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Chapter IV
Young Children Come First

Kwashiorkor Enters the Limelight

The formation of the PAG followed heightened concern about protein food sources for weanlings and the extent of protein malnutrition in the developing world. With new data coming in from developing countries which stressed protein malnutrition in weaning children, WHO deemed that an expert scientific body should investigate high-protein weaning foods thoroughly and steer the UN agencies in the proper direction. In 1957 Waterlow and Scrimshaw together cleared up the lagging problem of whether kwashiorkor, which was still known by a number of different terms and variant symptoms, was clinically the same world-wide. Their clarification helped consolidate the protein field and left no doubt that kwashiorkor in Africa was indifferentiable from kwashiorkor in Latin America.[1] This finding coincided with a boost in kwashiorkor interest from WHO which trickled through the administrations at Unicef and FAO. In 1958, WHO summed up its interest in nutritional work with the following statement: "Kwashiorkor is now the main nutritional disease with which the Organization is concerned."[2] Essentially it was this protein nutritional interest, which had marked support from the UN and its agencies, that began to shape something of a priesthood of nutritionists that exercised substantial control and influence over nutritional policy.

The PAG's focus on protein and kwashiorkor further magnified interest in protein malnutrition in the developing world, while edging out other nutrition topics. Although many nutritional deficiency disorders -- mainly beriberi, pellagra, anaemia, and goitre -- were discussed at major conferences, in the early-1950s kwashiorkor became **the** nutritional disease, and discussion of other nutritional issues frequently fell on deaf ears, at least within the UN agencies.[3] Donald McLaren, a specialist in malnutrition and eye disease, since the 1950s has been an avid critic of this priesthood

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[1]See J. C. Waterlow and Nevin S. Scrimshaw, 'The concept of kwashiorkor from a public health point of view', *Bulletin of the World Health Organization*, 1957, **16**, pp. 458-64.

[2]*The First Ten Years of the WHO*, Geneva, WHO, 1958, p. 310.

[3]Increasingly intense examinations of kwashiorkor permeate the medical literature of this time period. For example, see: Helen B. Burch, Guillermo Arroyave, Ruth Schwartz, Ana Maria Padilla, Moisés Béhar, Fernando Viteri, and Nevin S. Scrimshaw, 'Biochemical Changes in Liver Associated with Kwashiorkor', *The Journal of Clinical Investigation*, 1957, **XXXVI**(11), pp. 1579-87.

and its associated policies. McLaren asserted that WHO alienated him and his central interest -- advocacy for increased research and action on keratomalcia, a debilitating eye condition caused by vitamin A deficiency -- because it fell outside their conception of nutritional disease. As evidence, McLaren cited the failure of WHO through much of the 1950s to have meetings on the problem of nutritional blindness, a problem afflicting millions of people annually. He felt that medical men who firmly believed they could solve the problem of protein malnutrition held the nutritional yokes of FAO and WHO.[4]

The view that many medical men saw themselves as veritable 'übermenschen' when in fact they lacked appropriate knowledge and tools, has substantial support. The inherent problem in the medicalization of hunger and malnutrition was, as Williams and numerous other medical field workers pointed out, that doctors were minimally trained in nutrition, and entirely uneducated in malnutrition in developing countries. Thus they had a misinformed view of their own abilities based on their success in treating and curing disease in industrialized countries. Their lack of training seemed acute at WHO, which, according to Scrimshaw, "was a medical organization...[where] doctors didn't know about nutrition."[5] At least at FAO, Scrimshaw felt, the agronomists could sympathize with home economics and nutritional issues. That said, he nevertheless was unimpressed with the centralized manner in which the agency worked and candidly remarked that FAO's Nutrition Division had a few people scattered around the world with everyone else back in Rome.[6] Scrimshaw asserted that while nutritionists during the 1950s were not overtly critical, "it was talked about in the corridors".[7] Whispers of "they [FAO] should be working with Ministries of Agriculture as well as MOHs [Ministries of Health]"

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[4]Donald S. McLaren, interview, 6 October 1995. Although McLaren's statement might sound hyperbolic, the record does show that WHO overlooked vitamin A deficiency and xerophthalmia throughout the 1950s except for a study in Indonesia between 1952 and 1954. While the FAO/WHO/Unicef Joint Expert Committee on Nutrition during sessions one, three, five and six raised the issue, WHO responded only weakly. See: 'Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', Geneva, WHO, provisional agenda item 2.9 for thirty-fifth session of the Executive Board, EB35/9, 27 November 1964, pp. 38-40. Several other sources support this assertion. Susan Pettiss, the former director of the Helen Keller Foundation, claimed that at Unicef, where the medical programme was tied to WHO, vitamin A supplementation was discussed by the Board in 1965 but was not considered meaningfully before 1971. Susan Pettiss, interview conducted by John Charnow, 27 October and 3 November 1983, Unicef Archives, interview file, pp. 13-14.

[5]Nevin S. Scrimshaw, interview, 25 July 1995.

[6]Ibid.

[7]Ibid.

resonated in the air.[8] Without major precedents for such co-operation, this type of work developed slowly and was restrained by the small size of agency staff. In 1959, FAO's Nutrition Division had a staff in Rome of eighteen, one adviser at Unicef in New York, and an additional regional staff of seven. The latter was based in Washington, Mexico, Chile, Cairo, and Bangkok. WHO's Nutrition Section had three members at headquarters in Geneva, Scrimshaw (considered a staff member) at INCAP, and several consultants abroad.[9]

During the late-1950s, the atmosphere surrounding nutrition research and nutritional policy continued to be shored up as the composition of the FAO and WHO nutrition units became well-defined and their work along with Unicef's came to have a familiar rhythm.[10] Essentially, protein malnutrition, by then synonymous with kwashiorkor, piqued interest and embedded itself into the scientific psyche of these organizations. Nevertheless, broader understanding of nutrition in communities inspired a significant, if not revolutionary, change in international approaches to malnutrition. Prior to 1955, scientific conception of hunger and malnutrition issues had been largely couched in terms of disease, essentially a disease-oriented approach. Many nutritionists and their political counterparts in policy conceived of hunger and malnutrition as diseases that, with adequate research, could somehow be treated by one medical treatment or another. After 1955, however, a more holistic conception of hunger and malnutrition was adopted that encompassed medical, agricultural, educational, and economic factors and promoted multi-faceted approaches to new nutritional programmes. It would be reductionist to assert that a holistic conception stifled the trend that preceded it since disease-oriented proponents continued to influence the field of nutrition. There was, nevertheless, a rather dramatic transformation which is the underlying theme of this chapter.

Kenneth Carpenter has explored a few of the issues and projects that shaped protein-related nutritional work following the PAG's establishment. In particular, he highlighted how international committees between 1950 and 1955 determined that protein for children -- specifically milk substitutes -- had to be developed and distributed to stem protein malnutrition. He also followed the development and

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[8]Ibid.

[9]'The responsibilities of FAO and WHO in the field of nutrition: note prepared by the Nutrition Division of FAO and the Nutrition Section of WHO', March 1959, WHO Archives, folder 1, box A.0918, p. 2.

[10]Highlighting the high comfort level of Unicef with FAO, in his annual report to the Unicef Executive Board, Executive Director Maurice Pate joyously announced the appointment of a full-time FAO adviser and ongoing FAO/Unicef work. See: Maurice Pate, 'Statement of Maurice Pate to Executive Board', 22 October 1956, Unicef Archives, 88R025, box T-006, Teply files.

eventual failure, between 1955 and 1975, of numerous high-protein formulas, from fish protein concentrate to Lysine-enriched grain.[11] Although he thoroughly traced protein-rich food development, Carpenter fell short of properly explaining **why** these foods were being pursued vigorously. Much like the protein nutritionists themselves, the few historians who have touched on contemporary nutritional history have focused on the high-tech aspects of nutritional developments and have ignored the context of these advances. The broader political, programmatic, and scientific climate that telescoped out from the protein obsession is central to the discussion in this chapter.

Protein and Calories

For the purpose of continuity, this dissertation avoids expansive discussion of nutritional diseases besides those related to protein-calorie malnutrition. Kwashiorkor is a necessary focal point for two reasons: 1)it was, for decades, the most influential and popular malnutritional disease and 2)in later terminology it came to rest under the heading 'protein-calorie malnutrition' a term that I think well describes chronic persistent hunger. Historically, the term protein-calorie malnutrition (PCM) comes closest to reflecting the term 'hunger' and to encapsulating the broadest aspects of international malnutrition problems. In this light, PCM provides a reasonable probe that can be used to examine conceptions of hunger and malnutrition and their solutions. Furthermore, PCM during the decades discussed in this dissertation was considered the most significant public health problem in developing countries and received the lion's share of agencies' budgets. PCM was not the term of choice until the close of the 1950s.[12] Protein-malnutrition and protein-energy malnutrition (PEM) were used most frequently.[13] PEM and PCM are synonymous and their central importance stems from their replacement of the term protein-malnutrition and

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[11]Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 161-179.

[12]For a concise description of protein and calorie malnutrition as experts perceived them in the late-1950s see: John F. Brock, 'Protein malnutrition', pp. 21-6, and Herbert Pollock, 'Caloric malnutrition', pp. 27-31, in *Control of Malnutrition in Man*, New York, American Public Health Association, 1960.

[13]For examples of indicators used in the determination of PCM see: F. Gómez, R. R. Galvan, S. Frenk, J. C. Muñoz, R. Chavez, J. Vasquez, 'Mortality in second and third degree malnutrition', *Journal of Tropical Pediatrics*, 1956, 2, p. 77. Also: J. M. Bengoa, D. B. Jelliffe, and C. Perez, 'Some indicators for a broad assessment of the magnitude of protein-calorie malnutrition in young children in population groups', *American Journal of Clinical Nutrition*, November-December 1959, 7, pp. 714-20. Also: *Measurement of Levels of Health*, Report of a Study Group, Geneva, WHO, WHO Technical Report Series no. 137, 1957.

incorporation of calories. Both terms emphasized food supply and other principles in a way in which the focused term protein malnutrition could not. Nevertheless, in the decades to come, the grip of protein over the rhetoric and research of UN agencies would outweigh calories and energy. Carpenter in *Protein and Energy* highlights this tendency through his emphasis on protein over energy.

Scientific focus and concern for protein were glaringly evident in FAO's seminal complementary reports on protein and calorie requirements. The pamphlet *Calorie Requirements* related in general terms the basic human caloric requirements but did not mention PCM or its role in world hunger.[14] *Protein Requirements*, published in the same year, called attention to FAO's interest in supplementing diets with protein and broodingly stated that "The advances in knowledge enabled the [protein] Committee to adopt an approach which would have been impossible a few years ago, and at the same time increased its sense of responsibility."[15] This remark brought to light how seriously the involved experts felt protein to be as a public health issue, leading them to conclude that protein was "perhaps the most important of the nutrients needed by human beings and other organisms".[16] During this same period, Aykroyd at FAO reflected on the heightened interest in protein. In a letter to an FAO nutrition expert posted with Unicef in Guatemala, he wrote:

> It is, of course, true that human nutritionists, after concentrating for a period on vitamins, are 'coming back again to protein'. The reason for this is that, within very recent years, the widespread existence of protein malnutrition in human beings has been demonstrated. When FAO and WHO began work on this subject a few years ago, the fact that protein malnutrition is a problem of world-wide importance was not generally recognized.[17]

From the top of the agencies down, protein was being hailed as the most important nutrient missing from diets, and protein malnutrition became the target of their work.

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[14]*Calorie Requirements*, Rome, FAO, FAO Nutritional Studies no. 15, 1957.

[15]*Protein Requirements*, Rome, FAO, FAO Nutritional Studies no. 16, 1957, p. 2. Nevin Scrimshaw was the WHO representative at this FAO committee meeting in October 1955.

[16]Ibid., p. 47.

[17]W. R. Aykroyd, letter to John Duckworth, 29 November 1956, FAO Archives, 57.1A5.

Disease-based Approaches

The late-1950s saw a few profound shifts in nutritional research as well as in policy. Iodine deficiency disorders, the relationship between malnutrition and infection, fortification of milk with vitamins A and D, and programmatic emphasis on the pre-school child were all themes that played prominently into the repertoire of nutritional thought. In comparison to the previous ten years which had witnessed the birth of three international agencies and the veritable "discovery" of kwashiorkor, this period was a continuation of work. Many researchers and activists were anxious for results. The problem of goitre presented one possible area in which concerted research could have sweeping positive ramifications.

In 1956 Scrimshaw and two colleagues at INCAP, G. Arroyave and O. Pineda, published a landmark study entitled, 'The Stability of Potassium Iodate in Crude Table Salt'. The investigators in 1953 and 1954 had sought a solution to one of the burning problems in developing nations, goitre, and the accompanying problem of incorporating iodine into crude, frequently wet salt. The preventive and healing powers of iodine in the form of potassium iodide are lost when added to crude salt. Scrimshaw and his colleagues demonstrated that iodine in the form of potassium iodate was sufficiently stable to justify its utilization in countries where goitre was endemic and traditional iodization was inappropriate.[18] The broad applications of this finding would eradicate goitre in numerous areas, particularly in Latin America, during the ensuing decades and as early as 1957 inspired the Joint FAO/WHO Expert Committee to comment that, thanks to potassium iodate, iodine was being introduced into the salt supply in several countries.[19] For Scrimshaw, it showed how a relatively simple solution could have substantive ameliorative effects on the nutritional status of people. It also seems to have contributed to his conception of broader malnutritional problems in children in terms of problems and technological solutions. In Scrimshaw's disease-oriented view, by end of the 1950s, "we had the ability to wipe out goitre".[20] E. V. McCollum, a prominent nutritionist formerly active in vitamin research and a nutritional historian, well summed up the optimism with which researchers viewed nutritional investigations and breakthroughs. From his vantage point in 1957, McCollum declared:

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[18]Guillermo Arroyave, Oscar Pineda, Nevin S. Scrimshaw, 'The stability of potassium iodate in crude table salt', *Bulletin of the World Health Organization*, 1956, **14**, pp. 183-185.

[19]*Joint FAO/WHO Expert Committee on Nutrition, Fifth Report*, Rome and Geneva, FAO and WHO, WHO Technical Report Series no. 149, 1958, p. 28.

[20]Nevin S. Scrimshaw, interview, 25 July 1995.

> Before the emergence of the science of nutrition many millions of people in every generation, from ignorance, led lives blighted by malnutrition. Inferiority and suffering of domestic animals, with consequent economic loss, was even more widespread throughout the world. The new knowledge [of nutrition] brought about improvement of health and its attendant elevation of the status of human life above the sordid, to a degree scarcely equalled by any other agency concerned with the prevention or cure of disease. Implicit in physiological well-being is the prospect for betterment of courage, ideals, purposes, and achievement. Viewed from this standpoint, the rise of the science of nutrition is one of the greatest events in human history.[21]

Although McCollum's sentiment was hardly shared universally -- even within FAO and WHO nutrition units remained dwarfs compared to the others -- nutritional science had indeed risen through the ranks to present solutions to age-old problems. In the words of a *Lancet* editorial, "beri-beri and scurvy have been degraded from major menaces to preventable nuisances" while other nutrition problems persist.[22] A topic that a few decades earlier had been virtually absent from medical education and had not even been considered a field in its own right, found its proponents speaking with authority and influence as the decade came to a close.

Although it seemed that most nutritional disorders had treatments -- ranging from vitamin A supplements to iodate -- the serious lacunae could be found in workable solutions for PCM. The search for sustainable solutions allowed nutrition education to receive its greatest support to date, though disappointed experts noted that nutritional improvements due to education could not easily be identified and that it may therefore "be necessary to wait until the children of today are the parents of tomorrow before its full impact on food habits and nutritional status is evident."[23] This comment underlines why researchers generally threw their support toward projects they believed could rapidly -- or at least sooner than a lifetime -- show tangible results. Thus there are two leading historical strands that run through nutritional ideology located in the developing world during the late-1950s. On one hand, researchers sought quick "magic bullet" solutions such as thiamine and weaning foods for the prominent and pervasive problems of malnutrition. On the other hand, and running ideologically contrary to the former, the UN agencies recognized the

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[21]E. V. McCollum, *A History of Nutrition*, Boston, 1st ed., Houghton Mifflin Company, 1957, p. 421.

[22]'Better Nutrition', *Lancet*, 21 May 1955, 1061-62, on p. 1061.

[23]*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 46.

shortcomings of a vertical approach and tried, with difficulty, to develop horizontal applied nutrition programmes to treat the problem thoroughly.

School-aged Feeding Slows

Since the end of W.W.II, Unicef had focused its efforts on supplementary feeding programmes for school-aged children. In Europe, schools provided an excellent means for distributing aid and health care, and nutritionally deficient children could be identified with relative ease. Furthermore, schools were a logical starting-point for nutrition education that could encourage superior food habits. When Unicef began working in developing countries, the same framework for school-based nutrition intervention was transposed. Essentially the U.S. provided surplus dried milk powder in enormous quantities, and governments paid for much of the transportation and distribution costs. Unicef workers in the field along with FAO technical experts supervised distribution. FAO focused its staff on animal husbandry and the technical aspects of milk production while Unicef dealt with processing the milk and establishing dairy industries.[24] In some cases, Unicef encouraged local production of milk and constructed milk pasteurization plants that encouraged more efficient cattle breeding and provided milk supplies for feeding programmes. Seen in this light, supplemental feeding was an extension of the disease-based approach to nutritional deficiencies.

During the early-1950s, several field workers opined that school-based feeding was not viable. Emma Reh, a young nutritionist conducting surveys in Central America for FAO, perceived major problems which she communicated to Aykroyd: "We always found children in our sample who rejected Unicef milk, since they had better at home. While all school children are not well off, the non-school children are the more needy of the two."[25] Scrimshaw, through his work as director of INCAP, similarly believed that Unicef was misdirecting its efforts. In his view, morbidity and mortality were most prominent in pre-school aged children and it was they who should be the primary recipients of aid. During 1949 and 1950 Scrimshaw and his colleagues "couldn't find any signs of malnutrition in school children".[26] To test this empirical

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[24]Charles Egger, interview conducted by John Charnow, 25 October 1983, Unicef Archives, interview file, pp. 3-4.

[25]Emma Reh, letter to Aykroyd, San Jose, Costa Rica, 9 November 1950, FAO Archives, 57.0A1. Reh's frustration with milk-feeding programmes and Unicef's work in particular were evident in this letter. She wrote disparagingly of Unicef: "Is there now a U.N. organization whose scope it would be to concern itself with the welfare of children? It takes more than a supply organization. A U.N. Children's Bureau is needed."

[26]Nevin S. Scrimshaw, interview, 25 July 1995.

finding, they tried providing full school meals but found that the infant mortality rate stayed close to one hundred and kwashiorkor incidence remained steady.[27] The more INCAP investigators came to understand the troubling problems of malnutrition in surrounding Guatemalan communities, the clearer their focus on children under five became. Although FAO and Unicef had long before recognized that milk importation was not a long-term solution to malnutrition, there were few alternatives in sight.[28] Nevertheless, numerous field workers, particularly those working for Unicef, had positive perceptions of the feeding programmes.

The journal of Arthur Robinson, a long-time field administrator for Unicef and chief of the Northern South America office, presented an alternative view of feeding programmes. While visiting the sugar cane-cultivating island of St. Kitts where Robinson noted the land "owners are obliged to grow at least 5% of other crops, but in fact...I saw little but sugar", he visited a Unicef well-baby centre and related school milk distribution programme.[29] Robinson probed the chief doctor about the impact of the feeding programmes and learned that before the programmes, "There used to be a large percent of children in schools who had obvious clinical evidence of malnutrition; now it is difficult to find obvious evidence".[30] While it would be difficult to speculate on the true nutritional condition of the school-aged children seen by Robinson and Scrimshaw -- they were after all, in utterly different settings -- their commentary and concerns illuminate some of the key differences between the nutritional experts and the field workers. The experts certainly did see some signs of malnutrition in school-aged children but were drawn to the more profound symptoms of protein malnutrition in young children. Field workers like Robinson saw malnutrition in all ages of children and searched frequently for the means to do something for all of them. Usually, doing something meant school milk distribution. Two years later, however, no doubt inspired by the plethora of interest in protein malnutrition, Robinson implied, in one piece of correspondence, that protein malnutrition following weaning was a (if not **the**) major cause of death in young children. In fact, during just one day, he had seen seven infants die of protein malnutrition in a hospital.[31]

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[27]Ibid. The infant mortality rate (IMR) refers to the number of infants who do not reach the age of one, per thousand live births. In industrialized countries today, the figure tends to be less than ten.

[28]See: *Report of the Nutrition Committee for the Middle East, First Session, Cairo, 18-26 November 1958*, Rome, FAO, FAO Nutrition Meetings Report Series no. 24, 1959, pp. 38-41.

[29]Arthur Robinson, travel journal, 26 October 1957, Unicef Archives, CF-NYHQ-05AT.

[30]Ibid.

[31]Arthur Robinson, letter to Miss Winifred Salisbury, 10 September 1959, Unicef Archives, CF-NYHQ-05AT.

Years earlier, Robinson had actually had the opportunity to meet Scrimshaw and had come away with a rather negative impression. Robinson's discourse shows that even Scrimshaw was initially a proponent of appropriately-designed milk supplementation projects. In 1952, Robinson attended a meeting "which consisted largely of a lecture by Dr. Scrimshaw" and that gave him the feeling Scrimshaw's opinions of milk were "equivocal and confused".[32] After Robinson told Scrimshaw that Unicef's position on milk was largely based on the FAO/WHO Expert Committee on Nutrition's recommendations (which had advocated milk distribution) -- Scrimshaw suggested that the recommendations worked fine in Europe where milk distribution could be mixed with nutrition education but were ineffective in less developed countries unless combined with similar services. In the end, Scrimshaw advocated milk along with education about seven food groups before recognizing that the constituents of these groups were not available in Latin America. As a result of Scrimshaw's apparent contradictions, Robinson believed that "Altogether, for a man with two doctorates, he seems a very confused young man."[33] Perhaps more than highlighting any confusion on Scrimshaw's part, this incident showed the early cynicism of a practical nutrition worker toward an expert, and the frustration of an expert with his emerging field.

It is unclear how much impact INCAP investigations had on policy at Unicef during the mid-1950s since many top policy makers, such as Heyward, were having second thoughts already about school-feeding and milk powder distribution. According to his colleagues, Heyward in particular felt that milk powder and conservation projects by themselves "would have limited impact on nutrition and health."[34] This attitude appears to have had two profound effects on nutritional policy: firstly, the linking of milk distribution to community health care worker training and education, and secondly, the funding of protein research to find improved avenues for impact. In retrospect one could surmise that milk and protein supplements, while being a highly visible component of nutritional programmes, were nevertheless only one point of concentration. Carpenter's publication on protein as well as other contemporary pieces reinforce the view, however, that protein ruled minds, research, and policy. Is it a historical distortion that protein attracted greater attention than, for example, caloric intake? The written and oral records strongly

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[32]Arthur Robinson, letter to Robert Daves, 12 November 1952, Unicef Archives, CF-NYHQ-05AT.
[33]Ibid.
[34]L. J. Teply, letter to Jack Charnow regarding the flow of nutrition developments in Unicef, 25 May 1983, Unicef Archives, CF-NYH-09R.H1/C/02.09, box T006.

point toward protein having been the cardinal issue for nutrition workers and agencies. Les Teply, Unicef's senior nutritionist, provided seminal insight into the nature of protein interest in a letter to a colleague interested in nutritional history: "Although the surveys of Brock and Autret, for example, especially in Latin America, did speak of multiple nutritional deficiencies, including calorie deficiency, the main thrust of recommendations was to ensure supplies of nutritious protein suitable for young children."[35] Teply then explained that this concentration was not "irrational" because weaning foods had already demonstrated an unhealthy dependency on carbohydrates.[36] The force of the protein tide continued to grow as scientific studies brought ongoing attention to the plight of protein malnourished children.

By 1955, it was clear to one Unicef nutrition consultant, Charles Glen King, that Unicef's central nutrition projects in Central America -- MCP, school feeding, milk distribution through Maternal and Child Health Centers, and emergency relief -- were making little progress. In spite of milk being too expensive for the poor, King nevertheless encouraged improved milk production and further promoted broader educational programmes that had milk or other high-protein foods at their base. Unicef, King felt, should particularly concentrate on children aged one to five years since they seemed the hardest hit by severe malnutrition. In an apparently unintentional allusion to Darwinian struggle, King asserted that Unicef should focus on children from the time of weaning, when they were most prone to kwashiorkor, until they "are sufficiently advanced to obtain food on a more favourable basis in competition with other members of the family".[37] King's wording signified a clear break with Unicef's past concentration on school-aged children. In 1958 Moisés Béhar, an increasingly eminent nutritionist, along with Scrimshaw and colleagues, conducted an innovative study that investigated the cause of childhood death in four rural communities and compared their findings with the official statistics. The researchers sought to determine whether deaths brought on by malnutrition, often in the form of kwashiorkor, were being unreported. Their findings demonstrated that kwashiorkor was, in fact, a significant cause of death in nearly 20% of the cases. Furthermore, an analysis of the age distribution of mortality highlighted that 58% of deaths occurred in children under the age of five years, 5% between the age of five and fourteen years, and the remainder occurring in people fifteen years and over. Thus,

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[35]Ibid.

[36]Ibid.

[37]Charles Glen King, 'Recommendations for further development of Unicef-aided nutrition programmes in Central America and Panama', 1955, E/ICEF/293, 1-22, on p. 5.

their data suggested that "approximately one-third of the children born alive die before reaching five years of age."[38] The implications of their findings -- that nutrition in young children must be addressed more broadly in public health programmes -- in the hands of the politically savvy Scrimshaw, were bound to result in policy changes.

On the basis of INCAP evidence, Scrimshaw launched a highly critical attack on Unicef's school-child focus. He was joined by Jelliffe, another fervent advocate of young children's health concerns, as well as by other like-minded scientists. After undertaking much lobbying, particularly of Heyward, they succeeded, and Unicef radically realigned itself to make children under the age of five the priority. By 1957, change could be detected in sensitive communications of the Executive Director and the Executive Board: "The attention of the Board was likewise directed to the importance of improving the nutrition of pregnant and nursing mothers and of children during the crucial post-weaning and pre-school ages. Such an improvement would be even more valuable, from a health point of view, than improvement of the nutrition of the school age child."[39] Although this was not the first instance when Unicef approached such programmatic matters, the Executive Board admitted that, "The opportunities offered through maternal and child welfare centres to improve this [weanling] situation were great, although it was clear that, with a few exceptions, relatively little had thus far been done in taking advantage of these opportunities."[40] The school-based programmes Unicef maintained thus became more educational in nature: nutrition courses for rural teachers and other projects stressed sustainable improvements of diets through school gardens, and improved food preparation became popularized.[41] FAO supported these new projects and also pressed for community agricultural development that reflected nutritional concerns.[42] Unicef, however, held fast to its milk distribution programmes -- albeit shifted toward younger children -- for

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[38]Moisés Béhar, Werner Ascoli, Nevin S. Scrimshaw, 'An investigation into the causes of death in children in four rural communities in Guatemala', *Bulletin of the World Health Organization*, 1958, 19, 1093-1102, on pp. 1095-96.

[39]Maurice Pate, 'Expansion of Unicef Aid to Maternal and Child Nutrition Note and Recommendation by Executive Director', 9 July 1957, E/ICEF/l.1123, p. 9. The original board comment can be found in 'Report of the Executive Board', April 1957, E/ICEF/344/Rev.1, paragraph 66.

[40]Ibid.

[41]For a dry and clinical description of this transformation at Unicef, as well as of milk conservation programmes, see: John Charnow and Margaret Gaan, *History of Unicef*, 1965, Unicef Archives, pp. 68-79.

[42]*Report of the Regional Seminar on School Feeding in South America, Bogotá, 27 October - 8 November 1958*, sponsored by FAO and Unicef, Rome, FAO, FAO Nutrition Meetings Report Series no. 23, 1959, pp. 42-3.

lack of a high-protein substitute.[43] Donald R. Sabin, who by 1958 was the co-ordinator of Unicef's Food Conservation Division, articulated Unicef's programmatic priorities at an FAO meeting. Sabin sequestered their aid into three categories: maternal and child health (MCH), disease control, and nutrition. On the nutrition front, he aptly and accurately cited the five foci of their work: "feeding programmes for children and mothers; milk conservation; development of other protein-rich foods; aid for nutrition education to be effective at the village level and to stimulate self-help; and salt enrichment for goitre control."[44] In practice, the nutrition programme overlapped with MCH, whose major interest was in thousands of rural health centres. Sabin's remarks well illustrate how nutrition had become a centrepiece of the Unicef programme and had been redirected to the youngest, most vulnerable children in developing countries.

The transformation of programmatic policy from school children to young children reflects a milestone in the application of nutritional scientific observations -- which had for at least three decades empirically identified infants and small children as being particularly vulnerable -- to programmes. For Scrimshaw it proved to be the first demonstration of his ability to influence and alter policy. In his words, "The first major policy change [in this nutritional history] was Unicef's shift away from the school child toward the weaning child".[45] Weaning itself quickly became a central element of new nutritional research and policy. In developing countries in the years after the war, breastfeeding was still the food of choice for children up to three years of age.[46] Jelliffe and others were attracting concern for breastfeeding itself, particularly in the developing world. While Jelliffe had noted the need for a weaning food in his classic 1953 text on infant nutrition, he had become increasingly concerned with the failure of mothers to breastfeed altogether.[47] Breastmilk provides nutritional

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[43] *Expansion of Unicef Aid to Maternal and Child Nutrition*, op. cit., note 39 above, p. 9.

[44] Donald R. Sabin, *An Outline of the World of the United Nations Children's Fund*, presented to the Consultative Sub-committee on Surplus Disposal, FAO, Washington, D.C., 6 February 1958, Unicef Archives, Sabin papers, p. 2.

[45] Nevin S. Scrimshaw, interview, 26 July 1995. Carpenter notably overlooked the role of weaning in the development of protein science. While he mentioned the development of specific weaning foods, he failed to note how debate about protein malnutrition rippled outward from the lack of a protein-fortified weaning food in the developing world.

[46] There are a number of important articles in *Women and Children First*, particularly those by Richell, Gaitskell, Smith, and Peretz, that provide relevant background on the pre-W.W.II propensity to address weanlings' health. Valerie Fildes, Lara Marks, Hilary Marland (eds), *Women and Children First: International maternal and infant welfare 1870-1945*, London, Routledge, 1992.

[47] For a brief summary of Jelliffe's views on this topic, see: D. B. Jelliffe, 'Breast Feeding in Technically Developing Regions', *Courrier*, 1956, VI(4), pp. 191-5.

benefits to a growing, extremely vulnerable child. From the colostra, or first milk, which contains antibodies, to the composition of ordinary breastmilk, which is loaded with essential nutrients and protective factors, breastmilk is a super infant food. In areas where water and food supplies are contaminated by bacteria and parasites, breastmilk often provides the only safe nutrition to needy children. Williams and other field staff in developing countries had frequently commented on the improved health seen in the children who breastfed for the longest periods of time. However, it had also been noted that one of the most critical times in the life of child -- if not the most critical time -- was at weaning. At weaning, a growing child accustomed to healthy mother's milk must make the transition to the local food provided. In many cases the local food cannot compete nutritionally with mother's milk. Furthermore, ingestion of contaminated substances leads to chronic diarrhoea and infection in most very poor children. It was with this intimidating and overwhelming litany of problems in mind that new researchers in the developing world became increasingly frustrated and eager for solutions.

Protein Science and Weaning Foods: Children Come First

Unicef's shift toward weaning children reflected the broader movement in the late-1950s to allocate scientific personnel and resources to protein malnutrition in children under five and in appropriate weaning foods. WHO, FAO, and the PAG provided much of the scientific, and frequently financial, thrust that was required. At the fifth meeting of the Joint FAO/WHO Expert Committee on Nutrition in 1957, protein malnutrition figured prominently into discussion, in no small part due to the election of William Darby, the head of the PAG, as chairman of the session.[48] The committee determined that FAO and WHO had followed three stages in its research on protein malnutrition, the first two consisting of field surveys and analysis of the problem. With those near completion, according to the committee, FAO and WHO had moved into stage three which involved the implementation of preventive measures, particularly the supplementation of children's diets with "protein-rich foods other than milk"[49] WHO had a crystal-clear platform for its support of these foods: "Where protein malnutrition is caused by the inability of the people to obtain a suitable protein-rich food, the solution must lie in finding a cheap source of such a food."[50]

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[48]*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 3.

[49]Ibid., p. 20.

[50]*The First Ten Years of the WHO*, op. cit., note 2 above, p. 311.

In a scientific study typical of the period, four prominent Indian nutritionists affiliated with WHO and based at the widely-recognized Nutrition Research Laboratories in Coonoor, South India, conducted a protein malnutrition survey of poor children under five years of age and identified the detrimental and often fatal roles of diarrhoea, kwashiorkor, and marasmus during weaning. Significantly, the authors noted that kwashiorkor and marasmus accounted for a total of 2.7% of clinically-determined cases of illness while diarrhoea accounted for 20%.[51] These figures reflected, however, hospital or in-patient admissions and therefore could not be used as indicators of actual prevalence in the population. It was further observed that diarrhoea and other gastro-intestinal infections could be highly correlated with kwashiorkor.[52] This framing of nutritional questions in terms of kwashiorkor throughout dozens of similar studies highlighted the need for a high-protein weaning food. The language of protein malnutrition had become synonymous with that of kwashiorkor, and the perception of the needs of afflicted children created an atmosphere that pushed for solutions to this problem.

Since officially the MCH projects were considered one major component of hunger programmes, it is poignant that weaning foods were generally seen as the foundation for related projects. Thus, mothers were viewed as child-bearers and child-providers. As much as some researchers promoted the health of women, their health was usually passed over for the more appealing topic of what mothers could learn or do for the health of their children.[53] Several studies during the decade investigated the chemical composition of breastmilk, in part to determine whether a woman's health status affected the quantity or quality of breastmilk. For the most part, no overtly detrimental correlation could be found.[54] This is not said to discount the important work researchers conducted to determine ways to improve child health through educating or providing health care for mothers, but rather, to highlight how malnutrition itself broadly concerned itself at this time with children, not adults.

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[51]K. Someswara Rao, M. C. Swaminathan, S. Swarup, V. N. Patwardhan, 'Protein Malnutrition in South India', *Bulletin of the World Health Organization*, 1959, 20, 603-39, on p. 603. Rao and Patwardhan were, incidentally, on the Fifth Joint FAO/WHO Expert Committee on Nutrition. Patwardhan was a member while Rao served on the secretariat. See: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 2.

[52]Rao et. al, op. cit., note 51 above, p. 633.

[53]See, for example: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, pp. 46-49. A few investigations did reveal that maternal nutritional status might not vastly affect the quality of breastmilk. This no doubt led to a de-emphasis of programmes that specifically designated maternal nutrition as a priority.

[54]See: Bhavani Belavady and C. Gopalan, 'Chemical composition of human milk in poor Indian women', *Indian Journal of Medical Research*, March 1959, 47(2), pp. 234-45.

In a limited distribution report on MCH programmes in 1957, among other topics such as weaning foods and the PAG, Pate stressed methods for improving nutrition at the village level, a topic of discussion annually since 1954 at Unicef. In addition to "increasing the effectiveness of milk distribution by associating it with appropriate education in nutrition", he harped on the need for a concentration on nutrition in villages where, to date, public health interventions had been limited to agricultural and economic improvements along the lines of FAO's food supply policy.[55] Unicef's ideology had clearly shifted dramatically from just five years earlier when relief was the nucleus of policy. In 1957, Unicef was taking seriously the task of impacting children's lives by addressing nutritional problems on a community level. However, practically the concept of high-protein weaning foods had aroused Unicef's attention. Heyward in particular had become exceptionally interested in the industrial development of these foods and guided Unicef toward their production.[56]

Nevin Scrimshaw and Incaparina

Scrimshaw's work was significant in great part because of his prolific publications and close relationship with the PAG, FAO, and WHO.[57] FAO had placed research assistance into protein-rich foods for mothers and children at the top of its agenda and planned in particular, in 1956 and 1957 to focus on fish flour and oil-cake flours such as cottonseed. Its 1955 Conference report predicted an expansion in this type of work co-ordinated with and funded in part by Unicef.[58]

Scrimshaw's experience with weaning foods is important not only because his empirical observations were popular among researchers, but because his related work informed UN policy.[59] From the beginning of his nutritional work, virtually coinciding with the formation of WHO, FAO, and Unicef, Scrimshaw had increasingly expanded his connections within the very small network of nutritional experts. Such was the case that "When Frank Clements was the head of nutrition [at WHO]...in

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[55]*Expansion of Unicef Aid to Maternal and Child Nutrition*, op. cit., note 39 above, p. 7.

[56]Charles Egger, interview conducted by John Charnow, 26 October 1983, Unicef Archives, interview file, p. 2.

[57]Nevin S. Scrimshaw, interview, 18 July 1995.

[58]*Report of the 8th Session of the Conference 4-25 November 1955*, Rome, FAO, March 1956, pp. 118-19.

[59]Writing years after these events, Les Teply, Unicef's senior nutritionist, commented that outside of immediate staff, Scrimshaw and Darby (the first head of the PAG) were the key players internationally and in Unicef's own protein work. See: Les Teply, letter to E.J.R. Heyward, 2 December 1983, Unicef Archives, CF-NYH-09R.H1/C/02.09, 88R025, box 1988-T006.

1949...and I was just starting INCAP...he said to me 'The thing that you can do which would be the greatest contribution to nutrition in the world would be to develop a practical, low-cost weaning food' and I didn't forget that."[60] Indeed, Scrimshaw did not forget. Clements' words were a mantra for Scrimshaw. He filtered much of what he saw and read through them. They were certainly ringing in his head when, in Guatemala, he and his colleagues

> began to see these cases [of malnutrition] coming in and then tried to determine what we could tell the mother. And we found that sometimes mothers would bring children like this to the clinic and the physician would say, 'Give the child milk', and the mother of course couldn't afford the milk in the quantity and quality needed but would try to comply and put a teaspoon full of milk in a glass full of water. Then the child would come back and the doctor would say 'well I told you to give the child milk', and the mother would say 'well I did give the child milk but he got worse' -- or she simply wouldn't come back either because the child died, which was most common, or because the doctor didn't give her any advice that she could follow. Okay, well, doctor's stupid.[61]

In Scrimshaw's mind, however, the problem was far from one of medical stupidity -- though that certainly had a role in these affairs. Medical doctors in hospitals and clinics could, with relative ease, be retrained to listen better to patients and provide more practical advice about feeding and averting malnutrition. But what of the mothers who had no opportunity for medical advice and attention? These troubled and inspired Scrimshaw the most:

> Well, so then you're stopped on the roadside with a woman with a child in her arms who obviously is on the verge of full blown kwashiorkor and is going to die unless he gets some protein and what do you tell that mother? We know we couldn't tell her to get milk, and we knew the problems with giving legume, and we knew that we couldn't give more corn; and the whole family had a few ounces of meat a week...and even there there was the feeling that the man needed it for work...it was very very frustrating and that was when, remembering what Clements had said, I started to see what we could do.[62]

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[60]Nevin S. Scrimshaw, interview, 18 July 1995.

[61]Ibid.

[62]Ibid.

Scrimshaw's anecdote highlights a number of extremely important issues in nutritional history. It summed up the frustration shared by many doctors in developing countries of all too frequently having no sound advice to give mothers in order to prevent childhood mortality. Scrimshaw elucidated how, as a researcher and head of a major nutritional institute, he was inspired to find a solution, literally and figuratively. That it was Clements who recognized the problem prior to Scrimshaw and encouraged his work in Guatemala reflects the frequently unofficial or certainly unwritten ways in which policy makers interacted with science.

In many regions of the world researchers conducted work analogous to Scrimshaw's. However, the attention and momentum that INCAP built for a weaning solution does stand apart from similar ventures. Béhar, then a newcomer to INCAP, believed that "something was necessary for children who could not have milk. We didn't want it to be food distribution. We felt it should be something people could buy by themselves. We were convinced some people could not afford it, but the solution was for them to on their own move out of poverty."[63] INCAP spent years tracking down a suitable weaning food. The first problem -- a source of protein -- was the greatest impediment. Scrimshaw related how soon after his expression of interest in a weaning solution, he considered soy in the form of soy milk as a possible source. The private sector wasted no time in following up on his interest:

> Well at that time there was a soybean association that was anxious to supply initial quantities and so on and...as far as I could tell at the time, the efforts to grow soy in the tropics had failed and the prospects that soy would be available in Central America seemed in the foreseeable future to be remote and making these countries dependent on an imported product didn't seem to me a service.[64]

Thus Scrimshaw was thinking in very practical terms about a low-cost milk substitute. He found other seeds had major drawbacks as well. Sesame shattered when harvested, and peanuts were prohibitively expensive. It was then that he and his colleagues

> found that there were large amounts of cottonseed meal being shipped to Germany and to Europe for animal feeding. Well when we looked into the cottonseed we found the protein was fine but it had a toxic pigment, gossypol, which could kill non-ruminants if there was too

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[63]Moisés Béhar, interview, 29 December 1995.

[64]Nevin S. Scrimshaw, interview, 18 July 1995.

> much of it incorporated in the feed and obviously this wasn't the kind of thing that you wanted to feed to infants.[65]

Not surprisingly, Scrimshaw found wide support in the PAG for attempts to remove the gossypol from the cottonseed. The PAG set an acceptable level for gossypol and helped facilitate the interaction of Aaron Altschul, a United States Department of Agriculture chemist and protein expert based in New Orleans, with INCAP during May 1959. For Scrimshaw and his colleagues, the patient and attentive Altschul provided a major breakthrough: "Aaron showed them [cotton oil mill operators] that if they added holes to keep the temperature down and they operated the press at a lower speed so it didn't heat up so much, then most of the gossypol could go into the oil and that could be cleaned up by refining".[66] Altschul himself felt inspired by the whole process and noted, after seeing children being given the INCAP mixture, that he could "see why pressure exists to make this mixture a practical reality in Central America."[67] Altschul identified four mills -- one in Guatemala, two in El Salvador, and one in Nicaragua -- that could produce the cottonseed flour with sufficiently low levels of gossypol.[68] Economic and implementational concerns aside, he considered the transformation needed at these mills as the sole impediment to making INCAP Mixture 9, a high-protein food, practical.[69] As a result of Altschul's mechanical insight, INCAP had the opportunity to develop, on a wide-scale, a seemingly practical high-protein milk substitute called Incaparina.[70]

Altschul interestingly noted that mixture 9 should be viewed as "essentially a new product, and should not be defined simply as a mixture of the ingredients. We might even say that this cooked product may be to the mixture as a mixture of atoms is to a chemical product."[71] Altschul's remarks are emblematic of his concern that the mixture could conceivably have deleterious effects on its recipients and of the hyper-scientific manner in which researchers were framing this formula. By viewing it chemically -- a necessary procedure in order to assure its efficacy -- researchers

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[65]Ibid.

[66]Ibid.

[67]Aaron M. Altschul, *Report by Aaron M. Altschul of observations made during travel in Central America May 10th to 22nd*, 1959, INCAP, INCAP I-78, Scrimshaw Archives, p. 1.

[68]Ibid., p. 2.

[69]Ibid., p. 4.

[70]The etymology of Incaparina is rather interesting. In Spanish, the word for flour is harina, thus the 'arina' in Incaparina. INCAP scientists considered the need to give the weaning solution a palatable name. Incaparina is produced to this day in Central America.

[71]Altschul, op. cit., note 67 above, p. 6.

boosted the mixture's status to a medicinal level, thereby unintentionally reinforcing the view that hunger, a sickness, must have a cure. This view could be heard in the conclusion of Altschul's report: "The development of an all-vegetable food that is capable of having the same protein nutritive value as an animal protein mixture represents a type of sophistication which is no different than the sophistication which has marked the advance of society from time immemorial."[72] The substantial march of progress, in the minds of many researchers, would be able to dampen, if not eradicate, the miseries that had always plagued humankind. The optimism at INCAP was sufficiently intense to promote similar projects world-wide.

PAG Optimism

While WHO, FAO, and Unicef struggled within themselves to provide assurance that their projects were, in fact, making a tangible difference, the PAG leadership expressed tremendous confidence in its mission and impact. Many of the PAG members worked in related capacities on other committees such as the Committee on Protein Malnutrition which was sponsored by the Rockefeller Foundation and the National Academy of Sciences-National Research Council.[73] György, King, Sebrell, and Darby, all founding members of the PAG, sat on this committee which, in tandem with the PAG, emphasized the need for high-protein weaning foods for international nutritional improvement. The committee worked most closely with the PAG, but also had liaisons with WHO, FAO, and Unicef. In a report to the Rockefeller Foundation in 1958 the Committee on Protein Malnutrition sought to elaborate on the use of a $250,000 grant received earlier and pave the way for an additional grant of $300,000. The grant proposal contained the authors' infectious enthusiasm for protein research: they alerted the Rockefeller Foundation to the research grant having been used "only in connection with a broadly conceived world-wide program aimed at increasing the supply of safe and nutritionally adequate protein foods for the most vulnerable groups".[74] The report further trumpeted success in demonstrating the use and practicability of vegetable protein food mixtures in

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[72]Ibid., p. 9.

[73]The PAG lobbied the Rockefeller Foundation to make a grant in 1956 to the US National Academy of Sciences for weaning food research. The Committee on Malnutrition (part of the Academy), working with the PAG (after all, the members were the PAG), administered the grant. See: 'Review of the Organization's programme in nutrition, 1948-1964', op. cit., note 4 above, pp. 19, 20.

[74]W. H. Sebrell, W. J. Darby, G. A. Goldsmith, P. György, C. G. King, 'Report to the Food and Nutrition Board by the Committee on Protein Malnutrition', 31 October 1958, Unicef Archives, CF-NYHQ-05ANS-002.

developing countries, particularly in the treatment and prevention of kwashiorkor.[75] Such findings led the committee to optimistically assert that their research would result in a "maximum return" which would be seen in practical plans and programming.[76]

The underlying power of the PAG was that its membership swelled during the late-1950s to include the top nutritionists from developing countries -- all of whom shared a concern for weaning foods. The PAG members believed, largely due to Scrimshaw's work on Incaparina, that weaning foods using locally available sources and modern scientific techniques, could have an impact on protein malnutrition. Not everyone agreed, however, that these formulas held the key to arresting protein malnutrition. Even during the PAG's embryonic stage, Burgess, the WHO Nutrition Section Chief, and Aykroyd had commiserated over the overly-optimistic hopes pinned to protein-rich foods. Aykroyd wrote to Burgess:

> I am fully in agreement that the FAO/WHO/Unicef program concerned with the processing of presscakes and other protein-rich foods will not go very far in solving the problem of protein malnutrition among children throughout the world...As far as FAO and WHO are concerned, activities in this particular field form only a relatively small part of our total nutrition program, a fact which Unicef has sometimes found difficulty in grasping.[77]

Although such pessimism surfaced from time to time, generally, protein mixtures attracted an enthusiasm absent from other nutritional undertakings.

Malnutrition and Infection

Since its first two reports, the Joint FAO/WHO Expert Committee on Nutrition had stressed the need for greater knowledge of the interactions between nutrition and infection. By 1957 the topic had returned to prominence as concern mounted about the role of this relationship in the development of protein malnutrition.[78] The flurry of viewpoints in the scientific press ranged from advocacy of rapid treatment of infection and malnutrition in order to improve health, to the possibility that a poor diet might actually **help** a person ward off infection. Such

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[75]Ibid., p. 4.

[76]Ibid., p. 3.

[77]W. R. Aykroyd, letter to R. C. Burgess, 15 November 1956, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

[78]See: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, pp. 35-6.

divergent perspectives, particularly the latter, inspired a few researchers to uncover a reasonable explanation of the complex interactions of infection and nutrition.

In the early-1950s, Scrimshaw had an interest in this troubling interrelationship: "I started writing very early that infection was just as important a control of malnutrition as nutrition itself".[79] Scrimshaw's first investigations into the nature of malnutrition-induced morbidity and mortality inspired numerous other groundbreaking studies at INCAP. The four-village study of 1955 found that thirty percent of children on public records were listed as dying from infective and parasitic diseases when, in fact, most of them were dying from kwashiorkor and from diarrhoeal dehydration.[80] In the mid-1950s, Scrimshaw was telling colleagues around the world that infection was a key precipatory factor in the onset of kwashiorkor. According to Scrimshaw, Gopalan from India and Hegsted from Harvard told him that they had not seen adequate evidence to support the hypothesis. Scrimshaw found such comments frustrating and provocative since

> here we could see literally with our eyes the relationship between an episode of diarrhoea or measles and kwashiorkor and we systematically showed that every one of the communicable diseases of childhood, measles, German measles, whooping cough, could in the right circumstances, precipitate kwashiorkor, and we never saw kwashiorkor that wasn't associated with infection.[81]

By the late-1950s, Scrimshaw's colleagues were recognizing correlations between malnutrition and diarrhoea. Since diarrhoea had long been recognized as a primary cause of death in children under five, this connection figured deeply into researchers' interests.[82]

In 1957 Scrimshaw first contacted John Gordon, the head of epidemiology at the Harvard School of Public Health, to discuss malnutrition and infection. Together with Carl Taylor, also a professor at the Harvard School of Public Health, they set out to review the frequently contradictory medical investigations on the interactive roles of nutrition and infection. Their search initially confusingly showed that "many of the important infections of human populations are rendered more serious in their

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[79]Nevin S. Scrimshaw, interview, 26 July 1995.

[80]Béhar et. al., op. cit., note 38 above, p. 1099.

[81]Nevin S. Scrimshaw, interview, 26 July 1995.

[82]See: R. C. Burgess et. al., 'Informal meeting of advisers on nutrition research, Geneva, 11-13 March 1959: report to the Director-General', Geneva, WHO, 14 April 1959, MHO/PA/86.59, LSHTM Archives, WHO reports box, pp. 11-12, 17-18.

consequences by the presence of malnutrition; that a few infections are indeed less severe when associated with nutritional deficiency; and that many infections themselves precipitate nutritional disturbances."[83] That these three apparently sound results occurred suggested to the authors that they should reconsider the fundamental structure of their conception of nutrition and disease.

Scrimshaw, Taylor, and Gordon proceeded with their investigation and methodically reviewed mounds of data about the relationship between malnutrition and different types of infection. Taylor recalled that as they went through roughly 3000 publications, nutritionists consistently argued for nutritional interventions as a "silver bullet" for controlling infections. Conversely, the communicable disease specialists noted in their publications that infection control was a good method for controlling malnutrition. The importance of their comprehensive survey was, Taylor said, that "until our work nobody was putting those two observations together."[84] Their sweeping review revealed that nutritional deficiency appeared to be associated with increased resistance to viral and protozoan infections, probably due to the infectious agents' reliance on host cell processes. However, malnutrition frequently seemed to lower resistance to infection from "rickettsial, bacterial and helminth infections."[85] Thus they showed nutritional deficiency usually decreased resistance to infection, a notion that had been conventional wisdom for decades. They referred to this relationship as being "synergistic" -- malnutrition helped along the infection. In rare cases, the relationship between malnutrition and infection was defined as "antagonistic" because malnutrition actually decreased the likelihood of infection, often by impairing absorption. The vast majority of studies that they examined made use of laboratory animals and the strength of their conclusions drew mainly from the superimposition of the laboratory findings on widely-observed interactions in humans.

The investigators also turned to the far less discussed issue of the detrimental influence of infection on nutritional status, which they also considered to be a synergistic relationship. Much empirical data had shown that kwashiorkor often occurred in children just after an acute infection, most commonly diarrhoea or measles. These along with protozoan infections were shown to exacerbate nitrogen losses and accelerate the appearance of protein deficiency.[86] Although the researchers could not

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[83]Nevin S. Scrimshaw, Carl E. Taylor, and John E. Gordon, 'Interactions of Nutrition and Infection', *The American Journal of the Medical Sciences*, March 1959, 237(3), 367-403, on p. 367.

[84]Carl Taylor, interview, 26 June 1996.

[85]Scrimshaw et. al., op. cit., note 83 above, p. 389.

[86]Ibid., pp. 391-95.

conclusively assure their colleagues that malnutrition was bad for infection and vice-versa, they presented a "working generalization" that deleterious interaction -- synergism -- was the "dominant interaction".[87] In a remarkable call for reasonability on this point, they wrote, "No competent observer can witness the deaths from seemingly trivial infection of malnourished persons in technically underdeveloped areas...without realizing that large numbers of people are dying from infections ordinarily not fatal."[88] They therefore concluded that public health programmes addressing either problem had to take into consideration the interdependency between these factors.

Beyond the investigators' generalizations, the researchers were formulating other hypotheses about the cause of kwashiorkor and how nutritional programmes should be structured differently. In 1958 INCAP investigators had noted that diarrhoea and other infectious diseases appeared to be the precipitating cause of kwashiorkor.[89] According to Scrimshaw, the crux of their thinking was that diet alone was not responsible for the onset of kwashiorkor. Rather, a number of stresses seemed related and these fell into five categories: 1)anorexia, the drop in appetite precipitated by infections 2)the tendency of mothers to withdraw solid food if the child had diarrhoea or symptoms of the disease, and in their place give watery gruels or sugar water (or nothing) 3)chicken pox and other childhood communicable diseases 4)parasites and 5)diarrhoea, whose effects resulted in negative nitrogen balance.[90] This hypothesis was nothing less than a revolutionary notion, though it was not well known at the time.

One of the long-range effects of Scrimshaw's, Gordon's, and Taylor's publication, 'Interactions of Nutrition and Infection', was its influence decades later on child survival programmes.[91] As far as the current analysis is concerned, one of the key elements of this work was that, like so many other studies, it emphasized the supreme importance of protein over calories.[92] Although Scrimshaw's, Gordon's, and Taylor's findings were monumental, it took nearly a decade and a WHO monograph for their hypotheses to be disseminated widely. In the meantime, however, their initial

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[87]Ibid., p. 395.

[88]Ibid., pp. 395-96.

[89]Béhar et. al., op. cit., note 38 above, p. 1097.

[90]Nevin S. Scrimshaw, interview, 26 July 1995. See also: Nevin S. Scrimshaw, Dorothy Wilson, and Ricardo Bressani, 'Infection and Kwashiorkor', *The Journal of Tropical Pediatrics and African Child Health*, 1960, 6(2), pp. 37-43.

[91]This is a fruitful topic which has to-date been wholly unexplored.

[92]Scrimshaw et. al., 'Interactions of Nutrition and Infection', op. cit., note 83 above.

work inspired a landmark study in Guatemala that was conducted between 1959 and 1964 and which will be described in the next chapter. While the relationship between malnutrition and infection may appear intuitive, the establishment of a scientific basis for this thinking and for understanding its ramifications took considerable resources. As late as 1960, nutritional experts readily acknowledged that "The full significance of this interrelationship between malnutrition and infection, as it influences the severity and lethality of disease, is only now beginning to be realized."[93]

The Population Problem

At the end of the 1950s, an emerging awareness of the detrimental relationship between hunger, malnutrition, and population increase was reflected in public health conceptions of root problems in developing countries. Although Orr had expressed concern over population increases a decade earlier, further discussion within FAO and other agencies was stifled until the end of the decade. Then, words such as the following were more frequently heard at administrative meetings: "The rapid increase in population now taking place in most parts of the world made it urgently necessary that nutritional requirements should be estimated as accurately as possible and taken into account in formulating food supply targets."[94] International food congresses were incomplete without major papers presented on the latest demographic statistics and their grim ramifications for nutrition planning.[95] The American Public Health Association in 1959 released a policy statement calling for increased research and action on population increases and epitomized progressive medical sentiment in the following statement:

> There is today an increase of population which threatens the health and well-being of many millions of people. In many areas of the world substantial population increase means malnutrition and outright starvation...No problem-whether it be housing, education, food supply, recreation, communication, medical care-can be effectively solved

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[93]'Report to the Director-General, a document prepared by WHO consultants', 9 May 1960, Geneva, WHO, MHO/PA/66.60, LSHTM Archives, WHO reports box, p. 3. Participants and consultants included György, King, Platt, Sebrell, Scrimshaw, Dean, and Patwardhan.

[94]*Report of the 9th Session of the Conference, 2-23 November 1957*, Rome, FAO, 1958, p. 50.

[95]See: Byron T. Shaw, 'Prospective world production and distribution of food', pp. 373-77, and James Bonner, 'The world's increasing population', pp. 369-72, in Proceedings of the Fifth International Congress on Nutrition, Washington, D.C. September 1-7, 1960, *Federation Proceedings*, March 1961, Supplement no.7.

today if tomorrow's population increases out of proportion to the resources available to meet those problems.[96]

Unicef was well aware of the problems the population explosion in underdeveloped countries presented. Heyward commented that Unicef's impressive establishment of one thousand rural health centres annually was perhaps reaching thirty million people -- the same number of people born into poverty annually. Soberingly, Heyward declared that "though the international aid certainly is valuable in its indirect effects, by improving quality, quantitatively the countries being assisted are not making a net improvement in the availability of health services - a backlog of some 1,000,000,000 people unserviced remains about constant."[97] Heyward further noted that the increasing population made nutritional programmes still more difficult to implement though milk conservation (milk processing equipment), "expanded aid to nutrition" (later called applied nutrition programmes), and child feeding remained priorities. Ever the realist, he despondently stated that most Unicef-sponsored programmes were "demonstrations rather than efforts to cover countries with adequate services."[98] Heyward's concern reflected how population had become an additional variable in the effort to stem and ultimately vanquish hunger. The political momentum toward programmes that were self-replicable came in great part to the revelation that no UN agency would ever be capable of directly reaching more than a small percentage of hungry people on the planet. In essence, policy makers sought to transform their original vision of development, well summarized in the proverb, "Feed a man a fish and he eats for a day, teach a man to fish and he eats for a lifetime." Knowing that they lacked the personnel and resources to teach all "men" how to fish, they adopted a new approach: "Teach a man to teach others how to fish and no one will go hungry."

Nutrition Education

Since the early days of Cicely Williams and others, field workers in developing countries had been citing ignorance as a root cause of malnutrition in children. Many posited that if only people could be taught what to eat, what to grow, and how to

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[96]'Policy Statements', *American Journal of Public Health*, 1959, 49(12), 1702-4, on p. 1703.

[97]E. J. R. Heyward, 'The Real Problems of Unicef', New York, Draft copy, 15 December 1959, Unicef Archives, CF/HST/1985/034/Anac 03/01, p. 2.

[98]Ibid., p. 2.

today if tomorrow's population increases out of proportion to the resources available to meet those problems.[96]

Unicef was well aware of the problems the population explosion in underdeveloped countries presented. Heyward commented that Unicef's impressive establishment of one thousand rural health centres annually was perhaps reaching thirty million people -- the same number of people born into poverty annually. Soberingly, Heyward declared that "though the international aid certainly is valuable in its indirect effects, by improving quality, quantitatively the countries being assisted are not making a net improvement in the availability of health services - a backlog of some 1,000,000,000 people unserviced remains about constant."[97] Heyward further noted that the increasing population made nutritional programmes still more difficult to implement though milk conservation (milk processing equipment), "expanded aid to nutrition" (later called applied nutrition programmes), and child feeding remained priorities. Ever the realist, he despondently stated that most Unicef-sponsored programmes were "demonstrations rather than efforts to cover countries with adequate services."[98] Heyward's concern reflected how population had become an additional variable in the effort to stem and ultimately vanquish hunger. The political momentum toward programmes that were self-replicable came in great part to the revelation that no UN agency would ever be capable of directly reaching more than a small percentage of hungry people on the planet. In essence, policy makers sought to transform their original vision of development, well summarized in the proverb, "Feed a man a fish and he eats for a day, teach a man to fish and he eats for a lifetime." Knowing that they lacked the personnel and resources to teach all "men" how to fish, they adopted a new approach: "Teach a man to teach others how to fish and no one will go hungry."

Nutrition Education

Since the early days of Cicely Williams and others, field workers in developing countries had been citing ignorance as a root cause of malnutrition in children. Many posited that if only people could be taught what to eat, what to grow, and how to

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[96]'Policy Statements', *American Journal of Public Health*, 1959, 49(12), 1702-4, on p. 1703.

[97]E. J. R. Heyward, 'The Real Problems of Unicef', New York, Draft copy, 15 December 1959, Unicef Archives, CF/HST/1985/034/Anac 03/01, p. 2.

[98]Ibid.

prepare their meals, their hunger would be ended. Prior to the 1950s, however, the concept of nutrition education was far too esoteric to find its way into tangible programmes. FAO had made the greatest effort to incorporate such programmes into practical aid. In 1950 FAO published a pamphlet, *Teaching Better Nutrition*, which at the very least highlighted organizational interest in the issue. Even here, however, nutrition education programmes per se were of secondary importance when compared to the role of expanded food production.[99] The fourth meeting of the Joint FAO/WHO Expert Committee on Nutrition in 1954 set broad guidelines for nutrition education and training which it reiterated in 1957 and 1961. The foundation of their alienating advice was that only people interested in learning and innovating would use education actively, therefore, "it is better to concentrate the educational effort on the receptive few-leaving the rest to follow their example-than to spend much time and energy on persuading the reluctant to learn."[100] Unicef was only then beginning a major retraction of resources from rescue and catastrophic operations and turning its attention to long-term means to promote sustainable health. Nutrition education stood out from a number of options since it did not necessarily involve huge supplies of food and resources. Furthermore, intellectually it appealed to policy makers as a plausible means for empowering people on an infinitely important issue: their health. Perhaps the greatest force behind nutrition education was the belief -- pervasive at the time -- that while food scarcity and poverty generally caused malnutrition, ignorance also played a significant role.[101] All too often, however, nutrition education utilized little relevant or important information and merely promoted the consumption of more milk.[102]

Beginning in the late-1950s, consultants and full-time staff at WHO, FAO, and Unicef, increasingly investigated the efficacy of nutritional education interventions. At least initially, Aykroyd found himself overwhelmed by the issues involved. In 1956, he remarked on the state of nutritional education affairs: "Unicef now seems to be thinking largely in terms of education in nutrition. The thinking has not gone very far. In fact, at the moment it can fairly be said that no-one [sic] has very clear ideas as to

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[99]See J. A. S. Ritchie, *Teaching Better Nutrition*, Washington, D.C., H. K. Press for FAO, 1950, p. 1.

[100]*Joint FAO/WHO Expert Committee on Nutrition, Report on the Fourth Session*, Rome, FAO, FAO Nutrition Meetings Report Series no. 9, July 1955, p. 49.

[101]Nutrition literature is peppered with comments to this effect. For example, see: 'Report to the Director-General', op. cit., note 93 above, p. 3.

[102]Arthur Robinson, 'Practical and Policy Aspects of Unicef Assistance to Programmes for Improved Nutrition', 1961, Unicef Archives, CF NYHQ-05AT.

how a large sum of money could be usefully spent in this field."[103] Aykroyd and others were not so concerned about the approaches and techniques required for nutrition education as they were with their application in developing countries.[104] Jelliffe, whose previously illuminating work on infant nutrition has been mentioned, also consolidated many of his interests and concerns in education. He believed that well-planned nutrition education which researched local customs and designed means to alter behaviour, particularly in relation to infant feeding, could be successful. Nevertheless, he was concerned with one aspect of such programmes that would come to play heavily in the dialogue on this issue: evaluation. Jelliffe and his colleagues feared that assessing the impact of educational interventions would be the most difficult part of the process. According to one article he and a colleague published, evaluation of nutrition education on some level was required "if the blind, self-perpetuating delusion and ill-directed effort, aptly termed 'directionless activity pursued for its own sake', is to be avoided."[105]

Believing nutrition to be a key to nutritional advances, Unicef embarked on nutrition education as an organizational prerogative in 1954. The Executive Board approved an assistance programme calling for education on child feeding and child care and an embryonic programme to support local efforts for improved food production and child nutrition. In 1957 the Board reinvigorated the initiative and expanded funding.[106] While politically these developments sparkled during the end of the decade, their programmatic structure would not be arranged until the early-1960s and will be treated in Chapter V. At the end of the decade, nutrition education mainly involved the provision of films and texts to provide practical recommendations about grass-roots changes families could make to improve their nutritional status. WHO identified maternal and child health centres as the ideal site for nutrition education.[107]

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[103]W. R. Aykroyd, letter to R. C. Burgess, 15 November 1956, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

[104]Ibid.

[105]D. B. Jelliffe and F. J. Bennet, 'Nutrition Education in Tropical Child Health Centres', *Courrier*, 1960, X(9), 569-73, on p. 573. Ironically, years later an FAO nutrition worker assessing the nutrition education programmes of the 1960s and 1970s lamented that there had been little evaluation of FAO's technical assistance on training and nutritional education and "few projects collected systematically even simple data that would have served for evaluation." Jean W. McNaughton, 'A Review of FAO's Activities in Nutrition Education and Training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 5.

[106]Robinson, op. cit., note 102 above.

[107]*The First Ten Years of the WHO*, op. cit., note 2 above, p. 316.

The FAO/WHO role in education projects was to provide technical approval of Unicef-initiated programmes.[108] With the continuation of the gigantic milk powder feeding programmes -- albeit linked to education -- effective nutrition policy remained an abstraction. All agencies consistently noted that milk programmes were unsustainable and had only short-term benefits, often even when coupled with education. To this end, Aykroyd, FAO's nutrition head until 1960, believed that "a great deal of malnutrition is due not so much to lack of the right sort of foods, as to failure to make good use of the foods which are available."[109] Thus the feeding supplementation programmes in developing countries might best be viewed as an extension of European emergency feeding services -- the same services that had originally inspired funding for Unicef and UNRRA. Even with education, the grave problems that the nutritionists faced all too often seemed irreconcilable. Although they could make short-term improvements, they acknowledged their failure to assure sustainability and to reach large populations. Education seemed a plausible solution, but still more was required.

Applied Nutrition Programmes

In 1957, Unicef began promoting applied nutrition projects (ANPs), a medley of nutrition education, training, and schemes for improving production of protective foods locally.[110] The programmes received considerable attention and financial support from Unicef and FAO during their first years in part because of their new-found commitment to sustained development projects. In an ANP, a community nutrition worker might, hypothetically, enter a village, teach the people about childhood protein needs and train them in the construction of fish ponds. One of the intended results would be a community-wide initiative for developing a locally cultivable protein resource. The idea behind applied nutrition programming stemmed from the search for other means of channelling high-protein foods to young children. By encouraging local legume and cereal production, in addition to other protein sources, applied nutrition sought to introduce locally-available supplements to breastmilk.[111] Scrimshaw attributed excitement for applied nutrition to the increasing interest in kwashiorkor during the late-1950s. According to him, "breastfeeding was

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[108]Robinson, op. cit., note 102 above.

[109]See: W. R. Aykroyd, 'FAO and Nutrition', 1959, LSHTM Archives, FAO pamphlet box, p. 5.

[110]'Milestones in Unicef's History 1946-1985', January 1986, Unicef Archives, PR-NU-001, p. 3.

[111]Egger, op. cit., note 24 above, p. 5.

pretty much taken for granted at first because in all the countries [in which] we were working mothers were breastfeeding, but...with applied nutrition programs you could have models, and international agencies provided training...and we all felt very good about them...you could show some clear improvement".[112] Heyward, then Deputy Director of Unicef operations, felt that the stimulus at Unicef for applied nutrition programming came from his collaboration with Aykroyd and Autret at FAO. In Heyward's estimation, the concept of applied nutrition addressed the persistent development problem of improving food access on a family level: the main cause of malnutrition.[113]

At the LSHTM, Platt was training field workers in applied nutrition, a move stemming from his recognizance "that malnutrition is not just a matter of having too little to eat".[114] He firmly promoted programmes that took all aspects of life into consideration; from maternal education to communal responsibility, Platt invoked a developmental methodology that perpetually seemed just out of the reach of the UN agencies. His views were grounded in the grammar of academia as well as in practical experience, and this ensured his position as an important force in policy. However, being an academic, his philosophy was often difficult to translate into the practical programmes organizations like Unicef so fervently desired. His ideas were frequently double-edged: on one hand they were sufficiently rational to implement, while on the other they inspired cynicism. According to one of Platt's colleagues in London, Professor Phillip Payne, Platt was frustrated by his profession's obsession with protein and believed "that because of the metabolic interaction between protein and energy sources, and in addition the complication of the effects of zymotic diseases, it was simplistic to attempt to prove that there were two separate and independent syndromes, one specific to protein deficiency [kwashiorkor] and another for energy deficiency [marasmus]."[115] Platt's disappointment with this simplification led him to advocate alternative measures for addressing hunger problems. In a lengthy comment that reflected the complexity of the problems policy makers like Heyward and Aykroyd faced, Platt wrote, "The prevention of malnutrition is primarily a socio-economic matter and although help is needed from the doctor, the teacher, the agriculturalist and others, it is only when their specialist knowledge is integrated by

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[112]Nevin S. Scrimshaw, interview, 26 July 1995.

[113]E. J. R. Heyward, interview, 12 September 1995.

[114]B. S. Platt, 'The prevention of malnutrition', March 1958, London, Applied Nutrition Unit, LSHTM Archives, Platt files, p. 2.

[115]Phillip Payne, letter to Anne Hardy, 10 January 1995.

wise administration into an overall programme for the benefit of the community, that real progress can be made."[116] Few public health professionals knew how to follow such overwhelming prescriptions.

In spite of Heyward's interest in applied nutrition, it was not until 1959 when the U.S. was forced to cut off abruptly its enormous supply of dried skim milk that developing countries and international agencies were encouraged to experiment with other methods of improving their inhabitants' nutritional status.[117] The U.S. dried skim milk powder suspension was assumed to be a permanent change in U.S. policy. Pate explained to the Unicef Executive Board that the change had been prompted by improved sales of the powder for other uses that had legislational priority. The immediate result spelled disaster for many of the Unicef programmes approved for 1959 since forty percent less milk -- nearly 55 million pounds -- would be available. For Pate, the news must have been felt acutely since he had virtually founded Unicef a decade earlier on the basis of milk distribution programmes. In a letter to the Board, although Pate expressed deep concern for the ramifications of the loss on school feeding -- then still the recipient of half these supplies -- he was far more distraught about pre-school children who had a "nutritional priority" and would nevertheless have a major reduction in their supply.[118] Although initially the supply cessation came as an unwelcome shock to the Executive Board, it soon helped underline for Unicef and for the countries themselves just how unsustainable and ultimately damaging reliance on one major subsidy for health programmes could be. Furthermore, the shortage provided increased fuel for the development of protein mixtures.[119] Just before this halt, Unicef was distributing milk powder to the following: eleven African countries, eight Asian, eight Middle Eastern, and twenty-six in the Americas. During the first six months of 1959, Unicef estimated that daily, over five million mothers and children received milk.[120] Pate in 1960 notified the Executive Board that the surplus milk shortfall had a silver lining: "One of the positive results of the jolt we have all received about milk supplies is the greater interest among departments of governments in many

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[116]Platt, op. cit., note 114 above.

[117]Robinson, op. cit., note 102 above.

[118]Maurice Pate, letter to the members of Unicef Executive Board, New York, 22 October 1959, Unicef Archives, 88R025, box T006.

[119]*Report of the 10th Session of the Conference 31 October - 20 November 1959*, Rome, FAO, 1960, p. 129.

[120]Arthur Robinson, letter to Miss Winifred Salisbury, 10 September 1959, Unicef Archives, CF-NYHQ-05AT. For additional confirmation of this shift, see: Donald Sabin, 'Implementation of the WHO/FAO/Unicef Protein-Rich Foods Program', in *Proceedings of Conference On Soybean Products for Protein in Human Foods*, 13-15 September 1961, pp. 15-26, on p. 16.

countries to pursue" other means of delivering high-protein foods to pre-schoolers.[121] The "jolt" could not have come at a better time. Scrimshaw, Jelliffe and others were bringing to light evidence that many of these programmes in Central America were having an undesirable health effect. Mothers were diluting the milk with too much water and the water was often contaminated. Moreover, it came to Unicef's attention that in order to heat the milk still served in some schools, families had to spend precious hours collecting firewood to fuel the fires.[122] In too many areas, milk feeding had become a disaster, and Heyward was "horrified" to learn of it. Unicef rapidly was "weaned off milk" distribution and moved on with its other nutritional projects.[123] Interestingly, Care came to usurp Unicef's position in milk distribution and perpetuated many of the negative effects of this programme.[124]

FAO, WHO, and Unicef: Troubled Colleagues

FAO, WHO, and Unicef were frequently portrayed in popular periodicals of the 1950s as super organizations seeking to put an end to humankind's legacy of misery and hunger. In their superficial interactions, the organizations wished to cast a smooth humanistic finish on the nature of their respective work and inter-agency co-operation. Although the historical record -- inter-agency correspondence, oral histories, and board reports -- highlights notably serene co-operation among these agencies during their first years, this positive image deteriorated by the end of the 1950s, especially in relation to FAO and Unicef. This may in part be understood by considering the forces these agencies addressed during their initial years. Unicef struggled to simply exist through 1953 while it, along with FAO and WHO, dealt with major crises in Europe. In a search for institutional raison d'être that ensued during the mid-1950s, well-established institutional egos began to clash.

One instance which was emblematic of the conflict between FAO and Unicef occurred during 1955 and 1956 when the agencies were discussing plans for a FAO liaison nutrition officer for Unicef. Initially, the controversy seemed insignificant since different views on responsibilities of the officer were smoothed over by alterations in the post's description. However, Aykroyd wrote to Heyward in February 1956 that

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[121]Maurice Pate, 'Statement by Maurice Pate to the Executive Board of Unicef', 14 March 1960, E/ICEF/60A/CRP/6, p. 3.

[122]Nevin S. Scrimshaw, interview, 25 July 1995.

[123]E. J. R. Heyward, interview, 12 September 1995.

[124]Moisés Béhar, interview, 29 December 1995.

the differences between the agencies were hardly over semantics: "The major differences stem from the approaches to the problem of child nutrition adopted by FAO and Unicef respectively".[125] In Aykroyd's view, Unicef had exhausted its potential impact in its pursuit of milk supplementation and conservation programmes. Areas that then lacked conservation simply did not have the pasture or cattle needed to embark on such programmes. Moreover, Aykroyd prophesied that the dried skim milk supplies Unicef utilized could soon be significantly diminished and thereby compromise the content of these programmes. He believed that it would behoove Unicef to de-emphasize school feeding programmes and instead to examine opportunities for high-protein vegetable mixture development. Overall, Aykroyd asserted that the main difference between FAO and Unicef on child nutrition issues was that Unicef had a narrow interest in the development and distribution of supplementary foods while FAO conceived of such projects as a small part of the whole. Unicef, Aykroyd asserted, had to "adapt the Unicef policy and program to the real situation with respect to child nutrition, i.e. to discover how Unicef can most effectively utilize its resources in this field."[126] For support, Aykroyd cited comments from Pate and Heyward that Unicef nutritional work was retarded in comparison to its other health contributions. Aykroyd's commentary well elucidates the severe policy and programmatic issues Unicef faced during the late-1950s in regards to its nutrition programme. On the one hand, Unicef relied on its past success in the field of milk supplementation, while on the other, it hesitantly looked at the intimidating options on the horizon. Aykroyd condescendingly noted that yaws and malaria treatment and prevention, conducted with WHO aid, were considerably simpler undertakings compared to programmes for malnutrition in children.[127] During his last years at FAO, Aykroyd's lashing criticism of Unicef became increasingly bitter. In a confidential note to the Deputy Director-General of FAO in 1958, Aykroyd insisted that "the Unicef secretariat does not, in my view, fully understand the complexity of nutrition projects, probably comparing these with health projects of a relatively straightforward and simple nature."[128] In the same note, he complained that too often FAO received the blame for WHO's foibles. Recently the FAO Nutrition Division had been criticized for

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[125]W. R. Aykroyd, letter to E. J. R. Heyward (Deputy Director of Unicef), 24 February 1956, UN Archives, CF 9D 79, folder A023, Heyward file, p. 1.

[126]Ibid., p. 4.

[127]Ibid.

[128]W. R. Aykroyd, letter to F. T. Wahlen, 3 July 1958, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

holding up projects, when, according to Aykroyd, the wait for WHO approval had caused the delays.[129]

Financial jealousies also roused FAO's anger toward Unicef and WHO. Autret, Aykroyd's deputy, wrote a meticulous financial analysis of Unicef expenditures up to 1956. In it, he emphasized that half of Unicef's budget was directed at medical projects assisted by WHO. In contrast, Unicef allocated a mere 12% of its budget to FAO-supported projects. Autret moaned that "Unicef funds should be more equally distributed between programmes increasing (human) reproduction and (food) production."[130] In Autret's view, FAO's Nutrition Division had to make receipt of increased Unicef funds a top priority and seek to do so by proposing new programmes.[131]

FAO and WHO relations on nutrition issues were never quite as stormy as those between FAO and Unicef. Nonetheless, in March 1959, FAO and WHO felt compelled to produce and affirm a "Gentlemen's Agreement" that stipulated their individual and mutual responsibilities for work on nutrition.[132] Although the document was not meant as a rigid framework for allocating nutritional responsibilities, it did identify a "lead" agency for ten nutritional fields. According to the agreement, WHO was to be primarily responsible for the nutrition of pregnant and lactacting women, infants, and children.[133] FAO's sphere of concern, on the other hand, included food consumption assessment, national food and nutrition policy establishment, and supplementary school feeding.[134] Any anxieties this agreement may have initially quelled, resurfaced rapidly. In October, Dr. Abraham Horwitz, the Director of the Pan American Health Organization, acquainted Candau, WHO's Director-General, with FAO's tendency to appoint medical personnel to posts in Latin America. According to Horwitz, medical doctors were infringing on WHO's sphere of responsibility by over-emphasizing the medical aspects of their work rather than focusing on areas such as food storage, distribution, and production. Moreover, these doctors were having discussions with health authorities and were failing to apprise WHO of the contents of

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[129]Ibid.

[130]M. Autret, letter to F. L. McDougall, 1957, FAO Archives, 57.4C2, p. 2.

[131]Ibid., pp. 2-3.

[132]'The responsibilities of FAO and WHO', op. cit., note 9 above.

[133]Ibid., p. 7. A few years later, the agreement continued to be cited as the comment on divisional responsibilities. See, for example: Marcel Autret, 'Nutrition of the pre-school child: a consideration of new approaches', 15 July 1963, Unicef Archives, 88R025, box T-006, Teply files.

[134]'The responsibilities of FAO and WHO', op. cit., note 9 above, pp. 4-8.

these contacts.[135] This criticism hit WHO deeply. In December, P. Dorolle, WHO's Deputy Director-General, informed the FAO Deputy Director-General that "Unfortunately some developments seem to suggest that our efforts in defining the roles of WHO and FAO have not yet had the desired effect".[136] Evidently, the issue of responsibility for nutrition in the field had not been resolved.[137]

The establishment years earlier of prerequisite inter-agency co-operation, had by 1959 created waves of animosity between administrators at FAO and Unicef. Since Unicef had been required to obtain FAO technical approval on projects, there had been weighty questions about which organization should be responsible for related funding. According to Heyward, Phillips in particular at FAO, viewed Unicef as an easy source for technical funding support. Unicef did not have a problem with turning to FAO for general technical information about nutrition programmes -- in that respect FAO seemed competent. The cause for conflict was that every Unicef project, before being implemented, had first to clear FAO. At FAO the proposal would be passed to every department remotely related and which usually included MCH, Nutrition, and another division. Heyward saw how programmes designed from a country level were then criticized by FAO personnel who had no experience in that country and wrote in consultancies for their own technical staff (whose expenses had to be covered by Unicef).[138] Heyward wrote of this predicament that technical approval for all projects had "served as an excuse for agencies to give far too little general guidance about meeting children's needs in the fields of health, nutrition, social services, etc."[139] As research needs increased, Unicef asserted that FAO should be covering a greater share of projects that Unicef did not necessarily deem important.[140]

In September 1959 Unicef Executive Director Pate declared that financial problems had "come to a head" in great part because of FAO's declining budget and

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[135]Abraham Horwitz, letter to M. G. Candau, 30 October 1959, WHO Archives, folder 1, box A.0918.

[136]P. Dorolle, letter to Dr. Norman Wright, 7 December 1959, WHO Archives, folder 1, box A.0918.

[137]These concerns arose occasionally during the next decade. Although in 1964 FAO's Director-General wished to re-open the subject, Candau, WHO's Director-General, wrote to discourage him. Candau believed that the 1959 agreement had been fine and "that the agreed arrangements should be interpreted by our staffs in a spirit of goodwill and mutual cooperation." M. G. Candau, letter to B. R. Sen, 29 June 1964, WHO Archives, folder 1, box A.0918.

[138]E. J. R. Heyward, interview, 12 September 1995.

[139]E. J. R. Heyward, 'Notes on history of Unicef "policy"', 17 March 1965, Unicef Archives, CF/HST/1985/034/Anac 03/11, p. 3.

[140]B. R. Sen, FAO letter to Ministers of Agriculture, no. 71, June-July 1959, UN Archives, CF 9D 79, folder A023, Heyward file.

Unicef's disproportionate expansion.[141] As a result, FAO's Finance Committee formulated what Pate debasingly called a "theory". The Committee stated that Unicef-initiated projects requiring support from the Technical Assistance Fund, staffed in part by FAO, should be fully funded by Unicef.[142] In other words, Unicef should be held accountable for any FAO technical costs incurred in relation to Unicef projects. This development contrasted directly with a host of FAO Conference and Council statements during the previous decade to the effect that the two organizations should collaborate on malnutrition issues that faced people in developing countries. Further complicating the matter was the arrangement by which Unicef rarely had to assume technical costs incurred in joint work with WHO.[143]

Superficially, this funding conflict appears to have been nothing more than a struggle for each organization to evade financial expenditures that seemed best subsumed by its counterpart. A dissection of the rhetoric in this unusually sharp conflict between the two organizations reveals deeper ideological rifts which festered and returned during the following decades. In part, the central issue was one of independence as both organizations fiercely defended their right to pursue the work identified by their executive bodies (and presumably, their constitutions). In 1959, FAO's Nutrition Division noted that Unicef's practice of unilaterally initiating discussions with governments was not workable. Any such contacts should, according to FAO, be planned mutually from the earliest stage.[144] FAO had been reviled to hear that a UN Economic and Social Council delegate voiced concern over the possibility that Unicef, with its financial largesse, could conceivably "dictate the developments of the activities of other organizations and the expenditure of their funds."[145] Unicef countered that such a possibility could not come to pass but rather, that its agency concerns meshed with a substantial portion of FAO's mission and should therefore work in partnership.

FAO at times held Unicef in low regard, as reflected in the derogatory commentary of Nutrition Division staff. During meetings at Unicef headquarters to discuss a complex project, one FAO staff member remarked that "the main attention

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[141]Maurice Pate, 'Relations between Unicef and FAO', 21 September 1959, UN Archives, CF 9D 79, folder A023, Heyward file, p. 1.

[142]Ibid.

[143]'FAO/Unicef relations: discussions between the Director-General of FAO and the Executive Director of Unicef', 13 March 1960, UN Archives, CF9D 79, A027.

[144]'The technical approval of Unicef-supported projects', 1959, FAO Archives, Nutrition Division Director's Office Files (Aykroyd). The rhetoric of this paper suggests that it may well have been written by Aykroyd.

[145]Pate, op. cit., note 141 above, p. 6.

was directed at such questions as whether 3 jeeps or only 2 could be supplied in accordance with the regulations...Unicef seems to have the idea that all difficulties will be automatically solved by the simple increase in the nutrition staff available to FAO and WHO for dealing with Unicef-assisted projects."[146] Such animosity arose frequently, often exacerbated by FAO's frustration with the low interest expressed by developing country governments, as well as other FAO divisions themselves, to seek nutrition advice. Although FAO Conference meetings consistently reflected a desire on the part of Aykroyd to step up FAO's work on nutrition for mothers and children, these longings were often skirted for the sake of other more enticing FAO projects.[147] As FAO fiscally neglected the Nutrition Division, FAO administrators wished for Unicef to take up the financial slack. The Deputy Director-General of FAO wrote Pate:

> we are always glad to see additional resources being made available by Unicef for work which is so much in line with the aims and objectives of our Organization. We are, however, bound to consider the effect of the use of these additional resources on our own program and budget. Unless such additional resources can be matched by increased resources for FAO's part of the work, there is the risk that we may either have to alter our own program or become your Achilles heel![148]

If Unicef wished to expand its programming in nutrition, it had to be prepared to pay for FAO's complementary support. Unicef only reluctantly provided temporary funding to FAO which FAO considered vital for Unicef work to "be on a sound technical basis", and FAO's Conference in December 1959 still found itself largely at odds with the Unicef Executive Board.[149]

In March 1960, the respective heads of FAO and Unicef, B. R. Sen and Pate, met to discuss the increasingly tenuous situation between them. Pate argued strongly that FAO should not have a different financial arrangement with Unicef than WHO did

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[146]"The technical approval of Unicef-supported projects', op. cit., note 144 above, p. 11.

[147]Aykroyd, though a fine nutritionist, may not have had the political verve to push his ideas through the system. Autret recounted that "Aykroyd once told me that he didn't like tough discussions and that he would prefer that I speak because he would rather not deal with conflict." Marcel Autret, interview, 14 April 1996.

[148]Norman C. Wright, letter to Pate, 25 August 1959, Nutrition Division Director's Office Files (Aykroyd) 2/2, pp. 2-3.

[149]Excerpt from Report of Commission II as adopted by the Tenth Session of FAO Conference, Rome, November 1959 in E/ICEF/59-C/CRP/2, pp. 1-4. While Heyward and his colleagues fumed, Unicef continued for several years with this arrangement. Heyward, 'Notes on history of Unicef "policy"', op. cit., note 139 above, p. 7.

while Sen claimed that FAO's weak financial status necessitated this unique position.[150] Sen and Pate were unable to resolve their differences and did not need to at the time since Unicef's Executive Board had already agreed to provide temporary funding for FAO through 1961. The financial disagreement between the two agencies on one level demonstrates how for these bureaucracies ideological concerns and conceptions of how best to help hungry people were highly influential. FAO de-emphasized the Nutrition Division itself and tried to focus resources on other areas such as animal husbandry, food technology, and reforestation. Unicef, in contrast, placed increasing trust in the ability of nutrition programmes that dealt directly with issues -- protein malnutrition, food preparation, nutrition education -- to affect change.

Of Experts and Excoriation

Although this dissertation has not included in its scope the results of policy changes in New York, Geneva, and Rome in the field, it is important to relate some of the currents which ebbed at the doors of the policy makers in order to have a richer image of their position. In this context, Robinson's documents and a few oral histories are enlightening. Robinson was highly sceptical of the abilities of experts -- from FAO and WHO in particular -- to solve problems in the field or even accomplish anything noteworthy. He included one vitriolic attack in his regional newsletter to headquarters:

> 'An expert', goes an unofficial U.N. definition, 'is one whose ignorance has been organized'. We [in the field] are free to admit our own unorganized ignorance of many of the new and specialized fields into which Unicef is beginning to move, but we would plead with both experts and policy makers to approach with humility the problems of applying their own more highly organized ignorance to new areas, new countries and new situations.[151]

Robinson summed up the profound ill will field officers and staff had for both the recommendations of their superiors, and their perceived unconstructive relations with experts. His is not a view easily distilled from policy texts, committee meetings, expert groups, or conferences. It is, however, a view that starkly contrasts with the perspectives of the experts and the policy makers for it illuminates the apparent

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[150] 'FAO/Unicef Relations', op. cit., note 143 above.

[151] Arthur Robinson, 'Area Office for Northern South America', Report #13, March-June 1958, Unicef Archives, CF-NYHQ-05AT, p. 3.

ignorance which may have been their central shortcoming. Margaret Gaan, a Unicef programme officer and director for over two decades, while speaking of her time in the field in Thailand, described the FAO and WHO personnel as having unearned halos around their heads and believing their advice to be untouchable. In her experience, "What the agency [FAO and WHO] people said was right and so many times the Unicef people weren't prepared or were too innocent to fight with them."[152]

Two Unicef colleagues-in-bureaucracy did not take such a strong view of experts' advice. Charles Egger, the Unicef Director for Africa, Europe, and the Eastern Mediterranean throughout the 1950s, believed that criticism of experts had to be considered in the broader scientific context. From Egger's vantage point in Paris, "everybody believed [during the 1950s] in the success of modern scientific advances without much regard for the sociological and cultural environment."[153] This environment aside, John Grun, a Unicef worker for three decades, felt that many experts simply fell short of personal expectations imposed on all people. Grun stated: "I have known experts who were first-class, top-level guys, who were no use whatsoever in the field because, and it was years ago that I said it for the first time, 'If you send us an expert, don't send us the best; send us the guy who is half an expert and half a communicator.'...if you can't communicate, you're a dead loss."[154] A rare admission of culpability by one WHO bureaucrat suggests that Unicef staff's criticism was on target. Milton Seigel, the Assistant Director-General of WHO in charge of administration and finance for three decades, admitted that quality aside, WHO forced too many experts on Unicef. According to him, Unicef's administrators had told WHO that they were using more experts than necessary and in response, WHO acted childishly and increased the number of experts.[155] Unlike FAO, however, WHO quickly resolved its problems with Unicef.

For Unicef administrators and policy makers, the transition toward a broader understanding of public health was slowly in progress. At first, training workers in

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[152]Margaret Gaan, interview conducted by John Charnow, 21 November 1983, Unicef Archives, interview file, p. 9. Similar views were echoed in one of FAO's own publications. In *FAO's Role in Rural Welfare*, the author gloomily reported: "I heard of several instances of misjudgement or ignorance of local conditions among experts of international agencies that, frankly, seem to me incredible." H. S. Cruz, *FAO's Role in Rural Welfare*, Rome, FAO, 1959, C59/5, p. 124.

[153]Charles Egger, interview conducted by John Charnow, 11 October 1983, Unicef Archives, interview file, p. 16.

[154]John Grun, interview conducted by Herman Stein, 12 December 1983, Unicef Archives, interview file, p. 21.

[155]Milton Seigel, interview conducted by John Charnow, 11 May 1984, Unicef Archives, interview file, pp. 17-18.

Western techniques was considered "sufficient", and the notion that doctors, buttressed by nurses and sanitarians, were invulnerable, was prevalent.[156] Thus, when Robinson and other programme administrators preached to headquarters that countries and even communities had individual needs which could only be addressed locally, their words probably fell on deaf ears. Robinson's following comment likely had few admirers at headquarters: "the application of policy could be more effective if there were less of 'what is sauce for the goose is sauce for the gander' and more of 'one man's meat is another man's poison'".[157] Robinson's concern for specialization eventually came to the fore at the close of the decade, and Egger readily pointed out that such realizations did not come solely through WHO experts, but rather, from experienced African and European doctors and public health workers.[158]

For the interests of this dissertation, this commentary highlights key points that colour much of the history before us. Firstly, they underline the existence of true agency-wide international policies.[159] Although administrators in central offices often saw themselves only as implementing projects, they were, in fact, passing along policy that set a tone for work in the field and identified a distinct ideology. Secondly, these comments show how the ideal of individually autonomous projects, tailored to local needs, could not possibly be accounted for by broad organizational policies. All too frequently, when projects were filtered through the agency experts and made their way to the field, their impact was stifled by inappropriate directives.

A Step Back: An Examination of Nutrition Philosophy

By and large the 1950s were a tremendously productive and groundbreaking time for hunger-related research. By the middle of the decade, FAO, WHO, and Unicef were positioned for the first time to implement earnestly anti-hunger efforts in developing countries. Many of these activities initially paralleled vertical programmes that had been popularized in Europe after W.W.II and which had had two prerogatives: feed the hungry and heal the sick. As researchers increasingly realized that the relatively fleeting hunger seen in Europe was chronic for the majority of

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[156]Egger,op. cit., note 153 above, p. 16.

[157]Robinson, op. cit., note 151 above, p. 3.

[158]Egger,op. cit., note 153 above, p. 18.

[159]George Beaton, a nutrition consultant for many years, wrote me that he questioned whether such a thing as international nutrition policy existed. G. H. Beaton, personal correspondence, 2 November 1995. E. J. R. Heyward has posed the same question. E. J. R. Heyward, interview, 12 September 1995.

people in developing countries, they slowly changed their tactics. Unicef, which had begun then famous milk feeding programmes in Africa, Asia, and Latin America, during the early-1950s, found its programmes of limited, and at times negligible benefit. It is notable that the shift toward horizontal programming was, in the eyes of some, a logical step that did not necessarily devalue vertical approaches. Gaan held this viewpoint: "The problems that were solved by vertical programmes were so great that until you got them out of the way the other problems didn't surface enough to be clearly studied."[160] Gaan's remark, however, applied specifically to disease-oriented campaigns, not to the initially vertical nature of nutritional campaigns.

Two strains of project methodology emerged from agency cognizance of the benefits of a horizontal approach. In the first, FAO, WHO, and Unicef nutrition researchers and policy makers acknowledged the inability of milk alone to stem protein malnutrition in children in developing countries. They therefore propelled forward plans for alternative protein foods. Essentially, this modification in methodology -- from feeding children milk to developing and utilizing milk substitutes -- was not a major philosophical departure for the parties involved. Whether Incaparina or milk, the central tenet sought to provide malnourished children with the protein they required. The second strain marked a substantive transformation in approach. It involved an acknowledgment on the part of nutrition workers that feeding alone could not solve any nutritional problems; in fact, it could worsen them. Thus, new methods had to be devised to promote sustainable changes in the nutritional status of mothers and children. These novelties came under a number of headings, nutrition education and applied nutrition being the most prominent. Underlying these approaches was the sobering realization on the part of development agencies that they could never feed all children and therefore must find another route to see that children were well fed. However innovative, this methodology relied on a prefabricated focus, often pre-determined by joint discussions with WHO and FAO. Headquarters maintained considerable control over the implementation of projects, and field autonomy was restricted.[161] As a result, many programmes had a two-dimensional, vertical nature and a history of success in developed countries. Egger summarized this ideology: "as we were moving towards the 1960s, one thought, by introducing appropriate techniques that have proven themselves in Western countries, that this could be relatively easily translated and applied to developing countries."[162]

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[160]Gaan, op. cit., note 152 above, p. 5.

[161]Egger, op. cit., note 153 above, p. 21.

[162]Egger, op. cit., note 24 above, p. 5.

It should be noted that outside of its support for the PAG, WHO nutritional work was minimal in contrast to its joint efforts with Unicef to combat tropical disease. In addition to providing limited support to nutrition institutes in Cairo and Teheran, WHO staff worked mainly on training paramedical and auxiliary personnel in medicine, with some element of nutrition included. Apart from joint participation in numerous technical committees, regional conferences and technical courses, FAO/WHO joint nutritional work was minor.[163] In 1958 WHO's primary nutritional policy was "to increase its activity in the field of nutrition".[164] In 1959 a small group of experts, all well-known nutritionists -- Cruickshank, Darby, Hundley, Platt, Sebrell, Holt and Burgess -- advised the WHO Director-General of areas in which WHO should pursue nutritional research. Most importantly, they highlighted how medical developments had made major accomplishments in the control of nutritional diseases such as beriberi, pellagra, rickets, scurvy, and goitre, and stressed the accomplishments of a disease-based approach that viewed nutritional problems as diseases that could be controlled or treated. In this context, however, neither they nor anyone was capable of pointing to the control of hunger in relation to protein and calories as an accomplishment of their work. Thus, this group acknowledged the need for WHO nutrition research in this area to consider the "total food supply" and to separate itself "from investigations conducted merely as a part of the problem of a specific disease or group of diseases".[165] The translation of this directive into methodology called for an expanded focus which contradicted other WHO recommendations.

A report virtually contemporaneous with the one just cited, and written rather ironically by many of the same researchers, cheered WHO research that could identify specific nutritional diseases and their causes rather than invoking the broad heading, "'nutritional research'".[166] The report lamented how classic epidemiological investigations were not being thoroughly applied to nutritional diseases in under-developed countries. The writers seemed confused themselves as to what type of studies they wished to see since they noted how investigations into the aetiology of a disease such as kwashiorkor, far from requiring a concrete epidemiological approach, needed to examine "cultural, social, psychological, as well as disease factors."[167] Among the clear signals that could be detected from WHO's policy recommendations

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[163]See: Aykroyd, op. cit., note 109 above, p. 7.

[164]*Report of the Nutrition Committee for the Middle East*, op. cit., note 28 above, p. 52.

[165]Burgess et. al., op. cit., note 82 above, pp. 3-5.

[166]'Report to the Director-General', op. cit., note 93 above, p. 3.

[167]Ibid., p. 4.

was that nutritional diseases -- PCM included -- like any other disease, could be investigated, attacked, and eradicated.

FAO, in contrast to WHO, continued to examine nutrition as it pertained to food availability and consumption and maintained a significantly less optimistic viewpoint.[168] Its staff surveyed countries for food consumption data and further investigated human nutritional requirements. Along with the PAG it continued its protein-rich food programme, all the while recognizing that in addition to maternal nutrition education, the solution to protein malnutrition "lies in the greater production and consumption of ordinary foods which supply" protein.[169]

Robinson lucidly expressed the crashing of these currents in several of his facetious and informal office reports for the northern South America office. Robinson had a flair for articulating the concerns that plagued policy makers and field workers alike. Waxing on Unicef's illustrious history, Robinson recounted how the Unicef symbol for most people had been "the picture of child with a cup of milk".[170] In Robinson's mind, however, "the historical reasons which led Unicef to stress feeding programmes have lost their value" and Unicef had become "less interested in programmes which provide no more than temporary alleviation of a need, and more interested in programmes which provide long term improvement or...solution of a problem."[171] Robinson further asserted that the long-term value of milk programmes was "doubtful" and the reliance on foreign supplies unwise.[172] Thus he suggested a shift toward the new keys in nutrition: education, community activities, and small, replicable projects. Based on Robinson's previous communications, it seemed Unicef could adapt to these changes. A year earlier, after home leave and meetings with "policy makers" at headquarters, he reasoned that "Unicef policy is a dynamic thing. What was forbidden yesterday may today be merely frowned upon, permitted tomorrow and encouraged the next day; or sometimes it is the contrary."[173]

While the explosion of new programmes to treat hunger in developing countries came as welcome news to many in the development community, others saw recent developments as band-aids that obscured the true problems which were to be

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[168]FAO's disappointment with progress against global malnutrition inspired the Freedom From Hunger Campaign (FFHC) which will be described in the following chapter.

[169]See: Aykroyd, op. cit., note 109 above, pp. 1-7.

[170]Arthur Robinson, 'Area Office for Northern South America', Report #16, April-June 1959, Unicef Archives, CF-NYHQ-05AT, p. 1.

[171]Ibid., p. 1.

[172]Ibid., p. 2.

[173]Robinson, op. cit., note 151 above, p. 1.

confronted. In a confidential memo to the Unicef Executive Board titled 'The Real Problems of Unicef', Heyward noted that the Unicef Board spent far too much time working on unreal problems while the funds were put to work sluggishly. Among their problems was the failure to allocate funds rapidly enough to make a difference (and avoid a surplus), a position that would have been unconscionable a decade earlier given Unicef's then unstable financial situation.[174] Heyward's concerns were powerful forces for organizational change at Unicef. In 1959, the UN reflected its support for the shift toward children in its November 'Declaration of the Rights of the Child' which asserted that "the child shall have the right to adequate nutrition".[175] The decade had thus seen a number of critical shifts -- scientific and ideological -- that led toward absolute concern for the "child". Nutrition policy, while not leaving behind protein food interests and milk conservation, came to incorporate several other headings during the early 1960s. Iodine, iron, and vitamin A deficiencies, applied nutrition, nutrition training, and other points of study merged with the increased concern for pre-school children to present a more diversified framework for fighting malnutrition. This agency-wide broadening of focus and its associated ramifications will comprise the following chapter's discussion.

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[174]Heyward, op. cit., note 97 above, pp. 3-4.

[175]'Unicef's part in the development decade, 1960-1964', 30 October 1964, Unicef Archives, CF/HST/1985/034/anac 03/10, p. 23.