NOBEL PRIZES, PEACE AND PROGRESS OF SCIENCE

C'est l'ignorance qui sépare les hommes et la science qui les rapproche. PASTEUR.

THE recent celebration at Amsterdam of the semi-centennial of Van't Hoff's celebrated memoir on stereo-chemistry, the first of the scientific achievements which earned him in 1901, at the zenith of his career, the Nobel prize in chemistry, brought back to mind the address with which Van't Hoff opened the biennial meeting of Dutch scientists at Amsterdam in 1894. Van't Hoff compares the scientific advances made by the different nations, taking as his starting point a study by de Candolle, a Swiss botanist of French descent (1806–1893) who enumerates for each country at a given time the number of scientists who enjoy great reputation not only at home but also in foreign countries. His criterion is the distinction of being elected a member of distinguished foreign societies of learning. If one compares the numbers thus obtained with the total population of each country certain percentages are obtained and the following order results:

	1749	1789	1829	1869
(1)	Switzerland	Switzerland	Switzerland	Switzerland
(2)	Holland	Holland	Scandinavia	France
(3)	Scandinavia	Scandinavia	France	Germany
(4)	France	France	Germany	England
(5)	England	Spain	England	Scandinavia
(6)	Italy	Italy	Holland	Belgium
(7)	Germany	Belgium	Italy	Holland
(8)	Spain	United States	Belgium	Italy
(9)	Russia	England	Hungary	United States

This method is very fair since it takes up the scientists in the list of their time, for, as Van't Hoff remarks, famous names become gradually smaller, especially in natural sciences, where each succeeding discovery overshadows what precedes.

The remarkable thing about this table is that the small countries top the list, the larger countries with one exception, where France takes second place, being relegated to third and lower places.

A recent compilation in SCIENCE (January 30, 1925, p. 117) by F. Cajori, who attacks the problem from another angle, leads to similar results. Cajori bases his conclusions on the third volume of Poggendorff's Handwoerterbuch which gives the names of research men and the titles of their papers (for the exact sciences) from 1858 to 1883. Computing the number of scientists for every million of population (in 1870) we find that around 1870 the standing of the different nations was in the order: Switzerland, Holland, Germany, Sweden, England, France, Austria, United States, Italy and Russia.

It occurred to the writer that in the awards of the Nobel prizes, the highest recognition that can be given to any scientist, we have a suitable standard by which we can measure the scientific standing of the different nations during the past 25 years.

If we confine ourselves to natural sciences only (physics, chemistry and medicine) to make comparison with de Candolle's and Cajori's results possible, we see that in number of prizes Germany heads the list with 24, followed by France (12), England (11), Holland (6), Scandinavia (6) [divided as follows: Denmark (3), Sweden (3), Norway (0)], United States (4), Switzerland (2), Austria (2), Canada (2), Belgium (1), Spain (1), Italy (1) and Russia (1).

Dividing again by the number of inhabitants (in 1910) we find the following order: Holland, Switzerland, Scandinavia, Austria (assuming six million inhabitants for what is now the republic Austria), France, Germany, Canada, England, Belgium, Spain, United States, Italy, Russia.

The rôle of the small countries in the commonwealth of nations in the light of the foregoing statistics is strikingly illustrated. On a percentage basis Switzerland, Holland and Scandinavia have, time and again, contributed more to the progress of science than any other country and the fact that these small countries have enjoyed undisturbed peace over longer periods than their neighbors is not without significance. That Holland was chosen for the seat of the International Court and Switzerland for permanent residence of the League of Nations was nothing but a universal recognition of the importance of these small nations as natural traits d'union between the large, powerful and often antagonistic countries surrounding them. If we accept Pasteur's dictum that it is ignorance that separates the peoples of this earth and science that brings them together, then the exponents of Scandinavian, Dutch and Swiss science by their knowledge of the language and the progress of science in other countries can lay claim to a large share in the promotion of peace and progress throughout the world.

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SCIENTIFIC EVENTS

THE SEVENTH MEETING OF THE INTERNATIONAL COMMISSION OF EUGENICS

THE September number of *Eugenical News* gives an account of the annual meeting of the International Commission of Eugenics which was held in the rooms of the Royal Society, Burlington House, London, on July 14 and 15, under the presidency of Major Leonard Darwin. There were present the secretary-treasurer, Dr. A. Govaerts, besides the assistant secretary, Mrs. C. B. S. Hodson. Other members of the commission were: From Belgium, Dr. F. Ensch; from Denmark, Professor W. Johannsen; from France, M.