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Individual Members of the European Physical Society receive Europhysics news free of charge.

Members of EPS National Member Societies receive Europhysics news through their society, except members of the Institute of Physics in the United Kingdom and the German Physical Society who have access to an e-version at www.europhysicsnews.org. The following are 2014 print version subscription prices available through EDP Sciences (Prices include postal delivery cost).

Institutions - European Union countries: 100 €
(VAT not included, 20 %). **Rest of the world:** 119 €

Student - European Union countries: 47.50 €
(VAT not included, 20 %). **Rest of the world:** 57 €

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ISSN 0531-7479 • ISSN 1432-1092 (electronic edition)

Printer: Fabrègue - Saint-Yrieix-la-Perche, France

Legal deposit: August 2015



EPS HISTORIC SITES

The Residencia de Estudiantes, Madrid, Spain

It was a pleasure to be with the president of the EPS, Dr. Christophe Rossel, to commemorate the role of the *Residencia de Estudiantes* in the development of physics during the so-called Silver Age of Spanish Science, 1910-1936.

As the plaque declaring this place European Physical Society Historic Site states, the *Residencia*, under the supervision of Blas Cabrera (director of the neighbouring Laboratory of Physics Research and a former president of the Spanish Royal Physics Society), contributed strongly to the development of modern physics in Spain. Many illustrious physicists came to speak at the *Residencia* as, for instance, Einstein (his German being translated by the philosopher Ortega y Gasset), Marie Curie, Maurice de Broglie, Arthur Eddington or Paul Scherrer; the Spanish physicists Cabrera, Julio Palacios, Miguel Catalán, the physical chemist Enrique Moles, and many others also participated at the *Residencia*'s evening seminars.

I would like to stress that the present occasion does justice both to the *Residencia* and to physics and science in general. To the *Residencia*, because it recognizes its important role -not widely known- in fostering the advance of modern physics in Spain. It is easy to understand why science usually fades away when thinking of the *Residencia*: first, science is usually harder to grasp than humanities (*La Natura è scritta in lingua matematica* and too often mathematics becomes a barrier) and, secondly, the *Residencia* also hosted, to name just three, luminaries such as the poet and playwright Federico García Lorca, the painter Salvador Dalí or the filmmaker Luis Buñuel. But, precisely by having humanities as a reference frame, we are also doing justice to physics and to the scientists around the *Residencia* by recognizing science as a fundamental part of culture, on a par with literature or art. We might go even further: after all, as Ortega y Gasset said to and of Einstein himself, great scientists are "the magicians of our day, those who dictate the laws that Nature obeys". Uncovering these laws is the privilege of the very few, but it is a feat of paramount importance: as Richard Feynman said of Maxwell equations in his famous *Lectures on Physics*, with the passing of time even "the American Civil War



will pale into provincial insignificance in comparison with this important scientific event of the same decade" (the 1860s).

The founders of the *Institución Libre de Enseñanza* (ILE, *Free Institution for Education*), and the *Junta de Ampliación de Estudios e Investigaciones Científicas* (JAE, *Board for Further Studies and Scientific Research*, est. 1907), understood well the role of science. They thought of it as an essential ingredient of knowledge, culture and -last but by no means least- of social progress. The JAE, presided by the Nobel prize (in Physiology or Medicine, 1906) Santiago Ramón y Cajal until his death in 1934, created the *Residencia de Estudiantes*. Other illustrious members of the JAE's governing board included Joaquín Costa (more of him below); María de Maeztu, the driving force behind the *Residencia de Señoritas*, the sister of the *Residencia de Estudiantes*; and the engineer, excellent mathematician and also Nobel prize (of Literature!) José de Echegaray who, let me say in passing, was the first president of our Society (at that time, both of Physics and Chemistry and not yet Royal until 1928). He must have been a bigger than life character: the RSEF is still receiving letters addressed to president Echegaray!

Under Cajal's leadership of the JAE, it is not surprising that the *Residencia*

▲ EPS President Chris Rossel and Prof. J. Adolfo de Azcárraga unveil the commemorative plaque. To the right Prof. Emilio Lora-Tamayo (CSIC's President) and Alicia Gómez-Navarro (Director of the *Residencia de Estudiantes*).

▼ From left to right C. Rossel, E. Lora-Tamayo, A. Gómez-Navarro and J. Adolfo de Azcárraga during the opening ceremony.

soon became the hub of exchange and diffusion of new scientific ideas, of physics in particular, that we commemorate today. But science does need time to develop fully: the *Silver Age* came to an abrupt end in 1936, with the civil war. Of course, physics in Spain has come a very long way since the best years of the *Residencia* almost a century ago. But, in spite of the enormous development of physics and other branches of knowledge, Spanish science is now at a crossroads, damaged by the crisis, by dwindling economic support, plagued by bureaucracy and, further, by the loss of brilliant, young scientists who are emigrating -for good- to other countries.

This trend needs being reversed without delay.

More than a century ago, at the time of the Spanish *regenerationist movement*, which overlapped with the 'Silver Age' of Spanish Science and the golden years of the *Residencia*, a motto of Joaquín Costa was often repeated: "bread, school, and double lock to the Cid's grave", implying that Spain was lagging behind the rest of Europe and that this could not be hidden under her past glories. Present times are of course very different but, in some respects, a new *regenerationist* spirit is necessary today. Spain sorely needs a much healthier public life, an improved secondary education, truly first class universities and much more support for science. As it was obvious to the leaders of the ILE and the JAE a century ago, education and science play a central and always increasing role in the development and well-being of society. Let this happy occasion, in which we recognize the *Residencia* as an *EPS Historic Site*, remind us that scientific progress is rather hard to achieve, that it takes a long time to set it on track but that, unfortunately, it may be derailed and halted very easily. ■

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