Service of the Fabra Observatory. The Aerology Station participated in an international programme –the initiative of Vilhelm Bjerknes, founder of modern meteorology– to obtain meteorological data from the atmosphere using high-altitude hot-air balloons. This station represented the beginnings of what would eventually develop into the Meteorology Service of Catalonia (Servei Meteorològic de Catalunya), whose establishment was approved in 1919.

In addition to the Geographic and Geology Map Services and the Aerology Station, a Malaria Service was set up in 1915 under the management of Gustavo Pittaluga, an active promoter of a public health policy for the Mancomunitat. August Pi i Sunyer and Leandre Cervera, furthermore, put forward a proposal to create a physiology unit as early as 1917, but the death of Prat de la Riba

[44] IEC Archives. Science Division minutes, Vol. 2, pp. 7-8.
[45] IEC Archives. Science Division minutes, Vol. 3, p. 127.
[46] Aragonès, 2005, pp. 172-173.

delayed the foundation of what became known as the Physiology Division until 1921.

Apart from publications and scientific and technical services, the Science Division aimed to consolidate a community of Catalan scientists by incorporating subsidiary societies. The first of these, created at the end of 1912, was the Biology Society of Barcelona (Societat de Biologia de Barcelona), today the Catalan Biology Society (Societat Catalana de Biologia).

The Science Division minutes of 2 November 1912 would indicate this was not an IEC or Science Division initiative; it was, rather, an initiative by Catalan physiologists, who, according to August Pi i Sunyer, had established contact with the Société de Biologie in Paris for assistance with the creation of a sister body in Barcelona, with the idea being to exchange three-way communications and correspondence between the French and Catalan associations and what Pi i Sunyer referred to as the "Madrid Biology Society".[47] Science Division minutes for 2 November of that year merely make brief mention of the fact that the new society would be composed of IEC members. The initiative to create this body arose, undoubtedly, as a consequence of a divergence of interests and substantial differences in scientific training among members of the Science Division, it being acknowledged that the masterly efforts of Ramon Turró and August Pi i Sunyer were likely to conclude in the creation of a biology body with a significant international presence. On 14 December 1912, the first scientific session of the Biology Society of Barcelona took place. In its first 12 months, 31 communications were presented at successive scientific sessions by Turró, Pi i Sunyer and their colleagues, between them constituting the core group of the nascent Catalan biology community. These communications constituted the basis for the first volume of the new publication of the Biology Society of Barcelona entitled *Treballs de la Societat de Biologia de Barcelona*. Annual publication of the works presented at scientific sessions held the previous year continued up to 1920.

The first subsidiary society created by the IEC was the Biology Society of Barcelona, today the Catalan Biology Society.

Another member of the Science Division, Josep Bofill i Pichot, acted as liaison in terms of incorporating the Catalan Natural History Institution as a subsidiary society in the IEC. In this way a more explicit link was established between the scientific excursion tradition in Catalonia and more recently established research bodies. The lengthy and complex incorporation process commenced in early 1915 and was not terminated until 6 December 1917, when the members of the Catalan Natural History Institution approved the new statutes that would govern the body as a subsidiary society within the IEC.

[47] IEC Archives. Science Division minutes. Vol. 1, p. 193. Pi i Sunyer referred to the "Societat de Biologia de Madrid" but the Madrid association referred to is probably the "Sociedad Española de Biologia" (Spanish Biology Society) founded the previous year by Santiago Ramón y Cajal, Gregorio Marañón, Juan Negrín and other physicians carrying out biomedical research in a range of centres in Madrid. It is possible that Pi i Sunyer wished to underline his argument in favour of the creation of the Barcelona association by pointing to the example provided by colleagues in Madrid. Alternatively, he may have discussed the possibility of the Spanish associations uniting in a common front with regard to dealings with their French colleagues.

In 1914, when the Barcelona's Diputació Pedagogical Research Council (Consell d'Investigació Pedagògica) expressed a wish to run monographic advanced study courses and organise academic exchanges, the Science Division immediately responded by expressing its interest. However, the outbreak of World War 1 prevented researchers from the countries at war from participating and also prevented exchanges with foreign universities. When the courses were launched in 1915, therefore, academics from regions of Spain other than Catalonia were invited, commencing with the mathematician Julio Rey Pastor. These and subsequent mathematics and physics courses developed, in 1916, into a new series of publications under the management of Esteve Terradas (*Col·lecció de Cursos de Física i Matemàtica*).

The death of Prat de la Riba and Puig i Cadafalch's appointment as president of the Mancomunitat led to a shift in emphasis and a less central role for the IEC.

To sum up, the Science Division's contribution to the science policies of the Diputació and the Mancomunitat went beyond even the most ambitious aspirations of Prat de la Riba, resulting in scientific publications in the Catalan language (except for works by foreign authors published in other languages in the *Arxius de l'Institut de Ciències*), the supervision, inspection and management of scientific and technical services, support for the creation of research centres and scientific societies, and finally, the organisation of advanced study courses. All these activities, moreover, highlighted a clear ambition to ensure that scientific activity in Catalonia garnered itself a place on the international stage.

6. The Mancomunitat under Puig i Cadafalch (1917-1923)

Prat de la Riba died in 1917, Puig i Cadafalch became president of the Mancomunitat in 1917 and Joan Vallès i Pujals became president of the Diputació in 1918. Although no radical changes were brought about in the cultural and scientific policies of the Mancomunitat and the Diputació by these events, there was a slight shift in emphasis; the role of the IEC became slightly less central –despite the fact that Puig i Cadafalch was a founding member of the IEC and a member of the History and Archaeology Division.

At the outset Puig i Cadafalch and Eugeni d'Ors had been in agreement in terms of considering the IEC as yet another element in the cultural machinery of the Mancomunitat, although they also felt that it needed to have more autonomy. However, differences gradually arose between Puig i Cadafalch (and other members of the IEC) and Eugeni d'Ors that eventually became public, and in 1920 the latter was removed from all his responsibilities. This event partially explains the loss of influence and the restriction in the functions of the IEC. Also significant was the general deterioration in the social climate from around 1917 and the fact that the IEC's budget was first frozen then reduced from 1920. The situation did not improve in the years subsequent to the abrupt dismissal of Ors; repeated complaints were made against him, mainly by the Science Division, and especially from 1922.

The Mancomunitat had begun to directly take over IEC services and powers or had transferred these to other bodies or institutions some months before

the death of Prat de la Riba. Thus, for example, in 1917, the Natural Sciences Board of Barcelona (Junta de Ciències Naturals de Barcelona) was converted into a mixed body with the participation of the Diputació (previously it had been exclusively municipal), and was given responsibility for the Geographic and Geology Map Services of the IEC, resulting in a physical relocation of these services from the Seminary Museum to the Museum of Catalonia. On 30 June, Prat de la Riba authorised the same board to also take possession of the Diputació's natural history collections and the Geology Map Service collections so as to ensure continuation of work in these fields. In 1917, when its scope was broadened to include tuberculosis and typhoid, the Malaria Service (Servei Tècnic del Paludisme) was renamed the Healthcare Studies Service (Servei d'Estudis Sanitaris) and, in 1920, was transferred to the Mancomunitat.

During the early years of this period, a number of new centres were created within the IEC: the Pedagogical Seminary-Laboratory (1918), the Philosophy and Psychology Seminary-Laboratory (1918) and the Physiology Seminary-Laboratory (1920). The Physiology Seminary-Laboratory, however, failed to meet the expectations of August Pi i Sunyer and Jesús M. Bellido in regard to their project for a physiology unit as proposed to Prat de la Riba in early 1917. What was eventually called the Physiology Division was responsible for training large numbers of researchers who would form what gradually came to be recognised as a Catalan school of biology attached to the University of Barcelona. The Pedagogical Seminary-Laboratory and the Philosophy and Psychology Seminary-Laboratory, both closely identified with Eugeni d'Ors, did not survive for long and were suppressed in 1921, with the exception of the Experimental Psychology Laboratory (a spin-off of the Philosophy and Psychology Seminary-Laboratory), which was launched in 1919 under the management of the Belgian psychologist Georges Dwelshauvers and formally inaugurated in 1922.

The most significant creation in this period was the Meteorology Service, founded in 1921 under the management of Eduard Fontserè. This body commenced as the Aerology Station of Barcelona, founded in 1913. Together with the Physiology Division of August Pi i Sunyer and Jesús M. Bellido and the Excavations Service of Pere Bosch i Gimpera, the Meteorology Service is probably the most representative institution of the *noucentista* vision of research policy. These three centres carried out basic research, which they combined with the provision of a public service –whether the promotion of public health, the preservation of archaeological heritage or the provision of weather forecasts.

The creation of the Meteorology Service of Catalonia (1921) was probably the most representative institution of the *noucentista* vision of research policy, combining, as it did, basic research with the provision of a public service.

The dismissal of Ors in 1920 marked a turning point in the role played by the IEC in the web of cultural and scientific policies of the Mancomunitat. In that year, the Mancomunitat took over the most important responsibilities of the provincial councils of Catalonia, which meant that it inherited the Diputació's relationship with the IEC (and with the Natural Sciences Board of Barcelona, the Barcelona Museum Board, etc). Eugeni d'Ors by this stage held considerable sway in the Mancomunitat, as he was both

responsible for the Directorate of Public Instruction and president of the Pedagogical Council (derived from the Diputació's Pedagogical Research Council). Space here is too brief to analyse Ors' fall from grace, which has, in any case, been studied in depth elsewhere; suffice it to say that one of the consequences as far as the IEC was concerned was its loss of influence in terms of defining and regulating science policy in Catalonia.

During the dictatorship of Primo de Rivera, the IEC's role in science policy became wholly irrelevant, bereft as the body was of any public funding, expelled from its premises and with all its services transferred to the Diputació.

Social conflict between workers and capitalists –which continued until well after World War 1 led to a distrust of more left-wing intellectual sectors and to the gradual shift to the right of the Lliga Regionalista. This distrust particularly affected the Science Institute, despite the fact that prestigious individuals such as Pi i Sunyer and Fontserè were implementing key projects such as the Physiology Division and the Meteorology Service. From 1920, the flow of IEC publications almost completely dried up, not to recommence again until the period of the Republic and then only briefly. One final achievement in this stage of the IEC's history, however, was the creation of another subsidiary society, namely, the Catalan Philosophy Society, which, sadly, had barely come into being when General Primo de Rivera staged his coup d'état.

7. The Primo de Rivera dictatorship (1923-1930) and the Republic (1931-1939)

A coup d'état was proclaimed by General Primo de Rivera on 13 September 1923 in Barcelona, where Primo was Captain General. The coup was originally welcomed by conservative elements in Catalan society, including the Lliga Regionalista. The last issue of the *Crònica Oficial* (official gazette of the Mancomunitat), dating from September 1923, contained a declaration (published previously in the press) by the president, Puig i Cadafalch, expressing the hope that the new direction taken by the Spanish government would resolve the serious problems being experienced by the country.[48] To little avail, however, as Puig i Cadafalch was soon dismissed (January 1924), and the Monarchist Alfons Sala was appointed as president of the Mancomunitat, which was, nonetheless, gradually dismantled, to be finally suppressed in March 1925.

It goes without saying that, in the situation created by the Military Junta headed by Primo de Rivera, the IEC's role in science policy became wholly irrelevant, bereft as the body was, from 1925, of any public funding, expelled from its premises and with all its services transferred to the Diputació.

Even services transferred to the Diputació experienced a degree of precariousness that, in some cases, brought them to near demise. Only the Meteorology Service and, to a lesser extent, the Physiology Division survived with a certain dignity, although they were both ordered to use the Spanish language in their publications. Of the IEC subsidiary societies, only the Catalan Natural History Institution continued to function, publishing

[48] Mancomunitat de Catalunya, *Crònica Oficial*, Year 4, No. 8.

news (the *Butlletí* series), but not works (the *Treballs* series), as normal. It too was obliged not only to translate its name to Spanish but also to adapt the name of its news journal, in October 1925, to the rather odd *Butlletí de la Institución Catalana de Historia Natural*,[49] which was the name it bore until December 1929.

Other publications of the IEC continued, thanks to funding provided by some 30 private sponsors, mainly Rafael Patxot and Francesc Cambó. Rafael Patxot, for example, financed the publication of *Annual Reports* for the History and Archaeology Division (to replace its *Yearbooks*), for the Science Division (to replace its *Arxius de l'Institut de Ciències*) and for the Philology Division, and also subsidised a number of issues of the publication on dialects (*Butlletí de Dialectologia*). His own Patxot Foundation was responsible for publishing a rainfall atlas (*Atlas pluviomètric de Catalunya*), an international atlas of cloud formations (*Atlas internacional dels núvols i els estats del cel*), and an edited version of a manuscript describing celebrations of all kinds in Barcelona between 1383 and 1719 (*Llibre de les solemnitats de Barcelona*).

When, in 1930, Primo de Rivera departed into exile, a transitional government was appointed under General Berenguer which combined authoritarianism with a certain degree of civil liberty. As for the provincial councils, some of their deputies of before the coup of 1923 (those who had obtained most votes) were allowed to return. For the Diputació of Barcelona, this meant the return of Josep Puig i Cadafalch and Ferran Valls i Taberner, among others. Appointed as president of the Diputació was Joan Maluquer i Viladot and appointed as mayor of Barcelona was Baron Santiago Güell, one of the IEC's sponsors during the dictatorship.

Maluquer i Viladot was a conservative politician and monarchist, founder and president of the Monarchist Autonomic Federation (Federació Monàrquica Autonomista). He was also a known Catalanist and a reputable jurist. Three of his offspring were members of the Catalan Natural History Institution (two, in fact, were founders). Hardly surprising then that one of the first steps taken by the new Diputació, of which he was president, was to re-establish its patronage of the IEC and to restore many of the services that had been removed from it.[50] Returned to the IEC, for example, was its preeminent role on the board of trustees of the Library of Catalonia. The IEC was also commissioned to conduct a study on the reorganisation of the Geology and Topography Division whose functioning had been suspended.

The IEC was soon sufficiently consolidated to consider the possibility of establishing a new basis for its relationship with the Diputació –and not excluding, for example, the possibility of being converted to a private association (although this idea was soon ruled out). It did manage to persuade the Diputació to accord it a fair degree of autonomy; thus, on 2 July 1930, the Diputació granted the IEC the power to approve and adopt its statutes and the right to receive subsidies, and the agreement in this respect was approved at a plenary meeting of the IEC held two days later.

[49] The oddness resulted from the combination of the Catalan word for gazette with the Spanish language version of the name of the society.
[50] Not returned were the Meteorology Service and the Physiology Division, however, as these were now independent foundations. Links with the IEC were maintained, however, through the directors of these two bodies, Eduard Fontserè and August Pi i Sunyer, both members of the IEC, and through the appointment of an inspector from the IEC to each of the foundations (Balcells & Pujol, 2002, p. 230).

As the autonomy of the IEC was enhanced and as it was returned its sources of funding and its services, the Ajuntament, following the example of the Diputació, and bearing in mind the imminent 25th anniversary of the IEC, adopted an agreement to grant premises in the old Hospital de la Santa Creu and Casa de Convalescència for the Library of Catalonia and for IEC departments, services and subsidiary societies.[51] The premises were formally handed over on 30 March 1931, just a fortnight before the proclamation of the Republic. Even the Spanish government recognised the IEC in February 1931, when it formally requested it to nominate speakers (and substitutes) for the public competition panels that would examine candidates for university professorships.

In 1931, bearing in mind the imminent 25th anniversary of the IEC, in 1932, the Ajuntament granted premises in the old Hospital de la Santa Creu and Casa de Convalescència for the Library of Catalonia and for IEC departments, services and subsidiary societies.

The return to normality occurred smoothly and remained unaffected by the consolidation of the newly declared Republic and the constitution of an autonomous government, called the Generalitat, in Catalonia. The Generalitat took over from the Diputació in terms of providing funds to operate the IEC and to pay for refurbishment of its new premises in the old Hospital de la Santa Creu and the Casa de Convalescència. The IEC was thus able, according to its records, to celebrate its anniversary in the Casa de Convalescència premises in 1931 and 1932. Likewise, in the new premises in 1932, the new Catalan Physical, Chemical and Mathematical Sciences Society (Societat Catalana de Ciències Físiques, Químiques i Matemàtiques) was launched. In 1935, the Biology Society of Barcelona inaugurated its new premises in the Casa de Convalescència, which also hosted the meetings of the Science Division and the courses of the Mathematical Studies Centre (Centre d'Estudis Matemàtics). In early 1936, the Catalan Natural History Institution, the Catalan Physical, Chemical and Mathematical Sciences Society and the Catalan Geography Society (Societat Catalana de Geografia) –newly created in 1935– all moved into the new premises.

The slowness of the move by the IEC and the Library of Catalonia (the library was only moved on the eve of the Civil War), however, created an ongoing atmosphere of transition in the IEC, accentuated by the distancing of certain political leaders with links to the IEC and by differences between some IEC members with respect to the left-wing politicians who controlled the Generalitat and the Parliament of Catalonia.[52] Nonetheless, Puig i Cadafalch, Pere Coromines, Eduard Fontserè and Pompeu Fabra as presidents of the IEC between 1931 and 1939, managed somehow to keep the IEC on the political sidelines. Under the Generalitat, the IEC thus failed to recover the central place it had occupied in the cultural policies of the Mancomunitat.[53] The Physiology Division and the Meteorology Service

[51] Property of the Ajuntament, these premises had remained unused since 1930 when the hospital moved to new grounds as the Hospital de la Santa Creu i Sant Pau, financed by Pau Gil, owner of the gas and electricity company Catalana de Gas i Electricitat.
[52] For example, Puig i Cadafalch, as a key leader in the Lliga Regionalista, and Ferran Valls i Taberner, as a Lliga deputy in the Parliament of Catalonia, were politically in conflict with the Catalanist left, but also with the right-wingers that controlled the government of the Republic from 1934 to 1936.
[53] BALCELLS & PUJOL, 2002, p. 243.

had been separated from the IEC in 1930 at the IEC's request; in 1936, the Excavations Service and the Monument Preservation Service were transferred to the Generalitat's Department for Public Instruction, in application of the Catalan Statute of Autonomy of 1932, which, as it happened, made no mention of the IEC. It was the Science Division which took the initiative of requesting the reconstitution of the Geology Map Service with Marià Faura i Sans as director, a proposal that was acted on by the Generalitat in the early months of 1933. A proposal by Esteve Terradas at around the same time led to the creation of the Mathematical Studies Centre by the IEC, launched in 1933 under the management of Pere Pi Calleja. This centre was originally intended to be run in cooperation with the University of Barcelona, although this finally proved to be impossible.

An example of the difficulty of slotting the IEC into public cultural and scientific projects was provided by the project to create a new literary body, proposed by Ventura Gassol to the Generalitat's Culture Council in 1931. This body, which took shape in 1937 in the form of the Catalan Letters Institute (Institució de les Lletres Catalanes), competed directly with the IEC in terms of certain activities implemented by its Philology Division. The Generalitat, however, did commission the IEC with a number of important tasks: supervision of inventory-taking of the monuments of Catalonia (one of the transfers anticipated in the Catalan Statute of Autonomy of 1932) and a review of toponyms so as to determine definitive place names and complete a map of Catalonia in impeccable Catalan. The Generalitat also showed its interest in the proposal of the History and Archaeology Division to edit the historical *Dietaris de la Generalitat de Catalunya*, a description of political, military, religious and social events of the period 1411 to 1714.

The Generalitat also viewed favourably the decision of the IEC and the Meteorology Service to participate in International Polar Year 1932-1933 and to install Catalonia's first permanent mountain meteorology observatory on Turó de l'Home (opened in October 1932).

The Catalan Natural History Institution experienced a genuine golden age coinciding with the two terms of office of Pius Font i Quer as president (1932-1933 and 1934-1935).

Nonetheless, it was the subsidiary societies which were most involved in the cultural and science policies of the Generalitat of the Second Republic. After a number of years of relative inactivity and having had little contact with the IEC during the Primo de Rivera dictatorship, the Catalan Natural History Institution was now experiencing a genuine golden age coinciding with the two terms of office of Pius Font i Quer as president (1932-1935). It doubled its membership, substantially enhanced its level of activity, updated the *Butlletí*, recommenced organising thematic outings, and opened up to new sources of members; there were also significant qualitative improvements. It was in the education area that the IEC was able to decisively focus its growth and renewal; this gave it an important sense of direction –comparable to that of the years prior to the Primo de Rivera dictatorship– until the Civil War (1936-1939) abruptly truncated its progression. Rafael Candel, president of the Excursions Committee very cleverly managed to ensure that the Barcelona press mentioned the Catalan Natural History Institution calls for participants in outings.

Table 2
IEC subsidiary societies

Institució Catalana d'Història Natural / Catalan Natural History Institution (1899 / IEC 1915)
Societat Catalana de Biologia / Catalan Biology Society (1912)
Societat Catalana de Filosofia / Catalan Philosophy Society (1923)
Societat Catalana de Geografia / Catalan Geography Society (1935)
Societat Catalana d'Estudis Històrics / Catalan Historical Studies Society (1946)
Societat Catalana d'Estudis Litúrgics / Catalan Liturgical Studies Society (1970)
Societat Catalana de Musicologia / Catalan Musicology Society (1973)
Amics de l'Art Romànic / Friends of Romanesque Art (1977)
Societat Catalana d'Economia / Catalan Economics Society (1977)
Societat Catalana d'Estudis Numismàtics / Catalan Numismatic Studies Society (1979)
Associació Catalana de Ciències de l'Alimentació / Catalan Food Sciences Association (1979 / IEC 1992)
Societat Catalana d'Estudis Clàssics / Catalan Classical Studies Society (1979)
Associació Catalana de Sociologia / Catalan Sociology Association (1979)
Societat Catalana d'Ordenació del Territori / Catalan Territorial Planning Society (1979)
Societat Catalana de Pedagogia / Catalan Pedagogy Society (1979)
Societat d'Història de l'Educació dels Països de Llengua Catalana / Society for the History of Education in Catalan Speaking Lands (1982)
Institució Catalana d'Estudis Agraris / Catalan Agrarian Studies Institution (1984)
Societat Catalana de Comunicació / Catalan Communication Society (1985)
Societat Catalana de Física / Catalan Physics Society (1986)
Societat Catalana de Matemàtiques / Catalan Mathematics Society (1986)
Societat Catalana de Química / Catalan Chemistry Society (1986)
Societat Catalana de Tecnologia / Catalan Technology Society (1986)
Societat Catalana de Llengua i Literatura / Catalan Language and Literature Society (1986)
Societat Catalana d'Història de la Ciència i de la Tècnica / Catalan Science and Technology History Society (1991)
Societat Catalana d'Estudis Hebraics / Catalan Hebrew Studies Society (1995)
Societat Catalana d'Estudis Jurdics / Catalan Legal Studies Society (1995)
Associació de Sociolingüistes de Llengua Catalana / Catalan Language Sociolinguistics Association (2008)
Associació Catalana de Terminologia / Catalan Terminology Association (2008)

Professors and lecturers in a number of important education centres –Escola Normal, Escola Superior d'Agricultura, Institut-Escola, Institut de Cultura per a la Dona, Escoles Italianes, Liceu Francès and even the Autonomous University of Barcelona (to which Pius Font i Quer was appointed as a professor in 1933)– also actively promoted the excursions. These outings attracted large numbers of individuals, many of whom eventually took up membership in the IEC. This explosive growth in the IEC in the pre-war years can largely be attributed to the Generalitat's educational reforms.

Given the cultural and political context in which it occurred, an excursion to Minorca in April 1933, assumed particular importance. The Catalan Statute of Autonomy had been approved not long before (9 September 1932), and in Minorca a lively debate was taking place between advocates of Catalan autonomy (in favour of Minorca joining Catalonia), those who sought autonomy for Minorca, advocates of a statute of autonomy for the Balearic Islands and those who rejected all notions of autonomy.[54] The IEC group effectively acted as a cultural delegation from the Generalitat to the institutions and people of

[54] QUINTANA, 1998.

Minorca; it brought with it a formal greeting from president Francesc Macià, which was read after an extraordinary meeting held on 15 April in the plenary hall of the Ajuntament of Maó in the presence of city dignitaries, representatives of Minorcan scientific and cultural bodies and members of the public. The session concluded by paying homage to the memory of the Minorcan naturalist, Joan Joaquim Rodríguez Femenias, and a commemorative plaque was unveiled on the facade of what had been his home.[55]

The Biology Society of Barcelona also lived through a golden age in the 1930s and –unlike the Catalan Natural History Institution– was able to remain active practically to the end of the Civil War. In the early years of the war it hosted scientific meetings attended by important physiologists from Madrid (including Juan Negrín, president of the Republic), exiled to Barcelona as a consequence of Madrid being converted into a front in the Civil War. Juan Negrín, himself the oldest member of the society, attended the ceremony commemorating the 25th anniversary of the Biology Society of Barcelona on 14 December 1937. Other of the physiologists from Madrid who participated in scientific meetings during the Civil War included Francisco Grande Covian, who (along with Josep Puche) gave a talk on the metabolism of people experiencing war shortages in Madrid, and José Royo Iranzo, who (also with Josep Puche) gave a talk on the ascorbic acid content of different varieties of Valencian oranges.

The Catalan Physical, Chemical and Mathematical Sciences Society responded to several initiatives by Eduard Fontserè that ultimately resulted in bringing, into the academic circles of the IEC, technical experts to work alongside physicists, chemists and mathematicians. This society was generally very active between 1932 and 1936, publishing dozens of monographs on a number of subjects ranging from thermodynamics to biochemistry, meteorology and aluminium metallurgy.

Once the Catalan Physical, Chemical and Mathematical Sciences Society was consolidated, Fontserè commenced promoting (in 1933) the creation of the Catalan Geography Society, finally founded in 1935. Its first president was Pau Vila, who had been an outstanding member of the Catalan Territorial Division Board (Ponència de la Divisió Territorial de Catalunya), which concluded its work in 1933. The new society was thus associated, from its origins, not only with new trends in academic geography but also with an important project of the Generalitat –that of dividing Catalonia into functional administrative and service units on the basis of practical realities (thereby supplanting a barely functional division on the basis of provinces that was perceived as imposed by the state).

With the outbreak of the Civil War, the IEC had no choice but to restrict itself to completing tasks already underway.

The outbreak of the Civil War in 1936 frustrated all possibilities for terminating this project, however, which had already been affected by many complications arising from political disturbances in October 1934. The Generalitat was beginning to focus its energies on the demands of war and the

[55] CAMARASA 2000, p. 82. This was an initiative of the IEC board, possibly at the instigation of its president, Pius Font i Quer, who, stationed in Maó as a military pharmacist between 1911 and 1914, had had the opportunity to meet and become friends with many of the disciples and colleagues of Rodríguez Femenias. The expense was apparently borne by the Natural Sciences Board of Barcelona.

IEC had no choice but to restrict itself to completing tasks already underway. The minutes of the Science Division, for example, feature a request from the Economic Council of the Generalitat for an IEC representative to sit on a committee set up to study and propose a structure and functioning for a new Advanced Institute for Technical Research (Institut Superior d'Investigacions Tècniques) for Catalonia. In August 1937 the final volume of *Flora de Catalunya* was published (the minutes record the intention to hold a celebration to communicate the event to the media and the public in general, although there is no record that the celebration actually took place). The Biology Society of Barcelona managed to maintain its level of activity up to the close of the Civil War (the last meeting reported in *La Medicina Catalana* was for 23 March 1938).

The IEC was not explicitly listed among suppressed and prohibited institutions and was probably assumed to be defunct by the Franco government.

The circumstances in the closing months of 1937 and in 1938 –with Franco's Madrid offensive forcing a withdrawal of the Republican government, first to Valencia, then to Barcelona– led to what would be a final involvement by the IEC and some of its subsidiary societies (and key members) in science policy –but of the Republic not of the Generalitat. At its headquarters, the IEC played host to the Delegated Committee of the Spanish Board for the Advancement of Science and Research from November 1937, and meetings took place at least up to 1 April 1938 (the date of the last documented meeting).[56] In its first meeting in Barcelona, the Delegated Committee appointed four Catalan members, namely, Pompeu Fabra and Carles Riba from the Philology Division, and Antoni Trias i Pujol and Joaquim Xirau from the Biology Society of Barcelona. Josep Puche, also a member of the Biology Society of Barcelona, was another member of the Delegated Committee.

These new members were not invited to sit on the Delegated Committee –as might be imagined– for mere reasons of courtesy; Riba and Xirau attended all five meetings for which minutes have been preserved and Fabra and Trias attended four of the five. It goes without saying that their participation in discussions on a wide variety of themes was active. Surprising are the efforts of the members of the Delegated Committee to function as normal, despite the adversities and calamities of the Civil War. Also surprising is the continuity of routine budgetary control by the IEC over grants and the centres and laboratories that continued to operate, and the initiation of new projects, such as the acquisition of the plant collection and library of the botanist Carlos Pau (who died in 1937) and the printing of plates from the *Quinologia* (by the Spanish naturalist José Celestino Mutis, who died in the early 19th century).[57]

8. The long dark night of Franco's dictatorship (1939-1975)

With Franco's victory in the Civil War, the IEC found itself in an ambiguous situation. During the war or shortly thereafter, key members such as Joaquim

[56] Student Residence Archives. Delegated Committee minutes. Vol. IX. The minutes are cut off at the end of this volume, which would indicate that there was a tenth volume, now lost. The IEC archives make no reference to these or subsequent meetings.
[57] CAMARASA & ROCA ROSELL (in press).

Ruyra, Lluís Segalà, Josep Bofill i Pichot, Ferran de Sagarra, Pere Coromines and Ramon d'Alòs-Moner had all died. Eugeni d'Ors, Ferran Valls i Taberner and Esteve Terradas had, meanwhile, sided with the victors, whereas Pompeu Fabra, Lluís Nicolau d'Olwer, Jaume Serra i Hunter, Pere Bosch i Gimpera, August Pi i Sunyer, Josep Carné, Carles Riba and Puig i Cadafalch were all in exile (Puig i Cadafalch from as early as 1936).

The IEC was not explicitly listed among suppressed and prohibited institutions and was probably assumed to be defunct by the victors. As had happened during the dictatorship of Primo de Rivera, IEC services were absorbed by the Diputació and its staff were dismissed. The IEC's premises were given to the Spanish Mediterranean Studies Institute (Instituto Español de Estudios Mediterráneos), conceived and created to play the role formerly played by the IEC; this body never really became fully functional, however.

In early 1940 the last remaining IEC unit, the Lexicography Service, was expelled from the premises in the Casa de Convalescència. For a period of two years thereafter the IEC effectively seemed to have gone fully underground. In April 1942, however, surviving members of the IEC living in Barcelona and Puig i Cadafalch (who had returned from exile) met at the latter's house and agreed to continue operating the IEC, consider exiled members as present, fill vacancies, and become active again as soon as possible. Supporters of Franco, moreover, would not be dismissed as members.

The clandestinity in which the IEC –more or less tolerated– operated meant that it was unable to play a public role in cultural and scientific events or acts. Even so, the IEC managed to maintain a minimum but effective presence for Catalan culture in a number of international initiatives and to continue publishing in the Catalan language in a wide range of fields in both the sciences and the humanities. Between 1950 and 1951, for example, the IEC had exchanges with 168 academic bodies and received 1,381 books and journals as donations or in exchanges. From 1950, Ramon Aramon, as secretary of the IEC, participated regularly in assemblies of the Union Académique Internationale.

For the subsidiary societies of the IEC recovery was more difficult. The first to attempt a revival, in 1945, was the Catalan Natural History Institution which, inspired by the great enthusiasm of Pius Font i Quer, organised small encounters of botanists. Subsequently, in 1949, a number of commemorative acts were held to celebrate the Catalan Natural History Institution's 50th anniversary, and a special edition of its *Butlletí* was published. From this point on, however, activities were again restricted to occasional meetings of botanists and encounters of geologists and paleontologists. In 1968, its activities ceased altogether, although the momentum provided by a new generation of naturalists soon led to its revival in 1973.[58]

From the 1960s, the IEC began to establish a certain public presence.

Meanwhile, two new subsidiary societies were founded: the Catalan Historical Studies Society (Societat Catalana d'Estudis Històrics) in 1946 and the Catalan Legal, Economic and Social Studies Society (Societat Catalana d'Estudis Jurídics,

[58] CAMARASA, 2000, pp. 90-96.

Econòmics i Socials) in 1950. The Catalan Geography Society, furthermore, discretely resumed its activities in 1947. These three societies, like the Catalan Natural History Institution, played a modest but important role in maintaining continuity between pre-war and post-war generations. In 1954, the Catalan Biology Society (formerly the Biology Society of Barcelona) met, using as an excuse a conference by Josep Trueta on poliomyelitis, a subject that was very topical at that time. It was unable to meet again, however, until February 1962, when it did so under the pretext of preparing commemorative events for its 50th anniversary. It was in 1962 that it resumed publication of *Treballs*.[59] The Catalan Physical, Chemical and Mathematical Sciences Society met in 1959 for the first time since the Civil War.

On 26 November 1976, a royal decree recognised the IEC as an academic and cultural body whose scope covered the Catalan language and Catalan culture.

From the 1960s, the IEC began to establish a certain public presence. The Òmnium Cultural, an association founded in 1961 and aimed at defending and promoting the language, culture and national identity of Catalonia, greatly assisted the IEC, especially by making space available to the IEC at its headquarters at the Palau Dalmases in Barcelona. The fact that the Òmnium Cultural had its activities suspended by the government between 1963 and 1967, however, hindered public projection of the activities of the IEC in that period.

This fact did not stop the IEC, in 1968, from discreetly undertaking negotiations with the new president of the Diputació, Josep M. de Muller i d'Abadal. It also reformed its statutes, founded a new Philosophy and Social Sciences Division (Secció de Filosofia i Ciències Socials) distinct from the Science Division, and created a Permanent Council to govern over the presidents of the different divisions. This council would be re-elected every three years by a plenary meeting of members but would only be eligible for one additional consecutive mandate. Ramon Aramon was appointed as its general secretary for an indefinite period of time. By 1971 it was becoming clear that negotiations with the Diputació were not bearing fruit (and did not do so, in fact, until after the death of Franco on 20 November 1975). Nonetheless, under the presidency of Joan Antoni Samaranch, the Diputació budget for 1975 featured –for the first time since the early 1930s– a subsidy for the IEC amounting to 2 million pesetas (approximately 12,000 euros). The IEC also had the support again of the Òmnium Cultural (which continued until 1981). In the 1976 Diputació budget (approved before the death of Franco), the amount earmarked for the IEC was doubled. The IEC was also informed that it would be returned its premises in the Casa de Convalescència, once new premises were found for the bodies and services housed there.

9. The rocky transition to democracy (1976-1984)

The changeover from the Franco dictatorship to democracy, commonly referred to as the 'transition', commenced immediately after Franco's death on 20 November 1975. On 26 November 1976, a

[59] Alsina, 1985.

royal decree (published in the Official Spanish Gazette (Boletín Oficial del Estado) on 21 January 1977) recognised the IEC as an academic and cultural body whose scope covered the Catalan language and Catalan culture. This decree was passed in exceptional circumstances, as on 18 November the Franco legislature had passed a law on political reform that marked the end of the dictatorship; this law was submitted to referendum on 15 December. The recognition of the IEC in the royal decree was exceptional, as it had never before received recognition to this extent.[60] It was recognised as an autonomous legal entity, its scope of action was identified with the Catalan language, and it was enabled to create new subsidiaries, divisions, departments and research centres. Although specific reference as to how the IEC was to be financed was missing, neither were any possible sources of funding specifically excluded.

Recognition by the Spanish state was followed by that of the Diputació and the Ajuntament of Barcelona. Just before the first local elections of the democracy (1979), these bodies confirmed that the IEC would be given premises in the Casa de Convalescència, to be refurbished at the expense of the Diputació. The Casa de Convalescència was finally made available to the IEC in 1982.

Meanwhile, during the Catalan Culture Congress (held over two years from 1975 to 1977), critical voices were raised against the IEC, which was viewed by the younger generations as old-fashioned and poorly adapted to new social realities– unlike some of its offshoots, which were, as it happens, playing an active part in different areas of the congress (research, territorial planning, etc). The IEC was rated more highly in terms of research, although calls were made for it "to adapt its functioning to contemporary needs". The Physics Section of the Catalan Physical, Chemical and Mathematical Sciences Society proposed converting the IEC into a kind of 'senate' for the as yet undefined science policy of the Generalitat.[61]

Criticisms and pressures from some of the subsidiary societies of the IEC –mainly scientific ones such as the Catalan Biology Society, the Catalan Natural History Institution and the Catalan Physical, Chemical and Mathematical Sciences Society– led to internal reforms and enlargement of the IEC. The IEC at that time was headed by Dr. Josep Alsina i Bofill as president (1974-1978), who, some years earlier, had been the driving force behind the reorganisation of the Catalan Biology Society. One of the first reforms was to create associate membership status, so as to be able to have more than seven members in each division. In 1978 seventeen associates were admitted to the Science Division (among them, the first woman member of the IEC, the bryologist Creu Casas) and another six to the History and Archaeology Division, representing the largest enlargement in the history of the IEC. At the same time, a process for creating and incorporating new subsidiary societies was launched, largely as a consequence of the debate that took place during the Catalan Culture Congress. This process unfolded very rapidly; in 1979 alone, four new subsidiaries were founded, namely, the Catalan Sociology Association (Associació Catalana de Sociologia), the Catalan Classical Studies Society (Societat Catalana d'Estudis Clàssics), the Numismatic Studies Society (Societat d'Estudis Numismàtics) and the Territorial Planning Society (Societat d'Ordenació del Territori).

[60] Gabancho, 1982.
[61] Gacia & Roca Rosell, 2000.

In the years when the Generalitat was provisional (1977-1980) and immediately after it was fully restored (in the aftermath of the first elections to the Parliament of Catalonia in 1980), great hopes were pinned on the capacity for action of the new autonomous government in the area of science policy. The Catalan Statute of Autonomy of 1979 granted exclusive powers in research matters to the Generalitat of Catalonia. Unfotunately, just as staff and material resources were on the point of being transferred from the Spanish Higher Council for Scientific Research (Consejo Superior de Investigciones Científicas) to Catalonia, the attempted coup d'état of 23 February 1981 was staged. At this point in time, some sectors of the IEC had been actively preparing a proposal in which the IEC would play a central role in the Generalitat's science policy. Unfortunately, the coup not only frustrated the anticipated transfer of powers; it also led to political conditions that were contrary to autonomous government.

Under the initial governments of Jordi Pujol, which earmarked few resources for research, the IEC only played a marginal role in Catalan science policy.

Consequently, although it maintained its moral authority, the IEC continued to only play a marginal role in Catalan science policy. In part this was also due to poor relations with the initial governments of Jordi Pujol, who instead created the Interministerial Commission for Research and Technological Innovation (Comissió Interdepartamental de Recerca i Innovació Tecnològica) at the end of 1980 and attached it to the Department of the President. Its scant resources meant, however, that this body did little other than provide subsidies for small-scale initiatives, and its main emphasis was ultimately not on funding entire programmes but on human resource training –with the aim being to make Catalan research groups more competitive at the Spanish and European level.[62]

Despite adverse circumstances, the IEC continued to create research centres, such as, for example, the Eduard Fontserè Geophysical Studies Laboratory (Laboratori d'Estudis Geofísics Eduard Fontserè), founded in 1982. However, this initiative was not associated with public research policy but rather with an agreement with the electricity company FECSA in regard to the installation of a local network to study possible seismic movements in the region of the Ascó and Vandellòs nuclear plants. In 1984 the IEC created the Mathematical Research Centre (Centre de Recerca Matemàtica), which, in 2001, was converted into a consortium with the participation of the Generalitat. In fact, the publication and presentation to the Generalitat in 1982 of IEC proposals for a technology and energy policy concluded a period in which its efforts to participate in the science policy of an autonomous Catalonia failed to obtain a response from the Generalitat, which in its early years, did not rate research as a priority and so assigned it few resources.

10. Full recovery and centenary celebrations (1984-2007)

The fact that funding of the IEC left off being the responsibility of the Diputació of Barcelona to be assumed by the Generalitat of Catalonia implied no improvements. The Generalitat, in fact, as in the

[62] Cruz Castro & Sanz Menéndez, 2005.

1930s, was not exactly generous with the IEC. It seems that the president of the Generalitat, Jordi Pujol[63] was wary of what he perceived as the excessive autonomy of the IEC –this despite the presence in his government of three members of the IEC, namely, Miquel Coll i Alentorn (Department of the President), Ramon Trias Fargas (Department of Finance) and Josep Laporte (Department of Health). In fact, the irregularity of subsidies– irrespective of whether they were granted by the Diputació or by the Generalitat –frequently left the IEC on the brink of insolvency. Funds were simply insufficient for it to finance its activities, although it occasionally did obtain one-off grants for seminars, courses and symposia. It also entered into agreements with the Interministerial Commission for Research and Technological Innovation for concrete projects, such as the publication, in 1990, of the white paper on research in Catalonia (*Llibre blanc de la recerca a Catalunya*), commissioned in 1982.[64]

The coffers were empty by the end of 1985, and the next two years were especially difficult, with insufficient funds to even pay salaries by October 1987. On the occasion of the 80th anniversary of the IEC (16 November 1987), its president, Emili Giralt, made a speech in the presence of representatives of the Diputació of Barcelona and of the Parliament of Catalonia. Expected to be merely protocolary, the speech, in fact, referred in the crudest possible terms to the seriousness and the injustice of the situation being experienced by the IEC, with Giralt stating that "as in the times of the Primo de Rivera and Franco dictatorships" the IEC was being denied the resources necessary to be able to implement the mission it had been charged with. Emili Giralt then pointed to the miserly subsidies received by the IEC and to the contempt in which the IEC was held by the public authorities.

The irregularity of subsidies frequently left the IEC on the brink of insolvency.

It has to be conceded that the Generalitat was experiencing its own financing difficulties, which had aggravated since 1984. Furthermore, in 1986, approval by the Spanish state of a science law aimed at promoting and coordinating scientific and technical research seriously restricted the possibilities of the Catalan government to foster its own research policy, as this legislation limited it to actions in the university sector. Paradoxically, it was at around the time of this new legislation –impinging as it did on the powers of the Generalitat in matters of research and ruling out any transfers of resources– that the Generalitat started to set up new centres and implement specific research programmes –for example, the Biotechnology Agency (Agència de Biotecnologia), the Fine Chemistry Programme (Programa de Química Fina) and the International Centre for Numerical Methods in Engineering (Centre Internacional de Mètodes Numèrics a l'Enginyeria)[65]– sometimes in cooperation with the IEC, as happened with the Centre for Ecological Research and Forestry Applications (Centre de Recerques Ecològiques i Aplicacions Forestals) founded in 1987.

[63] Jordi Pujol, interestingly, has been a member of the Catalan Biology Society since the 1960s.
[64] IEC-CIRIT, 1990.
[65] Villar, 2006, pp. 58-59.

The year 1988 marked a turning point. Although the Generalitat subsidy remained at the level of previous years, a bank loan from Caixa de Catalunya enabled the IEC to avoid imminent financial collapse. At the end of the same year, the IEC and the Generalitat signed an agreement that would lead to a six-fold increase in the subsidy to the IEC. Although a cause-effect relationship cannot be assured, it is significant that the Interministerial Commission for Research and Technological Innovation was transferred, in July 1988, from the Department of the President to the Department of Education, coinciding with the appointment of Josep Laporte as head of the latter ministry. In the 1960s, Laporte, along with Josep Alsina i Bofill and Pere Babot, had played an active role in re-establishing the Catalan Biology Society.

At the end of 1988, the IEC and the Generalitat signed an agreement that would lead to a six-fold increase in the subsidy to the IEC.

A member of the IEC since 1978,[66] Laporte was a former rector of the Autonomous University of Barcelona (1976-1977) and a health minister in the first two governments formed by Jordi Pujol (1980-1988). The transfer of the Interministerial Commission for Research and Technological Innovation, marked, according to Cruz Castro and Sanz Menéndez,[67] a redefinition of research and development policy preferences by the Generalitat, from a model that favoured the private sector and industrial innovation to a model that was more aimed at academic research. This process was reinforced by the appointment of Heribert Barrera to the vice-presidency of the Interministerial Commission for Research and Technological Innovation at the end of 1988; Barrera was a member of the Science Division of the IEC and a former professor of inorganic chemistry at the Autonomous University of Barcelona.

As these new perspectives –certainly more favourable to the interests of the IEC– were being forged, the IEC debated and approved new statutes. Thus, appointments for life were prohibited, the number of members was increased, and the category of honorary membership was created for members aged over 70 (who would thus preserve all their rights while vacating seats for younger members). The number of members per division was also increased from seven to 21. The overall number of members further increased when the Science Division was split into two new divisions in 1989, namely, the Biological Sciences Division and the Science and Technology Division.

An agreement signed on 22 December 1988 by Jordi Pujol and Emili Giralt opened up new horizons. Under this agreement the IEC would be awarded a budget for the coming year of 566 million pesetas (approximately 3.4 million euros). As Giralt pointed out, it was not an “insignificant sum”, nor was it “a sum adequate to developing a science policy”; it was, rather, a sum that merely enabled what he called a “modest presence” in the world of research and advanced science.[68]

Even so, this presence would become less modest in the following years, despite the lack of clarity and

[66] Years later he would be appointed president of the IEC, between 2002 until his death in 2005.
[67] Cruz Castro & Sanz Menéndez, 2005, p. 39.
[68] Giralt, 1989, p. 209.

the fluctuations in science and cultural policies of successive autonomous governments and other public authorities in the different regions where the Catalan language was used. From 1990 and the joint publication (with the Interministerial Commission for Research and Technological Innovation) of a report on Catalan research (*La recerca científica i tecnològica a Catalunya: 1990*), the role played by the IEC has been enhanced as a consultative body of the Generalitat and of other public bodies located in Catalan-speaking regions.

The Philology Division of the IEC has also garnered recognition for its role as an academy of the Catalan language by the Generalitat of Catalonia (1991), the Government of Andorra (1993), the Government of the Balearic Islands (2000) and the Consell General dels Pirineus Orientals (2007). The Generalitat has also accorded the role of history academy to the History and Archaeology Division in matters related to the protection of the Catalan historical and archaeological heritage and the approval of flags and coats-of-arms for local bodies. The IEC (or one of its subsidiary societies) has representatives in trusteeships and on the boards of a number of nature parks and other protected nature areas in Catalonia, as well as in research and other trusts and consortia.

The new academic direction of the research and development policies of the Generalitat was further underlined after 1988 with the creation of four new public universities (Pompeu Fabra University, University of Lleida, University of Girona and Rovira i Virgili University) between 1990 and 1991. These new universities together with the three existing universities (University of Barcelona, Autonomous University of Barcelona and Technical University of Catalonia) are home to most of the researchers practising in Catalonia. In recognition of this fact, the new legislature of 1992 created a Universities and Research Commission, to be attached to the Department of the President and to be headed by Josep Laporte.

From 1990, the role played by the IEC as a consultative body of the Generalitat and other public bodies located in Catalan regions has been enhanced.

These new research and development policies of the Generalitat, even though they represented a more favourable environment for the IEC, led to uncertainties about the role to be played by the latter in Catalan research and development. Blocked its options for creating its own research centres or incorporating centres devolved to Catalonia, and limited its possibilities for taking the initiative in terms of research projects of its own, the idea began to germinate that the IEC should act as an umbrella research body for Catalonia and the Catalan speaking regions, fostering academic exchanges and interdisciplinary cooperation within a broader framework than is permitted by specific agreements between universities and research centres. The subsidiary societies –28 in total as of the beginning of 2008 and with a membership of close to 9,000 individuals– could play a particularly relevant role in this respect. The IEC also had a role to play as a consultative body to the Generalitat and other public authorities in Catalonia and the Catalan regions in matters related to science, language and historical, archaeological and natural heritage policies.

Given this perspective, in 1995 the Universities and Research Commission, in the framework of the First Catalan Research Plan (1993-1996), commissioned

a project to study the state of research in Catalonia in terms of internationally recognised criteria and based on a series of regular reports on each of the knowledge areas into which research activities can be categorised. The first series, entitled *Reports de la recerca a Catalunya*, structured in 24 thematic areas and covering the period 1990 to 1995, was commenced in December 1995 and published between 1996 and 2001.

Despite the practical difficulties implied by the interaction of the IEC with the scientific and cultural policies of the Generalitat, a certain equilibrium seems to have been achieved with the signing of the programme-contract 2005-2008.

With the conclusion of the first series in 2001, a further relevant change occurred in the research and development policies of the Generalitat. In April 2000, the Universities and Research Commission and the Information Society Commission were combined in a new ministry called the Department of Universities, Research and the Information Society (Departament d'Universitats, Recerca i Societat de la Informació), headed by Andreu Mas-Colell, the former head of the Universities and Research Commission. The new ministry was created with the four-fold aim of ensuring the quality of the Catalan university education system, developing a high-level and competitive science, technology and innovation system, adapting Catalonia to the information society and encouraging access thereto by individuals, companies and institutions, and finally, ensuring a greater presence for the Catalan language and for content in Catalan in the sciences and in the new technologies associated with the information society. Although Andreu Mas-Colell attached great importance to developing centres of excellence and infrastructures (as he had done previously in the Universities and Research Commission), overall he maintained a research and development direction that was more academic than industrial. Nonetheless, special emphasis continued to be placed on the information and communication technologies, bearing in mind the ministry's information society responsibilities.

In 2003, the IEC was commissioned by the ministry to produce a second series of *Reports de la recerca a Catalunya* covering the period 1996 to 2002, and structured, on this occasion, in terms of 27 thematic areas (with the additional areas covering languages other than Catalan, philosophy and the information and communications sciences). This task, which was concluded in two years, counted on the participation of teams of researchers for each knowledge area. It also included a public exhibition phase aimed at recording the comments and corrections of the academic community. The series was not published until February 2006, however. Shortly afterwards, the Generalitat signed a first four-year programme-contract (2005-2008) with the IEC. In this programme-contract, the IEC undertakes to fulfil three strategic aims, as follows:

– As the regulatory body for the Catalan language, to advance commitments undertaken in regard to Catalan language standards for Catalonia and all the Catalan regions.

– To become a genuine Catalan national language academy that will act as a referent for

public authorities in terms of official reports on strategies affecting the future of Catalonia.

– To develop a greater openness and to foster a process of internal discussion that will lead –in the form of a strategic plan– to a definition and design of the societal role of the IEC in Catalonia and all the Catalan regions.

The IEC celebrated its centenary in 2007 having largely complied with the aims and activities of the programme-contract. Tasks are on line to be fully concluded by the end of 2008, during which negotiations will commence in regard to a second four-year programme-contract. Despite the practical difficulties implied by the interaction of the IEC with the scientific and cultural policies of the Generalitat (the programme-contract requires dealings with three ministries, namely Presidency, Innovation, Universities and Enterprise), a certain equilibrium seems to have been achieved. To cite the institutional statement made at the close of the conference entitled 'Perspectives del Segle XXI: Recerca i País' (Perspectives on the 21st Century: Research and Country) held on 21 October 2004:

> "The Institute of Catalan Studies can play a key role in research itself and in programmes for overseeing and evaluating research, in following up the results of initiatives proposed to foster research, and, most particularly, in socially disseminating and promoting science and research." [69]

The IEC can and will play this key role. Indeed, the vitality of the 100-year-old IEC makes it impossible to imagine otherwise.

11. By way of a conclusion

As commented in the introduction, for nearly half of its existence the IEC has experienced extremely adverse conditions; as for the other half of its existence, conditions cannot be said to have been exactly propitious. Since its foundation in 1907, the IEC can hardly be said to have developed in a typical manner. Neither public nor private, neither an academy nor a research centre, it was created by a provincial authority (the Diputació) but charged with a mission to serve an internationally but not universally recognised culture, which is, moreover, fragmented between four states and, within one of those states (Spain), between five different administrative regions.[70] It is hardly surprising, therefore, that slotting the IEC –which has undoubtedly had brilliant and decisive moments– into scientific policy has historically been problematic.

Since its foundation in 1907, the IEC can hardly be said to have developed in a typical manner. Neither public nor private, neither an academy nor a research centre, it was created by a provincial authority but with a mission to serve an internationally but not universally recognised culture.

In its early years, under the patronage of its founder Prat de la Riba, the IEC participated in defining and executing the science and cultural policies of the

[69] INSTITUT D'ESTUDIS CATALANS, 2004, p. 22.
[70] The states are Andorra, Spain, France and Italy, and the Spanish administrative regions are Aragon, Catalonia, Valencia, the Balearic Islands and Murcia.

Diputació and the Mancomunitat, and, in the area of linguistics, developed a standard for written Catalan for all the regions where Catalan was used. It also participated –whenever circumstances were favourable– in defining research policies for the Spanish state under the auspices of the Spanish Board for the Advancement of Science and Research.

Between the death of Prat de la Riba (1917) and the coup d'état of Primo de Rivera (1923), confrontations between Puig i Cadafalch and Eugeni d'Ors undermined the role played by the IEC in the scientific and cultural policies of the Mancomunitat, which endeavoured to directly manage many of the initiatives and most of the services that had formerly been entrusted to the IEC. This crisis of confidence occurred despite the fact that the president of the Mancomunitat was Puig i Cadafalch himself –a founding member of the IEC. There was also an important internal crisis, with the IEC split between supporters and detractors of Eugeni d'Ors who had been dismissed from the IEC.

In his crusade for unity, the dictator Primo de Rivera tried to eliminate the IEC through inanition. However, the efforts of its members and the financial assistance provided by sponsors enabled the IEC to partially maintain its research efforts. Under the more benign dictatorship of General Berenguer, the Diputació, the Ajuntament and a number of other institutions and private individuals provided the IEC with resources that it would soon have the opportunity to bring into play, given the new cultural policies to be introduced by the Generalitat.

It was in the period of the Republic that the IEC obtained true institutional autonomy. The Generalitat, however, was unable to identify a suitable niche for the IEC, as the Republican leaders tended to view it as an instrument of the conservative Lliga Regionalista. Even so, many IEC members participated actively in defining some of the most important government initiatives of the time in the area of advanced education and research –Jaume Serra i Hunter, Pere Bosch i Gimpera, Pompeu Fabra and August Pi i Sunyer, for example, in the case of the Autonomous University of Barcelona; Eduard Fontserè in relation to the continuity of the Meteorology Service and Catalan participation in International Polar Year 1932-33; Josep Bofill i Pichot in the endeavour to maintain the Geology Map Service afloat; and finally, Pere Coromines in developing the Catalan Statute of Autonomy of 1932 and in his later role as Commissar of Museums during the Civil War.

In the Franco years the IEC was logically offered no opportunity to participate in public research policies –although its bearing and conduct was, in itself, a policy of sorts. The fact that the IEC continued to publish scientific articles in Catalan, organise and grant awards, participate in international bodies and foster scientific encounters whenever circumstances would permit, all helped to establish lines of action that have undoubtedly aided in the development of a scientific community in Catalonia. The IEC that eventually stepped onto the democratic stage did so with a dual nature: as the academy of academies and as a point of cohesion for Catalan scientists and researchers.

Sadly, neither the transition to democracy nor recognition by the Spanish state brought the anticipated tranquility to the IEC. As had happened during the Republic of the 1930s, the new Catalan, Valencian and Balearic governments were suspicious of the IEC. Furthermore, a lack of resources and the fact that adequate powers had not been devolved seriously limited the possibilities

for the governments of the regions implementing their own scientific and cultural policies. Financial resources awarded to the IEC have always been insufficient –at times, cripplingly so.

In this context the IEC views its role as that of an independent analytical and consultative body, although it still reserves the right to promote its own research programmes. This original and rather unique proposal is being imaginatively developed by the IEC, which relies on the deep roots that connect it to the Catalan scientific community. In more recent times, a series of agreements with the Generalitat, followed by the award of a programme-contract in 2005, have led the IEC down more favourable pathways in terms of its participation in the definition of research policies in Catalonia.

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ANNEX:
Selected Events 1907-2007

World	Catalan Lands	IEC
1907-1916		
The Ford Model T comes on the market, as the first car manufactured on an assembly line. Robert Peary reaches the North Pole and Roald Amundsen reaches the South Pole. Halley's comet appears, its tail passing very close to the earth. Ernest Rutherford formulates his theory of the atom. Alfred Wegener proposes his theory of continental drift, forerunner of the plate tectonics theory. The Titanic sunk by an iceberg. Ernest Rutherford and Niels Bohr describe the structure of the atom. Archduke Franz Ferdinand of Austria assassinated in Sarajevo and World War 1 breaks out. The Panama Canal inaugurated. The *Lusitania* torpedoed by a German submarine. (1915) Albert Einstein formulates his general theory of relativity (1915).	Victory of Solidaritat Catalana in elections to the legislature. Prat de la Riba elected president of the Diputació of Barcelona. Vineyard revolt in Catalunya del Nord (France). Tragic Week in Barcelona, and strikes and riots in Valencia and Minorca. National Confederation of Labour (CNT) founded in Barcelona. Creation of the Mancomunitat of Catalonia. Typhoid fever epidemic in Barcelona. Exhibition of the new Catalan art in Sabadell (Barcelona). Creation of the Librarian School. Mancomunitat public libraries opened. Electoral victory for the Lliga Regionalista.	IEC founded. First campaigns to study Romanesque paintings of the Pallars and Ribagorça regions. Commencement of excavations at Empúries. Statue of Asclepius discovered. Foundation of the Spanish Archaeology and History School in Rome. Science Division and Philology Division created. Lexicography Service created. The Biology Society of Barcelona founded as the IEC's first subsidiary society. Approval and publication of the *Normes Ortogràfiques*. Creation of the Library of Catalonia. Creation of the Monument Preservation and Cataloging Service, Excavations Service, Service for Preserving and Cataloging Archives and Libraries of Historical Interest, Malaria Service, Geographic Map Service and Geology Map Service.
1917-1926		
The Russian Revolution breaks out. The USA enters World War 1. Influenza pandemic (Spanish flu). Germany surrenders, World War 1 ends, the Austro-Hungarian and Ottoman empires collapse. League of Nations founded. Alcohol prohibited in the USA.	First Joan Miró exhibition at Galeries Dalmau in Barcelona. Death of Prat de la Riba, and election of Puig i Cadafalch as president of the Mancomunitat. Creation of the Mancomunitat's county library network. Strike at the Barcelona Traction, Light and Power Company.	The Catalan Natural History Institution incorporated as a subsidiary society. Eugeni d'Ors dismissed as secretary general and Ramon d'Alòs-Moner appointed in his place. Creation of the Meteorology Service of Catalonia and the Onomastics and Toponymy Service.

World	Catalan Lands	IEC
Germany's National Socialist Party presents its programme. Insulin discovered. New Economic Policy implemented in Russia. Fascists march on Rome. Mussolini becomes Prime Minister. Mussolini's party declared the only party in Italy. Mustafa Kemal Atatürk proclaims the Republic of Turkey. Lenin dies. Stalin takes power in the USSR. Lemaître formulates the Big Bang theory. The Rif War between Spain and Moroccan tribes ends. Guerrilla leader Abd-el-Krim is delivered to the French.	Eight-hour working day introduced in Spain. Dismissal of Eugeni d'Ors. Bloody confrontations between anarchist and free trade unions. Industrial crisis. Half of Catalan metallurgical workers out of work. Creation of the Bernat Metge Foundation. Primo de Rivera stages his coup. Teaching of Catalan prohibited in schools. Radio Barcelona, the first radio station in Spain, commences broadcasting. Suppression of the Mancomunitat. Francesc Macià's plot to invade Catalonia from Prats de Molló la Preste (France) discovered. Annual Book Day inaugurated.	Creation of the Pedagogical Seminary-Laboratory, the Philosophy and Psychology Seminary-Laboratory, the Experimental Physiology Laboratory and the Physiology Institute. Publication of the *Diccionari Ortogràfic* and *Gramàtica Catalana*. Admission to the Union Académique Internationale. Creation of the Catalan Philosophy Society. Loss of official recognition and public subsidies as a consequence of the Primo de Rivera dictatorship and dismantlement of the Mancomunitat. IEC services transferred to the Diputació of Barcelona. Participation in the creation of the International Committee of Historical Sciences in Geneva.
1927-1936		
Charles Lindbergh makes the first solo transatlantic flight from New York to Paris. Werner Heisenberg develops the uncertainty principle. First five-year plans in the USSR. Alexander Fleming discovers penicillin. Black Friday on the New York stock exchange. The Great Depression. Empire State Building completed. Manchuria invaded by Japan. Mao Zedong proclaims the People's Republic of China. Deuterium discovered. Neutron and positron discovered. Discovery of the first sulfamide. The first particle accelerator built. Reichstag fire. Victory of the National Socialist Party. Adolf Hitler becomes Chancellor. Mao Zedong commences the Long March. Rome-Berlin-Tokyo Axis.	Internation Exhibition of Barcelona. Primo de Rivera goes into exile and General Berenguer takes power. Proclamation of the Free Catalan Republic (later the Generalitat) and of the Second Republic in Spain. Anarchist risings in Alt Llobregat, Safor and Ribera Baixa. Approval of the Catalan Statute of Autonomy. Creation of the Autonomous University of Barcelona. Francesc Macià dies and Lluis Companys is elected president of the Generalitat. The law on crop contracts passed. October 1934 revolt. Arrest of members of the Generalitat and suspension of the Statute of Autonomy. Victory of the Popular Front in the February 1936 elections. Right-wing military coup (successful in Majorca but a failure in Catalonia, Minorca and Valencia) launches the Civil War (1936-39).	Recovery of Diputació patronage and services returned to the IEC following the fall of Primo de Rivera. Premises awarded in the Casa de Convalescència of the old Hospital de la Santa Creu. IEC linguistic standards adopted by Valencian writers. Publication by Pompeu Fabra of the *Diccionari General de la Llengua Catalana*, adopted as a standard dictionary. Foundation of the Catalan Physical, Chemical and Mathematical Sciences Society and the Geography Society. Participation in International Polar Year 1932-33. Lluís Nicolau d'Olwer elected as president of the Union Académique Internationale. Pompeu Fabra imprisoned as a consequence of the events of October 1934.

World	Catalan Lands	IEC
The first of the Moscow trials. Nylon developed. Electronic microscope invented.	The government of the Spanish Republic transfers to Valencia.	IEC subsidiary societies and central services and the Library of Catalonia transferred to the Casa de Convalescència.
1937-1946		
Guernika bombed by the German Condor Legion. The Munich Conference. Austria and Sudetenland annexed by Germany. First commercial transatlantic flight. World War 2 breaks out. Neptunium, the first known transuranic element, synthesised. Jacques-Yves Cousteau invents the aqua lung. The Conference of San Francisco and founding of the UN. Atomic bombs launched on Hiroshima and Nagasaki. World War 2 ends. Ho Chi Minh proclaims Vietnamese independence. The First Indochina War. Civil War in China. Nuremberg trials. General Franco's regime condemned by the UN. Ambassadors withdraw from Spain. IBM constructs the first computer.	Street battles between Republican factions in 1937 in Barcelona. The government of the Spanish Republic is installed in Barcelona. Early applications of Josep Trueta's method for treating fractures resulting from war. 2nd International Writers Congress in Valencia. Battle of the Ebro. End of the Spanish Civil War Prohibition of public use of the Catalan language by the Franco regime. Republican era civil servants removed from their posts. President Lluís Companys is shot in the Castle of Montjuïc in Barcelona. Universal suffrage suppressed in Andorra. Rationing cards introduced in Spain. Electricity and petrol restrictions imposed. Guerrilla action in the Valley of Aran and the mountains of Valencia. In New York, the Catalan National Council presents *The case of Catalonia: appeal to the United Nations*.	Pere Coromines, Pompeu Fabra, Pi i Sunyer, Josep Carner, Lluís Nicolau d'Olwer, Jaume Serra Hunter, Carles Riba and Bosch i Gimpera go into exile Confiscation of the Library of Catalonia and closure of the Lexicography Service. Creation and installation in the Casa de Convalescència of the Spanish Mediterranean Studies Institute to replace the IEC. Commencement of the reconstruction of the IEC. Creation of the Benèfica Minerva Foundation to sponsor the IEC. Annual celebrations of St George's Day and IEC awards re-launched in Puig i Cadafalch's house. Pompeu Fabra and Josep Carner are ministers of the Catalan government in exile and Lluís Nicolau d'Olwer is minister of the Spanish government in exile. Creation of the Catalan Historical Studies Society.
1947-1956		
India and Pakistan become independent. The Marshall Plan unfolds. UN Declaration of Human Rights. Korean War. Discovery of the transistor. First oral contraceptive developed. Spain admitted to the UN and UNESCO. Hillary and Tenzing conquer Everest. Watson and Crick establish the structure of DNA.	The enthroning of Mare de Déu de Montserrat takes place, considered to be an act of reconciliation. Dissolution of the government of the exiled Generalitat. The Viella Tunnel, connecting the Valley of Aran with Catalonia, is opened. Pau Casals launches the first Festival de Prada in Conflent (France). Boycott of trams (in response to an increase in fares) in Barcelona, leading to the strike of 1951.	Resumption of the activities of the Catalan Geographic Society. Re-establishment of relations with the Union Académique Internationale. Creation of the Catalan Legal, Economic and Social Studies Society. Celebration of the 50th anniversary of the Catalan Natural History Institute. The IEC obtains recognition of Catalan as a co-official language of the 5th Congress on the History of the Aragonese Crown held in Zaragoza.

World	Catalan Lands	IEC
Indochina becomes independent. Vietnam partitioned. First successful kidney transplant. The Algerian War breaks out. Salk develops the polio vaccine. First hydrogen bomb exploded on Bikini Atoll. Anti-USSR revolution in Hungary and invasion by Warsaw Pact forces.	Arrival of the US 6th Fleet to Barcelona. Rationing ends. 35th International Eucharistic Congress in Barcelona. SEAT car factory opened in the Zona Franca in Barcelona. Josep Tarradellas is elected as president of the Generalitat in exile. First Valencian language and culture courses at the University of the Valencia. Nylon production begins at the SAFA factory in Blanes (northern Catalonia). 2nd Mediterranean Games held in Barcelona. TVE (the Spanish state television) broadcasts for the first time.	IEC members participate and give talks in Catalan at the 7th Romance Languages Congress held in Barcelona. Second edition of the *Diccionari General* by Pompeu Fabra. First endeavour to re-launch the Biology Society with a conference by Josep Trueta. Police prevent a celebratory dinner for the 10th anniversary of the Catalan Historical Studies Society.
1957-1966		
Treaty of Rome and creation of the EEC. First artificial satellites launched into orbit. International Geophysical Year (1957-1958). Fidel Castro's revolution triumphs in Cuba. First laser developed. The first human, Yuro Gagarin, orbits the earth in the Vostok I. The Berlin Wall goes up. Luís Buñuel wins the Palme d'Or at the Cannes Film Festival for *Viridiana*. The USA launches massive attacks on North Vietnam (1958). Second Vatican Council (1959). Algeria becomes independent (1962). Earliest broadcasts by satellite TV. Cuban missile crisis. JF Kennedy is assassinated. President Johnson signs the Civil Rights Act of 1964.	Free Meeting of Students at the University of Barcelona. Josep M. de Porcioles becomes mayor of Barcelona. The first SEAT 600 cars are sold. Boycott of *La Vanguardia* published by Luis Galinsoga, due to an incident in which the Catalan language is insulted. TVE broadcasts for the first time from Barcelona. The Palau de la Musica incident, in which a song in Catalan is not performed despite being in the programme, results in the imprisonment of Jordi Pujol. First Valencian grape harvester expedition to Catalunya del Nord (France). Campaign calling for education in Catalan and normalisation of the language. Òmnium Cultural founded (1961) First concerts in Catalan by *Els Setze Jutges* (a group associated with singers such as Joan Manuel Serrat, Maria del Mar Bonet, Lluís Llach, among others).	Celebration of the 50th anniversary of the IEC in Lluís Bonet i Garí's home. Police suspension of annual anniversary celebrations in Lluís Bonet i Garí's home in 1959. Resumption of the activities of the Catalan Physical, Chemical and Mathematical Sciences Society. First course on Catalan culture for foreign university students. Creation of the Catalan Studies Advisory Board to train teachers of Catalan. Commencement of funding by Òmnium Cultural. Resumption of the activities of the Catalan Biology Society. First awards for Catalan Physical, Chemical and Mathematical Sciences Society and the Catalan Biology Society students. Ramon Aramon is vice-president of the Union Académique Internationale

World	Catalan Lands	IEC
First unmanned moon landing. (Luna 9) Chinese Cultural Revolution launched.	Foundation of Obra Cultural Balear to promote Catalan language and culture on the Balearic Islands. Òmnium Cultural closed down (1963). Acts to celebrate 25 years of peace since the end of the Civil War. Creation of the Democratic Students Union of the University of Barcelona (an event referred to as the *Caputxinada*). A campaign is launched to have Catalan bishops appointed in Catalonia (*Volem bisbes catalans*).	
1967-1976		
The *Torrey Canyon* sinks, resulting in the first major oil spill at sea (1967). First heart transplant. May 1968 protests in France. First manned moon landing (1969) Chinese Cultural Revolution ends. *Hymn of the United Nations* performed for the UN by its composer Pau Casals. The first microprocessors marketed. Club of Rome publishes *Limits to Growth*. The first earth observation satellite, Landsat I, launched into orbit. The first handheld mobile telephone developed. Augusto Pinochet stages a coup in Chile. President Salvador Allende of Chile dies (1973). Juan Domingo Perón elected president of Argentina. The first petrol crisis. The Portuguese Carnation Revolution ends dictatorship (1974). Richard Nixon impeached as president of the USA. The military stages a coup in Argentina.	Legalisation of the Òmnium Cultural and reopening of Palau Dalmases. First fascicules issued of the *Gran Enciclopèdia Catalana*. Creation of the Catalan literature award, Premi d'Honor de les Lletres Catalanes. Foundation of the Catalan Summer University in Prada de Conflent (France). Sit-in of intellectuals in Montserrat in protest against the Burgos trials. Universal suffrage and age of majority at 21 introduced in Andorra. First Catalan literature award, Premis Octubre, in Valencia. Constitution of the Assembly of Catalonia. Catalan Culture Congress 1975-1977. General Francisco Franco dies and Juan Carlos I becomes King of Spain. First issue of the Catalan language newspaper, *Avui*. For the first time since 1939, radio broadcasts are issued in the Catalan language by the new *Radio 4.* First legal celebration (100,000 participants) of the 11 September festivities in Sant Boi de Llobregat, near Barcelona.	First reform of the statutes and Jordi Rubió elected as the first president under the new rules. Creation of the Philosophy and Social Sciences Division. Creation of the Catalan Liturgical Studies Society. Pere Domingo is IEC president (1970-1974). The Catalan Natural History Institution resumes its activities. Meeting of the International Committee of Historical Sciences at IEC headquarters. Prada de Conflent manifesto defending Catalan as a language of scientific expression. Creation of the Catalan Musicology Society. Josep Alsina i Bofill is IEC president (1974-1978). Publication of a white paper on nature management in Catalonia and the Catalan regions (*Llibre Blanc de la Gestió de la Natura als Països Catalans*) by the Catalan Natural History Institution. Creation of individual physics, chemistry, mathematics and engineering divisions. Royal decree recognises the IEC.

World	Catalan Lands	IEC
1977-1986		
First *in vitro* baby born (1978). Shah Reza Pahlevi deposed and Ayatollah Khomeini is the new leader in Iran. Nuclear accidents at Three Mile Island (USA) and Chernobyl (Ukraine). Afghanistan invaded by USSR troops. Iran-Iraq War (1980-1988). First space shuttle flights. Challenger space shuttle accident. Falklands/Malvinas War between Argentina and Great Britain. The first personal computers marketed. The internet is created. (1983) Discovery and first description of AIDS. Microsoft Windows launched on the market. Development of the GNU operating system. Discovery of the ozone hole. First computer viruses. MIR space station launched into orbit. (1986)	Huge demonstration on the occasion of the 11 September festivities in 1977. President Tarradellas returns from exile and the Generalitat is provisionally restored (1977). Andorran nationality law passed (1977). The Centre for Documentation and Animation of Catalan Culture created in Perpignan (France) (1978). Acció Cultural del País Valencià created to protect the language. Approval and entry into force of the statutes of autonomy of Catalonia, Valencia and the Balearic Islands (1979, 1982, 1983) Elections to the Catalan Parliament. Jordi Pujol President of the Generalitat (1980-2003) Commencement of the process for separating powers in Andorra with the creation of its first government. Attempted coup d'état by Tejero and Milans del Bosch, with tanks taking to the streets of Valencia. (1981) Creation of the Interministerial Commission for Research and Technological Innovation (CIRIT). (1980) First broadcasts by Catalunya Ràdio. (1983) TV3 (a Catalan television station) commences regular broadcasts. (1983) Barcelona chosen to hold the 25th Olympic Games. (1986) Spain joins the EEC. (1986)	Return to old headquarters at the Casa de Convalescència. Reconstruction of the Catalan Legal, Economic and Social Studies Society (1977), re-founding of the Catalan Philosophy Society (1980) and resumption of the activities of the Historical Studies Society (1985). The Catalan Agrarian Studies Institute incorporated as a subsidiary society (1984). Creation of 15 new subsidiary societies Proposal to organise scientific research in Catalonia in 1977. Joan Ainaud de Lasarte is president (1978-1982). Enric Casassas is IEC president (1982-1987). IEC is commissioned to produce a white paper on research in Catalonia. (Llibre Blanc de la Recerca a Catalunya). Publication of preliminary results (1982). Mercè Rodoreda legacy (1983). Commencement of the *Diccionari del Català Contemporani* (1985). Creation of TERMCAT terminology database with the Generalitat (1985).
1987-1996		
Approval of the Single European Act (1987). Invention of the CD (1987). Signature of the Montreal Protocol on the ozone layer (1988). The *Exxon Valdez* catastrophe (1989). Fall of the Berlin Wall (1989). End of apartheid in South Africa and election of Nelson Mandela as president (1990-1994).	The Catalan Letters Institute is re-launched (1987). Federico Mayor Zaragoza is elected director general of UNESCO (1987). *Canal 9* television station commences broadcasting in Valencia (1989). Civil law compiled for the Balearic Islands (1990). The Valley of Aran has restored to it its Conselh Generau (1991). Olympic Games in Barcelona (1992).	Emili Giralt is IEC president (1987-1995). Approval of new statutes (1988). Agreement with the Generalitat (1988). Creation of the Biological Science Division and Science and Technology Division from the Science Division (1989). Creation of the *Atles Lingüístic del Domini Català* launched (1989). Presentation of the white paper *La recerca científica i tecnològica a Catalunya* (1990).

World	Catalan Lands	IEC
1987-1996		
The USSR collapses and the Commomwealht of Independent States is formed (1991). German reunification (1990). Tim Berners-Lee publishes the first web page (1990). Gulf War (1991). Yugoslavia breaks up (1991). Bosnian War (1992-1995). Rio de Janeiro Earth Summit (1992). CERN launches the World Wide Web (1993). Dolly, the first cloned mammal (a sheep), is born (1996). DVD marketed for the first time (1996).	Approval by referendum of the first Andorran constitution and entry to the UN (1993). UNESCO declares Minorca as a biosphere reserve (1993) and the Silk Exchange of Valencia as world heritage (1996). The first internet service providers are created (1995). Alghero (Sardinia) uploads its first website in Catalan (1996). Creation of the Meteorology Service (1996). Creation of the Collective Catalogue of the Universities of Catalonia as a bibliographic database (CCUC) (1996).	Creation of 4 new subsidiary societies Creation of the Ferran Sunyer i Balaguer Foundation (1991) and the Mercè Rodoreda Foundation (1992). First edition of the *Diccionari de la Llengua Catalana of the IEC* (1995). Agreement with the Generalitat to produce the *Reports de la recerca a Catalunya* (1995). Debate on the subsidiary societies and their relationship to the IEC (1995). Manuel Castellet is IEC president (1995-2002). Volume 100 of the Science Division minutes is concluded (1996).
1997-2006		
Kyoto Conference on climate change (1997). First weblogs (1997). Google launched (1998). First major anti-globalisation march in Seattle (1999). First plant genome (*Arabidopsis thaliana*) sequenced (2000). The online encyclopedia Wikipedia launched (2001). September 11 terrorist attacks in the USA (2001). Afganistan War. Fall of the Taliban regime (2001). Johannesburg Earth Summit (2002). The *Prestige* spills its cargo of oil off the Atlantic coast of Spain (2002). Azores summit and Iraq invasion. Saddam Hussein regime toppled (2003). Human genome sequenced (2003). March 11 terrorist attacks on Madrid (2004). Indian Ocean tsunami (2004). Kyoto Protocol enters into force (2005). Qinghai-Tibet railway inaugurated (2006).	Inauguration of the National Theatre of Catalonia (1997). Creation of the Valencian Language Academy (1998). Creation of Viquipèdia (the Catalan Wikipedia) (2001). Parliamentary elections in Andorra with the victory of the Liberal Union party (2001). Creation of the Ramon Llull Institute (2002). Elections to the Parliament of Catalonia, with Pasqual Maragall elected president of the Generalitat (2003-2006). The Balearic television station, IB3, broadcasts for the first time (2005). The domain extension .cat authorised for use on the internet (2005). Approval of the proposal for the reform of the Statute of Autonomy for Valencia (2006). Inauguration of the Biomedical Research Park in Barcelona (2006). Approval of the third Catalan Statute of Autonomy (2006). Elections to the Parliament of Catalonia, with José Montilla elected president of the Generalitat (2006).	Refurbishment of the headquarters at the Casa de Convalescència (1997-2001) and installation of the subsidiary societies in new premises in Carrer M. Aurèlia Capmany (1998). Centenary year celebrations of the Catalan Natural History Institution (1999-2000). Inauguration of the first branches in Catalunya del Nord, Lleida and Valencia. Philology Division seminar in Alghero (Sardinia) (2001). The Society for the History of Education in Catalan Speaking Regions incorporated as a subsidiary society (2001). Josep Laporte is IEC president (2002-2005) First IEC bulletin in electronic format (2004). 78th Assembly of the Union Académique Internationale at IEC headquarters (2004). Salvador Giner is IEC president (2005 to date). Signing of the programme-contract with the Generalitat (2006). Presentation of the *Reports de la recerca a Catalunya 1996-2002* (2006). Inauguration of the IEC centenary year (2006).