INTER-OFFICE CORRESPONDENCE

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Underdeveloped areas

FROM: RBW

DATE: August 2, 1963

TO:			COMMENTS:
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SUBJECT: Notes on Program in Lower South America

The following comments are based principally upon observations made by RBW during a trip to South America during May and June, 1963. Approximately one month was spent in Brazil, two weeks in Argentina, ten days in Chile, and two days in Perú. The principal purpose of the trip was to explore the possibilities for developing university-wide program in a few places, concentrating RF support and personnel in these places, as against the broader opportunistic approach to program which has characterized RF activities during the past fifty years and which has given excellent results.

There is less need, less justification, for a continuation of traditional program, and there is no possibility of continuing it, as in the past, because of lack of funds. Traditionally, a program opportunity, an idea, was exploited and developed to its logical conclusion (yellow fever and malaria operating programs in Brazil) or developed to a position of relatively self-supporting integrity (genetics program in Brazil). Traditionally, a person with ideas was trained abroad for lack of training opportunities in his country and, after training, was supported in his efforts to put his training into effect. The multiplier effect inherent in the latter program element has now reached a point where the second and third generations of scientists are too numerous to permit RF support, as in the case of the parent generation. From a fellowship given Prof. José Baeta Viánna, of Brazil, in biochemistry in 1923 have come, directly, at least thirteen professors of biochemistry and enormous influence upon fields that use biochemistry as a tool and upon medical education in Brazil.

The RF began program in lower South America in 1917 and had staff constantly in Brazil from that time until December, 1962, nearly forty-six consecutive years. At one time or another IHD or its successor organizations within the RF had resident staff in Argentina, Bolivia, Brazil, Chile, Paraguay, and Perú associated with medical science (public health, nursing, or medical education) program elements. In 1954 Agriculture established, and has maintained until now, program and resident staff in Chile. Neither Humanities nor

Social Sciences has had resident staff, nor substantial program interests in the area; visits by HSS staff members have been infrequent and have taken place principally since 1958. While a representative of the Natural Sciences has never been resident in the area, since 1940 there were regular biannual visits by a staff member (HMM) who, alone or with another staff member, represented also the Agricultural Sciences (including veterinary medicine).

It is not surprising, therefore, that RF program in lower South America has been predominantly concerned with the medical sciences over the past forty-six years. Fellowship awards over this period in Argentina, Brazil, and Chile show this plainly. During the period ending in 1950 nearly 80 per cent of all fellows from these countries represented a discipline within the medical sciences, principally public health (see tables appended). Since then the disproportion has been less with the development of program interests in agriculture and the natural sciences. It is a fact that the medical, natural, and agricultural sciences are better developed in lower South America than the social sciences and the humanities. One might conclude with substantial logic that this state of affairs is due, in no small part, to RF program interests in the area.

Until about 1940 the RF was essentially the only North American grant-making agency operating in lower South America. At about this time The Kellogg Foundation commenced to give fellowships in the medical sciences and nursing and nominal support of returned fellows, and the Federal Government, with the advent of the war, began the first of its support programs that today has AID as its lineal descendant and NIH, AEC, NSF, and other agencies as collateral descendants. Most recently Ford Foundation has entered the field in a very active sense. If imitation is the sincerest form of flattery, then the RF is flattered, because to a substantial degree all these agencies are building their program structures upon the foundations established by it. More importantly, the funds which these agencies can allocate to the region are greater by far than those available for RF program.

Of these agencies the program of The Ford Foundation is most important in relation to that of the RF. At the moment it is an expanding program. Offices have been established in Rio de Janeiro (Reynold Carlson and George G. F. Little), in Buenos Aires (Harry E. Wilhelm), and in Santiago (at the moment, a secretary). At least one staff member is associated with an operating program: Robert M. Carlson, soil chemist, at the University of the South, Bahia Blanca, Argentina. Ford Foundation appropriations provide financing of fellowships (they have no fellowship program <u>per se</u>) and for long-term assignment of American visiting professors who, to some extent (the selection of fellows), act as representatives of the Foundation. At the moment administrative field staff of FF represent the social sciences, principally the economic sciences.

Except for the medical sciences, FF program is pretty much across the board of university disciplines, and their appropriations tend to be quite large developmental grants. Recent examples: $490,000 for chemistry and $500,000 (proposed) for oceanography at the University of São Paulo; $650,000 for natural sciences at the graduate-school level, University of Brazil; $500,000 for physics

Of the total amount, about $835,000 is earmarked for the University of Brasilia. The disciplines included in the training program comprise seven broad fields related to the economic development of Brazil: mathematics, physics, chemistry, biology, geology, agricultural sciences and technology. At the moment, the training centers are located in thirteen of the thirty-four Brazilian universities; these would benefit directly, but in varying degrees, from the improved teaching and research conditions resulting from the program.

The overall management of the program will be done by CAPES. The Government of Brazil and, hopefully, Ford Foundation will allocate to CAPES (and perhaps to COSUPI and CNPq.) counterpart cruzeiro funds amounting to around $4.0 million dollars for teachers' salaries, undergraduate scholarships, and domestic and overseas fellowships. Provision is being made also for visiting professors. (See appended tables)

In an overall, educational sense, the project has certain weaknesses. No provision has been made for the social sciences (apart from demographic work) or for the humanities. The sciences involved are hard sciences mainly; biology is represented by biophysics, microbiology and marine biology (oceanography related to fisheries); and the medical sciences are not included. This last seems sensible, inasmuch as the medical sciences have occupied a privileged position for many years, have taken, and still take, a perhaps disproportionate part of the total funds available for education. The project, as a whole, makes sense in terms of the technological development of Brazil. However, it presents lacunae which have come about partly by chance. For example, perhaps the most significant work in organic chemistry in Brazil, that of the Walter Mors-Stanford group at Jardim Botanico in Rio de Janeiro, is not included because of its highly disorganized state when definitive planning of the project was being made.

Unfortunately, no similar project is being considered for Argentina, Chile, and Perú, although something may be done in the case of Argentina, now that there is a prospect for re-establishment of democratic processes and an improvement of the economic life of the country.

As regards RF program, the following possibilities (apart from fellowships) make sense to RBW: Consideration of three universities for long-range, developmental programs, three or four terminal appropriations in the natural sciences, and a somewhat expanded grant-in-aid program (as compared with such a program in the past ten years).

The universities proposed for consideration are the Catholic University of Chile, the University of Minas Gerais, and the University of Rio Grande do Sul. The institutions are listed in terms of their priority for consideration.

While the Catholic University of Chile, Santiago, has never been the recipient of major support from the RF, its Faculties of Medicine and of Agronomy have received substantial help in the past ten years. It now appears to be in a position to develop rapidly, in the sense of the next ten to twenty years, with a level of assistance lower than that which the other two institutions mentioned would require. The University presents several values to support this view.

In the first place, it is small - about 3,500 students. The student body is carefully selected, and the quality of the students seems to be higher than in other Chilean universities. Its administration is stable and not subject to national or local politics; the Rector is appointed by the Holy See, is a priest and usually from the hierarchy of the Church in Chile. The administration is relatively quite efficient; as compared with the University of Concepción, which has the same number of students, it operates on a budget half that of Concepción and has the reputation of putting its limited funds to the best possible use. Yet its faculty is paid at least as well as the faculties of other Chilean universities. The schools of medicine, agronomy, and economic sciences are excellent, amongst the better such schools in the continent. A solid start is being made to up-grade the teaching of the hard sciences. Its humanities and social sciences, apart from economics, are relatively weak, and its law school is poor. The quality of its top professors is unexcelled in Chile, as a generality, but except for the school of economics, and perhaps of agronomy and medicine, there is inadequate depth of staff.

Support over the years would have to consider new construction, equipment and supplies for teaching and research, training awards, one or more resident representatives of the RF (staff members or otherwise) for help with curriculum and other reforms and teaching, and salary supports for Chilean teachers. This last item, in RBW's view, would be a consideration in any university-development program in South America to the end that teachers, adequate in quality and in numbers, could be added to faculties as needed with the view that eventually the university could provide for them.

The total support for the development of Catholic University might be of the order of $5.0 million over the next ten years. This is obviously a guess, and an accurate figure would require a careful study by the task force.

In view of its pre-eminent position in Chilean education, it seems necessary to justify not selecting the University of Chile for major developmental support, the more so since it has been a major program element over the years. During the past ten years the University of Chile, in one way or another, has received about $100,000 per year from the RF. Considerations which seem to RBW to mitigate against its selection for broad, long-range developmental assistance are as follows:

The University is too large, too unwieldy administratively. Size alone should not be a determining factor, as witness several enormous American universities. But the fact is that Chileans are, essentially, Spanish, and the Spanish are essentially religious, not philosophic, people; they are individualists. Thus, their character is different from that of Americans and of Italians. The last comparison is made because of the fairly large Italian component in the Chilean population, a leavening factor which seems to RBW to be important. If this characterization of the Chileans (Spanish) is apt and just, it may have a bearing upon their tendency to build empires for themselves, as departments or faculties but not universities, because individualism is a force that tends to prevent the integration of component parts inherent in the word "university." On this basis, the larger the Ibero-American university in population and in component administrative units, the harder it is for it to become a university in the American or British sense.

To the difficulties inherent in the development of a Chilean university because of the essential nature of its people, the University of Chile has others not shared to any degree by Catholic University: the politics of Church and of State. There is a definite Church party and a definite anti-Church party, loosely called "Masonic," in the University, always at war with each other; not, perhaps, to the extent as in the University of Concepción, but nevertheless real. There is also a communist party which aligns itself, usually, with the Masons. The succession of rectors is determined not so much upon administrative or scholarly merit, but upon the support of the national Radical Party, now in power in the federal government. The University of Chile is, therefore, the scene of more or less constant internecine war which reflects itself inevitably in University administration. Lip service is given to reforms demanded by younger faculty members who have returned from American university environments; their accomplishment is slow and uncertain.

Because of its very nature, the Catholic University is relatively free of many of the difficulties one finds in the University of Chile. Added to this fact is its demonstrated response to the challenge of poverty: it has been forced by circumstances to practice the strictest economy, and its faculty members, whether or not by inclination, have cooperated with each other to an extent unusual in Latin America. The University has done much with little.

Finally, RBW believes, the Catholic University is better able to use assistance, more prone to accept sound advice and put it into action than is the University of Chile. If it should be decided to bring the Catholic University within RF program, someone with training in university administration should be found for assignment there to assist in long-range developmental program planning as a preliminary to financial commitments.

There is no university in Argentina, with the possible exception of the University of the South, which seems to RBW to merit serious consideration for a developmental program. The University of Cuyo might warrant consideration were it not for the fact that its component parts are in four different cities: Mendoza, San Juan, San José, and San Carlos de Bariloche, the last distant from the first by over 1,000 miles. The University of the South at Bahia Blanca, also new, is more a teachers' college and school of technology than a university. Founded less than ten years ago, there has not been time for the establishment of departmental empires, and it has qualities which could be built upon. Fortunately, it has no medical school, though it will probably organize one in time. The state of its top administration may be appraised by the fact that the Rector is an Indian who was imported to teach organic chemistry. His selection for his post as Rector seems to have been due to the inability of the University Council to agree upon an Argentine faculty member.

The people of the State of Minas Gerais have two sayings which they use to characterize themselves and their work: "Slow but always" and "Something done in Minas Gerais is something well done." The people of the State are the most conservative in Brazil and have a reputation for parsimony. The Cariocas say of them that they take their meals from drawers, so that the drawer may be closed should anyone arrive at meal time. Considering that the State had only one primary school in the first 300-odd years of its history, it has come a long way in education, especially in this century. The University is amongst the older in Brazil, its Faculty of Medicine the fourth oldest, dating from 1911. To one of its professors, Carlos Pinheiro Chagas, was awarded the first RF fellowship, in 1917.

The City of Belo Horizonte, in which the University is located, did not exist before 1900. It now has some 600,000 inhabitants and is growing at the rate of about 5 per cent per year. It is the sixth city in Brazil in population and the third most important industrial center. The State and its capital city seem destined to become more important with the passage of time.

The University of Minas Gerais has, in 1963, 5,587 undergraduates, 358 graduate students, and 1,663 students in other regular courses, for a total of 7,608 in thirteen faculties or technical schools. It is a growing institution: in 1961 there were 4,233 undergraduates; in 1962, 4,754. The School of Veterinary Medicine is possibly the best in South America, the Faculty of Medicine amongst the top five in Brazil. Both have received substantial support from the RF. The Schools of Law, Political Science, Economics, Engineering, and Dentistry are above the Brazilian average. The Faculty of Philosophy is not strong, but contains strong elements, such as zoology (Prof. Giorgio Schreiber). The outstanding Brazilian journal on polical sciences is published by the University.

At the moment the University is in the throes of a reformation and renaissance made possible by federal legislation enacted in 1961. Curriculum structure is being revised and liberalized, and the hard sciences are being concentrated in University institutes in the interest of efficiency and economy of teaching and research.

The administration of the individual faculties and schools has been stronger than that of the University. This is so partly because, of all federal universities, only the faculties and schools of UMG retained patrimonies given by the State, so that each faculty has a certain financial independence. While these patrimonies are not adequate for operation without federal subsidies, they are controlled by deans and not by the Rector. Traditionally, the Rector has been a figurehead. The present incumbent, who will not succeed himself, Dr. Orlando de Carvalho, trained in law and amongst Brazil's better political scientists, has succeeded to some extent in welding the faculties into a university. His efforts have been aided by younger faculty members trained in the United States. They have been impeded by lingering traditionalism and by a strong leftist group centered in the Faculty of Economic Sciences.

The RF Medical Mission, composed of Richard A. Pearce, John A. Ferrell, and Bailey K. Ashford, spent three months in Brazil during February-May, 1916. It recommended support to upgrade the medical school of Porto Alegre, now of the University of Rio Grande do Sul. The recommendation came to nothing because of local resistance, and only since 1940 has the University been assisted by RF support. This has been almost entirely to its Faculty of Medicine and the Schools of Agronomy and Veterinary Medicine; the only major exceptions are the Institute of Economics and the Institute of Biology (genetics).

Until recently, the University has not offered an opportunity for university-wide developmental support and in a strict sense still does not. However, things are coming to pass that may, in 1964, create a situation worth serious consideration. The interests which have been supported are strong points. The Faculty of Philosophy is in the process of reorganization, with the liberalization of curriculum made possible by the 1961 law reforming education in Brazil. Physics and mathematics are strong and getting stronger (there are four young teachers working toward Ph.D.'s in mathematics in New York University and the University of Wisconsin); chemistry is good in a teaching sense; geology is outstanding; a start is being made toward upgrading the teaching of philosophy; there is a good nursing school.

The weakest element in University reform is administration, especially as regards the office of the Rector, who presumably will finish his last (third) term in 1964 and, hopefully, will be succeeded by a more enlightened and dedicated person.

Again, as in Chile, one must justify not selecting an outstanding institution in Brazil for consideration for developmental support; namely, the University of São Paulo. The reasons are much the same as those which were used in the case of the University of Chile. The USP is large and getting larger. Its top administration, already weak, has recently been weakened by the appointment of a mediocre Rector. State politics enter too much into fundamental administrative decisions. Finally, the University is better supported financially than any other South American institution, with the possible exception of the University of Buenos Aires, and it has been, and will be, the recipient of large FF awards. In the past, the USP has received more RF support than any other Brazilian institution and is second only to the Universidad del Valle, at Cali, in this respect. Already the outstanding South American university, it will doubtless continue to make progress, and it is doubtful that RF support would much alter the progress of the future or its direction.

The last consideration seems to RBW to be important: RF assistance toward university development should be critical, not so much as regards financing as toward reform of teaching and the development of faculty quality in depth.

This consideration would pretty well rule out developmental program involving the new University of Brasilia and the proposed University of Ribeirão Preto, to be built around the excellent Faculty of Medicine there. In each instance concessions to principles would have to be made which RBW considers undesirable.

Recommendations for program are as follows:

(1) Consideration by the task force of the Catholic University of Santiago, Chile; the University of Minas Gerais, Belo Horizonte, Brazil; and of the University of Rio Grande do Sul, Porto Alegre, Brazil, for university development program.

(2) If the above recommendation is accepted and one or more universities are selected for program development, the employment of a staff member for service in the field is recommended. In the view of RBW, this person should have a strong background in education, preferably at the university level, and preferably some experience in university administration.

(3) That a terminal appropriation be given to the University of Buenos Aires to finance four projects for which assistance has been requested:

Faculty of Medical Sciences, Prof. Roberto Mancini, part of the cost of an electron microscope	$25,000

Faculty of Exact and Natural Sciences,	
Dr. Venancio Deulofeu, organic chemistry	$21,000
Dr. José Luis Reissig, molecular genetics	15,000
Faculty of Pharmacy, Dr. Alejandro Paladini, biochemistry research	10,000
	$71,000

(4) That a terminal appropriation be made to Stanford University to support the research and training program in the University of Brazil, Rio de Janeiro, in organic chemistry, over a period of three years. - $130,000

(5) That a terminal appropriation be made to the Institute of Science, University of Chile, Santiago, for the purchase of paramagnetic resonance equipment for various research programs. - $45,000

(6) That grant-in-aid funds should be of the order of $200,000 in 1964, principally for support of recently returned young research workers whose work probably will merit financing by NIH or other fund-granting agencies.

(7) That fellowships in the medical sciences be reduced in favor of giving more fellowships in the natural sciences and that fellowship awards, after 1964, be made to postdoctoral candidates.

Robert B. Watson, M.D.

RBW:MAS
Attachments

ROCKEFELLER FOUNDATION FELLOWSHIPS AWARDED IN
ARGENTINA, BRAZIL, AND CHILE

1917 - 1962

	1917-1950	1951-1955	1956	1957	1958	1959	1960	1961	1962	1963 (to 7/30)	Total
ARGENTINA											
Agriculture	2	4	1	4	1	1	0	0	0	5	18
Humanities	8	0	0	0	0	1	0	0	0	0	9
Medical Sciences	45	2	0	0	3	0	2	3	3	2	60
Natural Sciences	7	4	0	2	2	1	0	1	0	1	18
Nursing	1	0	0	0	0	0	1	0	0	0	2
Public Health	8	0	0	0	0	0	0	0	0	0	8
Social Sciences	0	0	0	0	0	0	0	0	0	1	1
Total	71	10	1	6	6	3	3	4	3	9	116
BRAZIL											
Agriculture	5	34	10	2	1	1	2	0	0	1	56
Humanities	10	0	0	0	1	0	0	2	0	0	13
Medical Sciences	46	10	4	6	5	12	10	7	8	1	109
Natural Sciences	24	32	13	3	4	7	5	3	1	0	92
Nursing	31	8	0	0	0	8	3	3	0	0	53
Public Health	60	2	0	0	0	0	0	0	0	0	62
Social Sciences	1	3	0	1	0	1	0	1	0	0	7
Total	177	89	27	12	11	29	20	16	9	2	392
CHILE											
Agriculture	6	8	1	4	1	1	1	0	0	7	29
Humanities	6	1	1	1	1	0	3	1	1	0	15
Medical Sciences	23	11	6	4	7	6	4	3	2	2	68
Natural Sciences	1	4	2	3	2	0	1	0	4	2	19
Nursing	15	2	0	0	0	0	0	0	0	0	17
Public Health	22	3	0	0	0	0	0	0	0	0	25
Social Sciences	0	0	1	0	0	0	0	0	0	3	4
Total	73	29	11	12	11	7	9	4	7	14	177

ROCKEFELLER FOUNDATION SCHOLARSHIPS AND TRAINING AWARDS IN
ARGENTINA, BRAZIL, AND CHILE

1947 - 1962

	1947-1957	1958	1959	1960	1961	1962	Total
ARGENTINA							
Agriculture	0	2	2	2	9	5	20
Humanities	0	0	0	0	1	0	1
Nursing	0	0	0	0	0	0	0
Social Sciences	0	0	0	0	1	0	1
Total	0	2	2	2	11	5	22
BRAZIL							
Agriculture	31	11	8	5	6	6	67
Humanities	0	0	0	1	1	0	2
Nursing	0	0	0	0	0	2	2
Social Sciences	1	0	2	0	2	2	7
Total	32	11	10	6	9	10	78
CHILE							
Agriculture	4	4	3	4	10	9	34
Humanities	0	0	0	1	0	1	2
Nursing	0	0	0	0	0	0	0
Social Sciences	0	2	1	5	5	5	18
Total	4	6	4	10	15	15	54

July 30, 1963
MER