

And there was a contradiction, overlooked for the most part in his soaring speeches. His central insight at Nairobi was that economic growth could be created in rural areas by giving technical aid to small farmers — those who tilled “a handkerchief of soil,” in his fine phrase. But people with land were, by definition, not landless and not the absolute poor, who, by his announced income criterion, had almost nothing. McNamara was rushing past a sociological fact of most of the societies he sought to help, which was that the very poor people were landless or squatters with no title to land. Those with farms existed in “relative poverty”; he counted them separately from the 700 million. Who, exactly, was he planning to uplift? wondered a few experts at the time.⁴⁰ The problem would haunt him later.

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McNamara’s systems approach, however, would prove in at least one case to be of overwhelming importance. He had displayed all his life both skepticism of advanced technology and an underlying faith in technological miracles. McNamara, explains one of the Bank’s senior statistical experts, was looking for what economists call a “production function, a standard approach so powerful and efficient that it could be easily transferred from one situation to others and between countries.

“One couldn’t help [but get] the impression that he had the belief that if we prototyped in a few places, we could go off and put it onto the production line.”⁴¹

McNamara arrived on the scene at the right moment, therefore, as far as the Green Revolution was concerned. The miracle strains of high-yield wheat and rice that would thrive in parts of Asia and Latin America had proved themselves.⁴² As a trustee of the Ford Foundation from April 1968 onward, McNamara had a front-row seat at the breakthroughs pioneered by the four research institutes that were supported by Ford and by the Rockefeller Foundation and that created the Green Revolution. He got to know the remarkable people of the Green Revolution, such as Norman Borlaug and Forrest (“Frosty”) Hill. “McNamara had an intellectual’s fascination with the hands-on, land-grant guys,” remarks Yudelman.

The Green Revolution was becoming the victim of its own success. Between them, the two foundations bankrolled the four institutes, the first one in Mexico, where Borlaug did his seminal work with Mexican semidwarf wheat; one in the Philippines; one in Colombia; and one for tropical agriculture, in Nigeria. The annual budgets of

the four centers were climbing toward \$11 million; although the foundations had made several unusual long-term grants to keep them going, it was not clear that long-term financing could be arranged. Compounding the problem was the rising demand for advice and extension, the mechanism by which new agricultural knowledge, seeds, and farming techniques spread to specific localities and are taught, one on one, to local farmers. Eleven million dollars was a drop in the bucket to convert the hundreds of millions of rural farmers in India to better farming practices, to remove the threat of famines and raise incomes above fifty to seventy-five dollars per year.

At a meeting at the Rockefeller Foundation's conference center at Bellagio, Italy, in 1969, after a "homespun presentation" by Frosty Hill on how the new varieties were transforming India's Punjab, McNamara proposed a "consultative group" of several organizations and aid donors to jointly provide funds for the institutes on an ongoing basis, says Warren Baum, a key player.⁴³ Immediately John Hannah, the director of the U.S. government's aid program, suggested that the United States provide 25 percent of the funds for a joint group. McNamara's idea, swapped around the meeting, became the answer.

His faith in management drove him to find the right organizational vehicle by which to disseminate the Green Revolution on a scale commensurate with its potential. The Bank's executive directors, however, had reservations: Why not regional groups to support the far-flung institutes? Why not have the United Nations food agency take the lead? Why should the World Bank provide the secretariat and organizing functions, as McNamara recommended? Supporting agriculture research at the increased level that McNamara encouraged, in different regions and new, specialized institutes, would be a huge enterprise, and what about the diversion of Bank staff time and funds? McNamara pointed to Rotberg's successful investment of the Bank's liquid funds to answer the last objection: The Bank would pay for the operating costs of the group secretariat in Washington from profits on invested funds, he said. As for why the Bank should take the lead, McNamara noted that the directors already had agreed to plans to lend \$4 billion for agricultural projects in coming years, projects whose total value over time would be \$10 billion, yet the research base to validate this investment did not exist.

McNamara's approach to running the planet, in Clark's phrase, was to determine overall needs and then find resources to meet the

needs. This approach seemed bold, if not rash, when he talked of population growth or of reaching all of 700 million absolute poor. Yet it was right for the situation of agriculture in 1969–71. The weakness of his management style — overcentralized direction, overemphasis on resource inputs and the “production function” — were strengths in this case.

M. S. Swaminathan, one of the deans of Indian agriculture, recalls that McNamara convened the experts at a dinner party at his house on Tracy Place in 1971.⁴⁴ Swaminathan remembers McNamara’s banging his hand on the dining room table as he told them that their plans were too *small*. Instead of scrounging for \$11 million per year, the institutes needed to spend \$100 million per year by 1980, he said.

The experts were stunned.

Meanwhile, the Bank’s executive directors were still balking, and the foundations’ string was running out. But the consultative-group format was being developed steadily into a mature plan, and in 1972 the unglamorous-sounding Consultative Group on International Agricultural Research came into being. Its headquarters were in the World Bank’s offices, while its technical advisory committee was housed in the Food and Agriculture Organization. CGIAR had a troika of expert directors — Hill, Swaminathan, and Sir John Crawford — and funds to run the research centers, pledged by eleven donors and totaling more than \$160 million; its annual grants would rise toward \$100 million during the decade.

By the early 1980s, more institutes had been added and hundreds of new strains had been exported successfully to Asia and Latin America, although with less success in Africa, on the whole. The institute in the Philippines assisted China for years, despite the fact that China was neither recognized by the international system nor a member of the Bank.⁴⁵

By 1983, eighteen years after the first successful new strains grew in India and Pakistan, 58 percent of the rice land in the developing countries — which lies mainly in Asia — was planted with the new varieties of rice. Also by that time, the new varieties of wheat and rice distributed from the research centers were estimated to have provided fifty million tons of additional food per year, enough to meet the cereal needs — that is, the caloric requirements — of 500 million people, “impressive numbers by any standard,” says one evaluation.

Swaminathan says, “McNamara’s personal conviction of the crucial role of research was a very important factor in CGIAR’s gaining

momentum.” Would the larger, more organized structure and vastly greater funding levels have been achieved without McNamara and the Bank? Swaminathan thinks not. “Without the Bank’s indications that it would be central, the thing would not have moved.”⁴⁶

McNamara and Margy were touring a town in the West African nation of Mali, south of the great, dry region of the continent called the Sahel, when they noticed about eight adult men walking along, holding on to a pole; a small child held the other end of the pole and led them along.

Why? the McNamaras asked. The men were blind, they were told; 20 million people in seven countries in West Africa, from Senegal to Niger, faced a terrible choice: farm and risk blindness, or barely scabble a living off parched land away from the river.⁴⁷

The scourge was a disease called river blindness, or onchocerciasis, spread by a black fly that bred in river rapids. A farmer on the banks might be bitten a thousand times a day when the flies were buzzing and thus be implanted with worm larvae. As the worms grew, they caused terrible internal pain and itching; people had committed suicide to end the agony. The dead worms built up in the human eye and caused blindness.

“Margaret in particular was affected by this,” recalls David Bell, former head of the U.S. Agency for International Development. Margy asked her husband why the Bank did not do something about it. McNamara explained that the Bank left health programs to the World Health Organization. But Margy wouldn’t take no for an answer, and Bob McNamara decided his wife was right.

McNamara the moralist often said that not to act is tantamount to action and carries equal responsibility. There was no preventive inoculation against the disease at the time, so the only solution was spraying. The Bank justified project loans to fight river blindness on an economic rate-of-return computation of how much more productive the people of the region would be if more retained their sight.

The remaining problem was the lack of expertise or organization in the many countries where the disease struck — African countries often had modern city hospitals but rarely organized health care in rural areas. The Bank’s first lending to fight the disease, in 1974, went to a supergovernmental group, mainly staffed with European and American experts, that could fly helicopters along rivers, crossing provincial and national boundaries.⁴⁸

27. *NYTI*, 1973; William Clark diary.
28. William Clark diary.
29. Interview, Hollis Chenery. Chenery published a version of the paper as "Restructuring the World Economy" in *Foreign Affairs* 53, no. 2 (January 1985): 242ff.
30. The \$20 billion and \$300 billion figures are in 1974 dollars and from Chenery, "Restructuring the World Economy," 258, 254. RSM interview in *Der Volkskrant* of Amsterdam, March 23, 1974, for RSM's views at that moment (English typescript on file at World Bank-IMF Joint Library, *The Times* [London], July 25, 1974). *Meet the Press*, March 24, 1974.
31. RSM address to the Board of Governors, September 30, 1974, p. 18.
32. Interviews: Hollis Chenery, William Clark, Munir Benjenk.
33. *WP*, 1974. The IMF was part of the plan.
34. William Clark diary.
35. RSM address to the Board of Governors, September 30, 1974, p. 3.
36. *Ibid.*, 20.
37. William Clark diary.
38. Interviews: Montague Yudelman, S. Shahid Husain, Leif Christoffersen.
39. Background interview.
40. This widely discussed issue is described succinctly in Ayres, *Banking on the Poor*, 79, 80.
41. Background interview.
42. Interviews: Warren Baum, Montague Yudelman, John Lewis, others. An authoritative discussion of the crisis in funding for the research institutes and its resolution through the founding of CGIAR is Baum, *Partners Against Hunger*, chap. 2.
43. Baum, *Partners*, 30.
44. Interview, M. S. Swaminathan.
45. See Baum, *Partners*, 164, 165, 236-238, 284, 285. China released high-yielding semidwarf rice varieties to its own people in 1959, before the International Rice Research Institute in the Philippines released IR8, its key high-yield rice strain. Peking's emphasis on food production helped increase the share of land planted with rice in China using the new types from 28 percent in 1965 to 77 percent in 1970. Since then, however, the IRRI-sponsored varieties have become a substantial share of China's rice crop, even though China was not a formal member of the CGIAR system. Thus indirectly, RSM assisted in improving the amount and quality of rice available to the Chinese.

The figure of 500 million people is from Baum, *Partners*, 285, and based on an extensive "impact" study of the effect of the international centers on agriculture worldwide. An estimated half of those people are Chinese, who obtained new varieties partly through their own efforts and partly with IRRI strains. Thus the centers' — hence RSM's — contribution to food self-sufficiency is somewhat less than the 500 million, possibly closer to 300 million.

While many effects of the Green Revolution can be criticized, "the key statistic," Baum writes, is that by 1983 "half the area devoted to wheat and rice in developing countries is now planted to the semidwarf varieties" (307). Baum also summarizes, "Modern varieties of rice and wheat have prevented mass starvation in much of Asia. But in Africa and semi-

arid Asia, increased production of these varieties has done much less for poor consumers who eat mainly sorghum, millet, maize, and cassava" (293).

46. Interview, M. S. Swaminathan.
47. Interview, David Bell. Facts about onchocerciasis are from the World Bank video "River Blindness" and information supplied by the West African Riverblindness Control Program of the World Bank.
48. Background interview.
49. See Andrew Kamark, letter to the editor, *Foreign Affairs* 60, no. 4 (April 1982): 943.
50. Background interviews. *NYT*, October 5, October 8, 1976; *Euromoney*, June 1976, p. 64. *WP*, September 1976. In 1976 it was widely assumed that RSM would not be reappointed if Gerald Ford won the fall presidential election. But if Jimmy Carter won, he stood a better chance of reappointment. RSM address to the Board of Governors, October 4, 1976.
51. The Japanese director was Taro Hori, who made a confidential speech to the board highly critical of RSM, which was then leaked to the press. The fact that Hori's criticisms of RSM closely echoed those of William Simon led to speculation that the Japanese were putting good relations with Simon and the U.S. administration ahead of the need for good relations with RSM. *Far Eastern Economic Review* (Hong Kong), December 10, 1976; *Barron's*, October 11, 1976; *Annual Report*, 1977, pp. 6, 7.
52. Background interview. *NYT*, October 9, 1976. Within a month, the White House announced the resignation of Charles A. Cooper, the U.S. executive director, who had represented Simon in the struggle with RSM.

23. MANAGEMENT IS THE GATE

1. In his 1973 speech at Nairobi, RSM had proposed to solve it in the lifetime of children born that day. He recognized that this goal was set back by shifts in the international economy after oil prices rose in 1973-74. Nonetheless, RSM continued to talk of significantly lessening absolute poverty in some unspecified, not-too-distant time frame.
2. Travel scenes are from two background interviews and an interview with Timothy Tahane, executive secretary of the World Bank.
3. William Clark diary.
4. RSM speech to the Board of Governors, September 25, 1978, p. 30.
5. Cary Reich, "The World's Greatest Borrower (as Told by Himself)," *Institutional Investor*, July 1984, pp. 57-69.
6. Background interview.
7. *Annual Report*, 1978. Over the period, the average rates of return on Bank loans were 1.2 percent for agriculture projects, 8 percent for water projects, 22 percent for transportation projects, for example. Of course, some projects earned nothing and had negative rates of return: 8 percent of all IDA projects were negative in this period, while another 11 percent of them did not attain the 10 percent positive rate of return. *IDA in Retrospect*, 53.
8. Interview, John Lewis.
9. Interview, Leif Christoffersen.
10. Of many sources, see Ungar, *Africa*, 397-404; "TP" is from Rosenblum and Williamson, *Squandering Eden*, 126. See also 126-135.
11. By 1981, the Bank's professional staff of 2,552 represented 101 different na-