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SCIENCE COMMITTEE

CURRENT AVAILABILITY OF NATIONAL AND INTERNATIONAL FELLOW-
IN NATURAL SCIENCES, ENGINEERING AND TECHNOLOGY IN NATO
AND OTHER COUNTRIES

Note by the Chairman

At the recent meetings of the Science Committee I was requested to obtain information on the existing international exchange of post-graduate students.

2. The United States Delegation has kindly made available Mr. E. McCrensky, of the Office of Naval Research, who has collected the existing information on this subject.

3. Mr. McCrensky's report is attached.

(Signed) N.F. RAMSEY

Palais de Chaillot,
Paris, XVIIe.

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CURRENT AVAILABILITY OF NATIONAL AND INTERNATIONAL FELLOWSHIPS IN NATURAL SCIENCES, ENGINEERING AND TECHNOLOGY IN NATO AND OTHER COUNTRIES

Note by Mr. E. McCrensky

A study has been made of current information available on annual opportunities for national and international fellowships at graduate and post-graduate levels in NATO and other countries. Where expedient, information has been obtained from official sources within a particular country. The UNESCO publication, "Study Abroad", Volume 9, has been principally utilised as a source of the statistics used in the accompanying charts and should be consulted for additional information on organizations sponsoring fellowships. Certain limitations of data are recognised in Charts I and II attached because of the following conditions: Some countries have not provided UNESCO with figures on the number of fellowships granted annually nor have they identified the disciplines in which awards may be made. Many government-sponsored programmes do not have a specific limitation on the number of fellowships to be awarded in any single year which number may vary annually according to emergent needs. Private foundations in some countries sponsor major fellowship programmes permitting awards in any field of knowledge. Consequently, the number of annual awards in natural sciences, engineering and technology must be estimated. In all cases only awards for eight months or more duration have been included.

2. In Charts I and II attached, the estimate has been uniformly made that one-third of the total number of awards cited in "Study Abroad" as made annually in all fields by a government programme or by a private foundation have been in the fields of natural sciences, engineering and technology. Where no information is available as to any number of fellowships given, only one award has been allocated to the number shown in Charts I and II. The information in Charts I and II may be helpful in determining the national scope and policies for administration of the NATO fellowships which will help provide opportunities for scientists to intermingle with their counterparts in other European countries and the United States and to benefit from association with research work in the laboratory of another country.

3. Charts III and IV indicate a broad range of differences among NATO countries in their number of foreign students in relation to the overall student population. It suggests that the potential for exchange programmes is still substantially capable of further development. Chart V shows present opportunities now available to scientists and engineers of NATO countries for study or research in another NATO country.

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Chart I. Availability of national and international fellowships for graduate study, of 8 months or longer in Natural Sciences, Engineering and Technology *

Country of study Country of origin	Belgium	Canada	Denmark	France	Germany	Greece	Iceland	Italy	Luxembourg	Netherlands	Norway	Portugal	Turkey	United Kingdom	United States	Anywhere	Total
I. NATO Countries																	
Belgium	62			1												19	82
Canada		105												12	5	42	164
Denmark			9												15		24
France				850											140	25	1015
Germany					335											1(a)	336
Greece																25	25
Iceland (a)		1									1					1(a)	3
Italy								90								36	126
Luxembourg (a)																1(a)	1
Netherlands										10				1		2(a)	13
Norway											10					60	70
Portugal												1(b)				8	9
Turkey													45			180(c)	225
United Kingdom											1			1015(d)	51	66	1133
United States	8			4										10	650(e)	1730	2402

II. OTHER Countries

Albania	..
Bulgaria	150 in Bulgaria; restricted to graduates of countries with which Bulgaria exchanges students.
Czechoslovakia	..
Hungary	..
Poland	..
Roumania	..
U.S.S.R.	..
Yugoslavia	..

* When the total number of fellowships is not specified in original sources as to field of study, 1/3 of this total has been allocated in this Study to Natural Sciences, Engineering and Technology. If no information has been given by the original sources as to the total number of fellowships, only 1 fellowship has been allocated to such programmes.

- a. Government-sponsored programmes. No information on number of awards given.
- b. Information on number of awards not available.
- c. Of which 125 limited to Turkish civil service employees.
- d. Many tenable also in Europe - approximately 20 annually for study outside the U.K. - open only to British citizens resident in the U.K. Does not include research fellowships in government establishments.
- e. Available to citizens of most countries.
- .. Information not available.

Chart II. Availability of national and international post-doctoral fellowships for advanced research and study, for 8 months or longer in Natural Sciences, Engineering and Technology*

Country of study Country of origin	Belgium	Canada	Denmark	France	Germany	Greece	Iceland	Italy	Luxembourg	Netherlands	Norway	Portugal	Turkey	United Kingdom	United States	Any-where	Total
I. NATO Countries																	
Belgium	10																10
Canada		80													9	20	109
Denmark																4	4
France (a)																	
Germany (a)																	
Greece (a)																	
Iceland (a)																	
Italy (a)																	
Luxembourg (a)																	
Netherlands	1															15	16
Norway (a)																	
Portugal (a)																	
Turkey (a)																	
United Kingdom														365 (b)			365
United States															235	490	725
II. OTHER Countries (a)																	
Albania																	
Bulgaria																	
Czechoslovakia																	
Hungary																	
Poland																	
Roumania																	
U.S.S.R.																	
Yugoslavia																	

* When the total number of fellowships is not specified in original sources as to field of study, 1/3 of this total has been allocated in this Study to Natural Sciences, Engineering and Technology. If no information has been given by the original sources as to the total number of fellowships, only 1 fellowship has been allocated to such programmes.

a. Information not available on number of post-doctoral fellowships awarded.

b. Tenable also in Europe - open only to British citizens resident in the United Kingdom. Information not available on number of awards made for study in British territory only.

Chart III. Foreign students in Natural Sciences, Engineering & Technology in relation to all students enrolled at universities and other institutions of higher education 1956 - 1957*

Country	Total Enrollment	Foreign Students	%
<u>I. NATO Countries</u>			
Belgium	25 169	604	2.4
Canada	72 745	4 275 (a)	5.9
Denmark	12 447	42	0.3
France	170 023	3 458	2.0
Germany	151 343	3 405	2.2
Greece	17 975 (b)	179 (c)	1.0
Iceland	739	19	2.6
Italy	212 424	908	0.4
Luxembourg	
Netherlands	30 939	425	1.4
Norway	5 952	17	0.3
Portugal	22 319	506	2.3
Turkey	42 642	716	1.7
United Kingdom	90 500	3 706	4.1
United States	2 918 212	14 429	0.5
<u>II. OTHER Countries</u>			
Albania	1 950	2	0.1
Bulgaria	31 134	81	0.3
Czechoslovakia	48 877 (b)	975	2.0
Hungary	33 617 (b)	593	1.8
Poland	139 244	506	0.4
Roumania	81 206	347	0.4
U.S.S.R.	2 013 565	10 505 (d)	0.5
Yugoslavia	72 267	89	0.1

a. Total in all fields of study.

b. 1955-1956 figure.

c. Total in all fields of foreign students at University of Athens only.

d. Includes law and social sciences.

* These statistics, obtained from UNESCO, were submitted by countries listed for publication in "Study Abroad".

Chart IV. Foreign students in Natural Sciences, Engineering and Technology
in 1955 - 1956 *

I. NATO Countries

Belgium	257
Canada	(a)
Denmark	(a)
France	3 472 (b)
Germany	2 640
Greece	(a)
Iceland	(a)
Italy	777
Luxembourg	(a)
Netherlands	414
Norway	19
Portugal	404
Turkey	547
United Kingdom	3 348
United States	17 594

II. OTHER Countries

Albania	2
Bulgaria	76
Czechoslovakia	619
Hungary	(a)
Poland	365
Roumania	340
U.S.S.R.	6 900
Yugoslavia	91

a. Information not available.

b. Includes French colonials.

* These statistics are based on data submitted to UNESCO for publication in "Study Abroad".

Chart V. Government-sponsored graduate fellowship programmes in Natural Sciences, Engineering and Technology
currently available to citizens of NATO countries *

Country of origin \ Country offering fellowships to citizens of a specified country	Belgium	Canada	Denmark	France	Germany	Greece	Iceland	Italy	Luxembourg	Netherlands	Norway	Portugal	Turkey	United Kingdom	United States
Belgium		X	X	X	X			X	X	X	X			X	X
Canada				X	X		X				X			X	X
Denmark		X		X	X			X			X			X	X
France	X	X	X		X			X		X		X		X	X
Germany	X	X	X	X				X			X		X	X	X
Greece	X	X		X	X			X					X	X	X
Iceland		X	X		X			X			X			X	X
Italy	X	X	X	X	X					X		X		X	X
Luxembourg	X	X		X	X			X						X	X
Netherlands	X	X	X	X	X			X	X		X			X	X
Norway	X	X	X	X	X		X	X						X	X
Portugal		X		X	X			X						X	X
Turkey	X	X		X	X			X						X	X
United Kingdom	X	X	X	X	X			X		X		X		X	X
United States	X	X	X	X	X			X		X			X	X	X

* Based on information provided to UNESCO.