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Chapter VI
Nutritional Politics

> Since nutritional science is of immediate social consequence, nutritionists must perforce publicly take positions on issues of national and international concern. Having established such a position, the scientist is subjected to that great danger of becoming a politician of science, a 'theoretician', of espousing a dogma. He fears that a revision of his position will cause him to lose face and therefore he may cling to all evidence, even outdated or unsound, to sustain a previously announced position.
>
> William Darby, Professor of nutrition, Vanderbilt University, 1966[1]

The Rhythm of Change

While many of the currents in nutritional history, such as the rapid change of Unicef's focus toward the pre-school child, reflect the swiftness with which transformations in policy and scientific focus could occur, innovation generally marched at a torpid pace. The dried milk distribution programmes of the 1950s, in spite of evidence that they could be harmful, continued to be implemented by one agency or another for decades. Similarly, high-protein mix development programmes, ANPs, and other undertakings which had spotty track records proceeded to receive top priority. Stasis in policy itself can be found through these years: the FAO *Manual On Food and Nutrition Policy*, first published in 1969, was actually written in 1966 and was published and translated in its final form well into the 1970s.[2] General nutrition policy did not contain radical changes on a year-to-year basis. Nevertheless, the arena in which central concerns of the UN agencies were formulated allowed for apparently pressing issues to seize attention and resources rapidly. This dissertation discusses the introduction of various nutritional issues into this arena and the way in which new, frequently scientifically-espoused ideas, transformed the landscape of policy over time. We saw toward the end of 1965 that a new tone of dismay over the breadth of nutrition issues was introduced into the elocution of nutritionists. This chapter and the next are in part concerned with how this dismay rose to deafening

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[1]William J. Darby, 'Nutrition research for the future', provisional agenda item 13, Joint FAO/WHO Expert Committee on Nutrition, 25 October 1966, NU: FAO/WHO/NU/13, LSHTM Archives, Payne papers, FAO/WHO expert committee box, p. 5.

[2]J. P. Greaves, interview, 16 February 1996.

proportions within a few years and distracted attention from broader hunger and malnutrition concerns.

FAO's *Manual on Food and Nutrition Policy* provides a springboard for a broad discussion of nutrition policy during the late-1960s. Marcel Autret, then director of the FAO Nutrition Division, wrote in the foreword to the ninety-five page manual that current nutrition activities had been re-tooled to target the prevention of malnutrition and the elimination of undernutrition. This was hardly a recent development since these changes had spearheaded nutrition policy reform since the mid-1950s. Nevertheless, Autret asserted that nutrition policy and activities could best be approached by combining the forces of the "agronomists, technologists, economists and educators" who would work "with the nutritionist, who is now considered an indispensable partner in this effort."[3] Reflecting the influence of the Unicef Bellagio conference, Autret suggested that these professionals would create programmes in the broader context of national plans. At a time when the planners, economists, and nutritionists were still debating the fundamental issues related to malnutrition and hunger, it is remarkable that FAO was so bold as to publish a blueprint for action. Within FAO itself, there was little agreement about the primary causes of hunger and malnutrition and approaches to its treatment and prevention. Although the *Manual on Food and Nutrition Policy* was not meant as the consummate guide to arranging policies, it did seek to frame malnutrition and hunger in similar terms throughout the developing world. The authors sketched a rough and largely ambiguous methodology for forging nutrition policies which began with an evaluation of existing nutrition problems and followed with a national planning approach. They asserted that the augmentation of existing food production was of vital importance and that the resulting additional food was to be either purchased or distributed through food distribution schemes. Additionally, health workers would provide the necessary education to solidify nutritional changes and encourage healthy eating habits.[4] Thus, the basic recommendations had changed very little from ideas pronounced even two decades earlier by Orr. National planning aside, the solutions resonated with calls for increased support for the familiar programmes of the previous decade: high-protein food development and applied nutrition programmes.

An examination of nutrition initiatives during the second half of the 1960s reveals that there were no great new initiatives for policy makers. Instead, analysts

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[3]B. F. Johnston and J. P. Greaves, *Manual on Food and Nutrition Policy*, Rome, FAO, FAO Nutritional Studies no. 22, 1969, foreword.
[4]Ibid., pp. 32-42.

pored over old programmes searching for improvements to be made, while leaders critiqued their policies and identified largely bureaucratic reasons for the failure of nutritional programmes. Within Unicef, administrators long tired of mediocre results from joint Unicef/FAO projects took out their frustration on the FAO Nutrition Division. At the same time, many nutritionists continued to rally behind the threat of a world protein gap which, they predicted, would be responsible for increased misery and malnutrition in developing countries. The nutritional environment of the late-1960s provided nutritional programmes with time to evolve while the political climate around many nutritional issues began to heat up.

The Whole Society Is The Patient

Through the 1960s, the protein in PCM continued to dominate scientific dialogue and programme planning. Although the sixth report of the FAO/WHO Joint Expert Committee on Nutrition mentioned the importance of marasmus in developing countries that were rapidly urbanizing, it reassuringly suggested that current protein-rich food programmes were in part designed to address this problem.[5] By 1966, Donald McLaren, still conducting impressive nutritional research at the American University in Beirut, felt that the focus on kwashiorkor had drawn the pendulum too far away from marasmus as well as from the importance of calories and infection. His experiences in Lebanon guided his frustration:

> we [nutritionists] didn't know [then] what to do with this marasmus...I would go into a children's hospital during the summer in Beirut and half the kids were sort of skin and bone and you just couldn't sort of cope with it. It didn't strike you as being a nutritional problem at all; these kids are badly neglected and that's what happened when you neglected children, they can't eat, you don't feed them and that's all there is to it.[6]

In the *Lancet*, he vented his feelings by publishing another article highly critical of the nutritional establishment and sure to attract the attention of policy makers. By this time, PCM had come to define itself as a category of disease, even though it could exhibit radically different manifestations and arise from dramatically different causes.

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[5]*Joint FAO/WHO Expert Committee on Nutrition, Sixth Report*, Rome, FAO, FAO Nutrition Meetings Report Series no. 32, 1962. This attitude was expressed again a few years later by the same committee. See: *Joint FAO/WHO Expert Committee on Nutrition, Seventh Report*, Geneva, WHO, Technical Report Series no. 377, 1967, p. 60.

[6]D. S. McLaren, interview, 6 October 1995.

McLaren felt that this inept categorization and rigid nomenclature had led clinicians "to lump all malnourished children together and ignore the pronounced contrasts not only between the polar disorders, marasmus and kwashiorkor, but also between marasmus and marasmic kwashiorkor."[7] To McLaren, these distinctions were of vital importance especially in Beirut, where the incidence of kwashiorkor was low and marasmus was common. Since kwashiorkor tends to strike children aged one-to-four years of age and marasmus affects those less-than-one, McLaren believed that it was important to lure increased attention to the neglected younger age group.[8] Citing the heightened recognition of malnutrition in pre-school children which we witnessed in the last chapter, McLaren argued that marasmic infants were being overlooked at a time when their mortality and morbidity were rising.[9] While kwashiorkor was still being trumpeted as the leading nutritional disease in the PCM spectrum, McLaren defied the conventional wisdom and asserted that nutritional marasmus was, in fact, the most pressing and significant element.[10] Thus, McLaren drew a new line across the nutritional field which pitted the nutritionists interested in protein and kwashiorkor against those focused on calories and marasmus.

McLaren's views on hunger and malnutrition were not overtly embraced by nutritionists. In Hamburg during 1966, McLaren was a speaker at the Seventh International Congress on Nutrition. Congress organizers had asked him to discuss a protein mixture being used at the American University in Beirut. After reading a paper on a related subject, McLaren volunteered another, unsolicited piece.[11] In it, he criticised the rationale behind most protein mixtures and contended that although protein mixtures might be appropriate for preventing kwashiorkor, they might do little for the massive problem of nutritional marasmus. McLaren recounted that Autret, "that French pharmacist", and Scrimshaw "were livid...I saw them change color [as I spoke] and the chairman said 'we'll break'."[12] McLaren claimed that during the break, peers approached him and sympathetically said, "this is terrific but we're scared we're going to have our grants cut [for protein research]."[13] During the discussion of the

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[7]Donald Stewart McLaren, 'A fresh look at protein-calorie malnutrition', *Lancet*, 27 August 1966, 485-88, on p. 485.
[8]Ibid., p. 485.
[9]Ibid.
[10]Ibid., p. 488.
[11]See: D. S. McLaren, Pergrouhi Asfar, and Beatrice Zekian, 'Liver Pathology and vitamin A storage in children recovering from protein-calorie malnutrition', in *VIIth International Congress of Nutrition*, Hamburg, 3-10 August 1966, Hamburg, Heralusgeber Publishers, 1966, pp. 108-11.
[12]D. S. McLaren, interview, 6 October 1995. Autret was not a trained nutritionist. Thus McLaren's calling him a "French pharmacist" was meant pejoratively.
[13]Ibid.

paper, McLaren found Sebrell to be supportive but Autret and Scrimshaw "attacked the thing; 'how are you going to solve the problem?'" they asked.[14] McLaren lamented that this congress was one of the few public opportunities he had to respond to their complaints. Following the congress, he and Autret briefly corresponded on protein issues, and their letters suggest that they quickly hit ideological barriers. Autret outlined FAO's substantial stake in protein for McLaren and assured him that FAO would attempt to reverse the trend toward ready-made protein mixtures. Autret further highlighted the paramount importance given protein by the Nutrition Division.[15] McLaren aggressively, though nevertheless cordially, replied:

> Marasmus is the main nutritional problem of early childhood; its causes are however basically not nutritional but cultural, economic, and hygienic. If this is so, then it knocks the bottom out of the whole argument for Protein-Rich foods etc...Repeatedly throughout all the documents you have sent me, all those produced at the Hamburg congress and almost every one ever on the subject the assumption is made that protein malnutrition is the main problem and that food mixtures are the way to prevent it...I am not, of course suggesting that it is FAO's job to get these facts straight, but I believe that FAO can look to WHO for the answer.[16]

McLaren's and Autret's viewpoints were irreconcilable between them and, on a greater scale, within the international nutritional community. Not long after the Hamburg Congress, McLaren found himself "ostracized" by the protein advocates. He was not surprised by his alienation because, in his view, the most powerful people in nutrition at the time were "Scrimshaw and his minions. [And Scrimshaw] was so powerful...I would say there was not anyone else [in the nutrition field] that mattered."[17] In McLaren's mind, the whole problem of focusing on kwashiorkor and protein was rooted in history. When Brock and Autret wrote their monograph on kwashiorkor in Africa, they overlooked marasmus because a "skinny baby is just not that interesting."[18] McLaren believed that "Doctors are always fascinated by the exotic; describe a new syndrome and put your name on it."[19]

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[14]Ibid.
[15]M. Autret, letter to McLaren, 7 September 1966, FAO Archives, Nutrition Division Registry Files, NU-1/2, NU-1/4, box 12.
[16]D. S. McLaren, letter to Autret, 22 October 1966, FAO Archives, Nutrition Division Registry Files, NU-1/2, NU-1/4, box 12.
[17]D. S. McLaren, interview, 6 October 1995.
[18]Ibid.
[19]Ibid.

While McLaren assailed the tunnel vision with which most nutritionists conceived of nutritional problems, the idea that nutritionists had strayed too far from their central focus was contained in little nutritional dialogue during the late-1960s. J. C. Waterlow, arguably the first person to emphasize the clinical differences between marasmus and kwashiorkor, was mildly distressed over the attention nutritionists were giving kwashiorkor. Waterlow explained the problem for the researcher in the following terms: "If an investigation is made of 'kwashiorkor' in which the criterion of the disease is the presence of oedema, the undernourished [marasmic] child who had oedema last week, or may have it next week, or who has an excess of body water without clinical oedema, is ignored; yet such cases are not irrelevant."[20] Waterlow, often a prime protein proponent, ideologically sided with McLaren on this issue and remarked that dogmatic attitudes had led to neglect of marasmic patients and to what he termed, "logical absurdities". Waterlow recounted: "I have seen clinicians arguing about the diagnosis of a malnourished child, and settling for marasmus...[then] a small patch of dermatosis was observed and so the diagnosis was changed to kwashiorkor."[21] In the small, exclusive world of nutritionists, Waterlow had a few friends who shared his criticisms.

William Darby, the former PAG chairman and a leading advocate for nutritionists, while speaking of nutrition and clinical medicine admitted that "the nutritionist sometimes has failed adequately to consider the relevant known medical facts, some of which are obvious to the experienced clinician, and thereby has drawn wrong conclusions or misinterpreted his observations."[22] He further warned that "The nutrition scientist is in danger of becoming superficial, uncritical, and unsound in research" while trying to become an expert in other fields such as public health, food production, and population.[23] Nutritionists, Darby believed, could only rarely establish expertise in a field outside of their own.[24] If Darby's observations on nutritionists were accurate, then McLaren's call for a broadening of nutritionists' scope would have been seen as blasphemous to the hard-core protein nutritionists who wished to focus their specialized field further. Just short of hypocrisy the nutritionists appeared perfectly capable of simultaneously holding several diametrically opposed opinions of what nutrition should entail. Darby, for example, rallied against the trend of nutritionists to

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[20]J. C. Waterlow, 'The adaptation of protein metabolism to low protein intakes', in R. A. McCance and Elsie M. Widdowson (eds), *Calorie Deficiencies and Protein Deficiencies, Proceedings of a Colloquium held in Cambridge April 1967*, London, J. & A. Churchill Ltd., 1968, 61-73, on p. 61.
[21]Ibid. Dermatosis and oedema were considered iron-clad characteristics of kwashiorkor.
[22]Darby, op. cit., note 1 above, p. 3.
[23]Ibid.
[24]Ibid., pp. 3-4.

over-expand their field, but also warned that nutritionists were too often simplifying nutrition problems and searching for "the single factor responsible for an effect" when other factors such as infection had to be considered. (emphasis his)[25] Because of the variety of ideas nutritionists had about what nutritionists did, it could be asserted that there were no specific camps of nutritionists. On the contrary, Darby envisaged identifiable nutritional cadres as follows:

> there are those who urge that all effort be directed toward applying existing substantial knowledge toward developmental research to produce food formulations. Other scientists disdain any research developmental in nature and withdraw further and further into the laboratory to be concerned with the esoteric or at times trivial refinements of knowledge. Still others insist upon more and more restudy of well understood phenomena or situations to points of no return, while others needlessly expend resources on refinements of methodology unjustified by the application to be made of the particular procedure. (emphasis his)[26]

At least among the nutritionists, several genres of approach existed which ranged from those advocating research, to those focused on practical programmes. These divergent perspectives caused the more prominent nutritionists to reinforce their call for competence and homogeneity within the nutritional establishment. To Darby, the ultimate aim of the nutritionists should be to conduct research, since only it could stimulate a proper evolution of nutritional knowledge and, among other attributes, the creation of "effective programs of applied nutrition."[27]

For McLaren, effective programmes in nutrition were rarely encountered. He highlighted and condemned the strictly nutritional approach that had been adopted by health projects and instead promoted supplementary food programmes alongside programmes to prevent and control infection. McLaren declared:

> The mistake has been repeatedly made in the past and is still being made of assuming that nutritional disease must be combated by nutritional measures. This is naturally not a popular thing to say among nutritionists, especially those committed to such an approach. Today the malnutrition of early childhood as typified by marasmus is symptomatic of a sick and bewildered segment of urbanising and

[25]Ibid., p. 4.
[26]Ibid.
[27]Ibid., p. 5.

> modernising society, rootless and insecure. **The whole society is the patient.** (emphasis mine)[28]

In McLaren's mind, malnutrition and hunger were inextricably tied to socio-economic conditions and could not be effectively treated by singular methods alone. Given the rise in bottle-feeding in developing countries and the dearth of broad-spectrum nutritional programmes, McLaren made the following prognosis:

> the future is fraught with danger and at present we are ill-prepared to meet it. Marasmus is already underestimated, and all the indications are that it is rapidly on the increase as an epiphenomenon of the half-assimilated modernising process engulfing the developing regions of the world. On the other hand, kwashiorkor, under the same influences, is dying out, being part and parcel of a more traditional way of life.[29]

Although some nutritionists like Scrimshaw felt that McLaren had exaggerated the situation based on data only from Lebanon, McLaren's arguments were not utterly rejected. On the other hand, they were not acted on either. As long as the nutrition establishment allowed protein to remain on centre stage, harrowing messages about calories were ignored.

Nutrition and Infection Revisited

Echoing the recent research on interactions of infection and nutrition, McLaren in his *Lancet* article posited that "purely nutritional measures" such as protein mixtures were "doomed to failure" unless the causes of abrupt weaning were addressed as well.[30] Observations in Beirut suggested that mothers halted weaning quickly due to another pregnancy or infections. The mothers then provided diluted formula to the infants, who would subsequently fall ill with gastro-intestinal infections. In McLaren's view, the replacement of nutritious food at times of intestinal distress with teas and waters to help rest the gut were a major factor in the aetiology of marasmus.[31] The mistaken notion that the gut required time to recover from infection remained prevalent in traditional societies as well as in Western medicine. In the case of choleric infection, for example, it was not until 1968 that scientists working in Dhaka,

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[28]McLaren, op. cit., note 7 above, p. 488.
[29]Ibid.
[30]Ibid., p. 486.
[31]Ibid.

Bangladesh realized that even critically ill cholera patients could successfully absorb fluid and food taken by mouth.[32] Research on electrolyte physiology, malnutrition and infection became increasingly popular during the late-1960s.[33] The ideas about the interactions of infection and nutrition, which Scrimshaw, Taylor, and Gordon had first highlighted roughly a decade earlier, began to be injected into the framework of research programmes. However, their views were by no means ubiquitous. An FAO/WHO Expert Committee on Nutrition noted in 1967: "that the interrelationship of malnutrition and infection constitutes a major public health problem is **slowly** becoming apparent." (emphasis mine)[34]

Studies that investigated the aetiology of diarrhoea, however, were increasingly vocal about the role of malnutrition in this disease.[35] Contemporary research suggested that often in kwashiorkor and marasmus, loose stools led to dehydration and death in a large percentage of cases. Although in many of these cases the diarrhoea was a symptom of an underlying nutritional disorder, its clinical importance as a principal cause of death attracted the attention of medical doctors.[36] Interest in diarrhoea rose high enough for an expert committee to call it "The single most important health problem in most developing countries".[37] Soon after this declaration, Scrimshaw, Gordon, and Taylor published a more detailed study of the interactions of nutrition and infection in the form of a WHO monograph in 1968. The advances over their publication from a decade before were substantial and brought increased attention to the topic as well as to diarrhoea. Among their important findings were key insights into the roles of infection and nutrition in the daily lives of children in developing countries. They noted that an episode of infection with recovery was usually not of great significance for a child's health. If the child had an inadequate diet and was struck by another infection, however, then just one episode of diarrhoea or an acute respiratory infection could precipitate kwashiorkor. This

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[32]For a detailed description of the evolution of cholera and diarrhoeal treatment in the 1960s see: Joshua Ruxin, 'Magic bullet: the history of oral rehydration therapy', *Medical History*, **38**, pp. 363-97.

[33]For example, see: F. Lowenstein, 'Nutrition and infection in Africa', Joint FAO/WHO/OAU Regional food and nutrition commission for Africa, Occasional Paper No.2, October 1967, LSHTM Archives, WHO policy file.

[34]*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 5 above, p. 22.

[35]See, for example: Lie Kian Joe, B. Rukmono, Sri Oemijati, K. Sahab, K. W. Newell, Sie Ting Hay, and R. Widodo Talogo, 'Diarrhoea among infants in a crowded area of Djakarta, Indonesia', *Bulletin of the World Health Organization*, 1966, **34**, pp. 197-210.

[36]For a superb public health perspective on the interactions of malnutrition and diarrhoea see: D. B. Jelliffe, 'Therapy of diarrheal disease in early childhood, principles based on observations in the tropics', *Clinical Pediatrics*, June 1967, 6(6), pp. 355-64.

[37]*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 5 above, p. 73.

schematic for understanding the course of kwashiorkor was a crucial reply to critics who had argued that much of the time, diarrhoea did not spur kwashiorkor.[38]

1969 marked the year that Scrimshaw, Gordon, Béhar, and their fellow INCAP investigator, Miguel Guzmán, published their final commentary on their three-village nutrition and infection study, discussed in the last chapter. In the final analysis, the researchers noted that their monumental study had enriched knowledge but had not provided any singular insights. In their words: "Although new and useful procedures for public health action became evident, the principles established decades ago remained unchanged."[39] Nevertheless, the study did present exceptional new data on morbidity in young children which demonstrated uniquely the toll of malnutrition and infection during childhood. Moreover, having observed that preventive medicine or supplemental feeding had only a limited impact on childhood health, the researchers noted that malnutrition and infection should be considered a single entity since their treatment together was found to be far greater than the sum of their parts.

The three-village study was the precursor to perhaps the most impressive research that was being done during the late-1960s to show the inter-relationship between nutrition and infection. Starting in 1964, Dr. Leonardo Mata, a nutritionist at INCAP who had been involved in Scrimshaw's earlier work on interactions of nutrition and infection, expanded on the completed three-village study with an eye toward the role of diarrhoea. In the Guatemalan highland village of Santa María Cauqué, Mata and his colleagues were tracking children from birth until the age of three to determine with greater precision the relation between nutrition and infection. Additionally, they were recording important observations of feeding practices, intestinal infection, disease incidence, and childhood growth and development. Their findings did much to confirm past observations that growth stunting tended to be brought on during the weaning period at which time infections also began. They also added new data which showed the synergistic manner in which malnutrition was related to diarrhoea as well as to other diseases such as measles, pertussis, and pneumonia. According to Béhar, who had replaced Scrimshaw as the director of INCAP, Mata's research was reshaping the goal of nutritional research. The elusive "endgame" they sought, stated Béhar, was to find a diet culturally and economically compatible with rural life which helped

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[38]Nevin S. Scrimshaw, interview, 25 July 1995 and N. S. Scrimshaw, C. E. Taylor, and J. E. Gordon, *Interactions of nutrition and infection*, Geneva, WHO, Monograph series no. 57, 1968.

[39]Nevin S. Scrimshaw, Moisés Béhar, Miguel A. Guzmán, and John E. Gordon, 'Nutrition and infection field study in Guatemalan villages, 1959-1964: IX. an evaluation of medical, social, and public health benefits, with suggestions for future field study', *Archives of Environmental Health*, January 1969, **18**, 51-62, on p. 53.

prevent childhood disease. INCAP data had demonstrated that in the cases of these diseases mortality and morbidity rates were several times what had been observed in industrialized countries.[40] Although diet was the target of their work, as late as 1969, they were still unable to state with certainty which factor was "primordial" in the development of clinical malnutrition.[41]

Urban Nutrition

A good deal of McLaren's concerns for the rise of marasmus in the world grew out of his belief that urbanization, then progressing at a rapid pace, would lead to new and potentially wider nutritional deficiencies. McLaren was not the first to bring up this issue; since applied nutrition programming began, nutrition planners had expressed concern that their projects were only targeting rural populations at a time of enormous movement from these areas to the cities. Further, the usefulness of applied nutrition for urban dwellers came into question since there was not much point in teaching an urban slum dweller how to construct a household garden when there was no land on which to put it. Increasing knowledge of the tremendous demographic shift toward the cities slowly came to influence organizational thought on nutrition in developing countries. Whereas previously, nutrition programmes had primarily targeted agriculturists -- recipients were often referred to as subsistence farmers -- new programmes had to revise these terms to include urban populations. The late-1960s appears to mark the birth of substantial new efforts on this issue. Teply, then Unicef's nutrition expert at headquarters, in a letter to Heyward in 1967 summed up the new programmatic problems inspired by the urban transition: "many have talked about malnutrition in urbanized areas of developing countries, but few have developed specific nutrition projects for these areas. Indeed, there are some who believe specific nutrition projects are neither necessary nor desirable." (emphasis his)[42] According to Teply, Unicef had been engaged in a number of programmes such as supplementary foods, health service, and milk conservation, that had had some effect on urban nutrition but which were apparently not reaching the shanty towns and other needy areas. Unicef staff felt that the two options for effective programmes in the cities were

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[40]Leonardo J. Mata and Moisés Béhar, 'Public health significance of nutrition and infection: interaction in preindustrial countries 1,2', paper presented at the International Congresses of Tropical Medicine and Malaria, Teheran, September 1968, LSHTM Archives, nutrition and infection folder, p. 20. A fuller description of the results of Mata's work follows in Chapter VIII.

[41]Ibid., p. 3.

[42]L. J. Teply, letter to E. J. R. Heyward, 12 July 1967, Unicef Archives, 88R025, Box T-006, Teply Files.

to have either a new line of projects distinct from ANPs or to modify and expand applied nutrition programming. Teply asserted that nutrition rehabilitation centres, university involvement, and possibly the fortification of staple foods were among the methods that should be promoted. However, he generally favoured single projects that crossed urban-rural lines over projects linked to one population group. Apparently, his opinion did not carry far with the Unicef Board since rural projects were increasingly viewed in a different context from urban endeavours.[43]

Many nutritionists brooded over the problem of urbanization, noting that their methods would have to be redesigned in order to address a host of new nutritional problems. Jelliffe, one of the most prominent tropical nutritionists, noted that the rising levels of urbanization combined with "the cultural dislocation and uncertaintly [sic] of uprooted new townsmen again has most impact on young children-notably with the trend to unaffordable bottle-feeding (considerably under the impetus of locally inappropriate and unethical advertising)".[44] For Jelliffe and his colleagues, urbanization was certain to bring the problems of the major childhood health issues -- diarrhoea, malnutrition, and respiratory infection -- in from the countryside. Teply remarked that "Little is known about how this trend [early breastfeeding cessation due to urbanization] might be slowed and there appear to be only limited attempts in developing countries in this regard."[45] FAO and WHO began to pursue urban and peri-urban nutritional problems seriously during this time period. Progress was slow, and midway through 1968 FAO, WHO, and Unicef planned to "find out what persons or institutions are available in strategic areas to undertake feasibility studies for programmes aimed at improvement of nutrition within the urban setting."[46] Thus, as the process of urbanization was accelerating, most project proposals and nutrition studies still tended to conjure the image of the aid recipient as a rural dweller.

What Is It All About?

While the nutritionists witnessed growth in infighting during the late-1960s, they were joined by their fellow nutrition programme administrators who were also

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[43]See: 'General Progress Report of the Executive Director, child malnutrition in the developing countries', 17 March 1969, E/ICEF/586/Add.9.

[44]Derrick B. Jelliffe, 'The pre-school child as a bio-cultural transitional', *The Journal of Tropical Medicine*, December 1968, 217-27, on p. 219.

[45]L. J. Teply, 'Protein and calorie needs of the young child and alternative ways to meet them', paper for the Food Conservation Conference, 13-22 May 1968, Unicef Archives, Teply files, C242, p. 5.

[46]'Report of FAO/WHO Inter-Secretariat Meeting on Nutrition Problems of Urban and Peri-Urban Areas', Geneva, 27-31 May 1968, WHO Archives, folder 2, box A.0918, p. 8.

having trouble defining their roles. J. P. Greaves, a British-educated nutritionist working for FAO during this time, found his initial work to be entirely disillusioning. His first task at FAO, which brought him in close contact with McLaren at the American University of Beirut, was to organize a multi-disciplinary course on nutrition for influential policy makers in the Middle East. After travelling extensively to drum up participation, Greaves returned to Cairo to brief the head of the FAO office, who also happened to serve as the regional FAO director. Greaves' first conversation with the director crushed his excitement for the project: "the only thing that interested him [the regional director] was where would he be sitting on the platform [at the initial ceremony]...I tried to express in my eyes total contempt...I do realize that I was over naïve; these things are not beyond relevance".[47] Soon after, Greaves began to feel that the agency invested too much time in organizing superfluous nutrition meetings and training seminars. He recalled the epiphany he had when he was still a young nutrition officer preparing for one such meeting:

> I was sitting in the Roman ampitheatre in Amman and it suddenly came to me [that] all this talk -- it's really not what it's about -- and I can remember saying [to myself] 'some people talk about seminars as if something had been achieved, when in fact nothing has been achieved except the potential to do something. But it's the follow up; nothing has happened unless people go out and operate.'[48]

Greaves' perceptions of FAO uncannily mirrored FAO's own evaluation of its nutrition training programmes which came several years later. On all counts, according to evaluator Jean McNaughton, a senior FAO food policy and nutrition officer, nutrition worker training had failed. The research fellowship programme, for example, which trained students from developing countries in nutrition, failed to teach culturally adapted lessons. More detrimentally, the students, once trained, often failed to return to their native lands. McNaughton called the training of field-level nutrition workers -- the same work Greaves conducted -- "the weakest link in the chain of training activities" and demurred that training had "tended to be too theoretical, that trainees have no clear understanding of nutrition information, [and] that in addition they have

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[47]J. P. Greaves, interview, 8 December 1995. Greaves' disgust for FAO continued to mount after similar incidents. At an FAO reception one evening, he felt nauseated after hearing his colleagues discuss incessantly their perks and pensions.
[48]Ibid.

not received sufficient instruction in what to teach and how to teach".[49] The nutrition training problems also applied to regional seminars and workshops of the sort Greaves organized which, according to McNaughton, "have not made a large contribution to strengthening national institutions or training capacity."[50]

For Greaves, FAO would never be an organization where he felt that he could grow. A few years after joining, he decided to devote his talents to Unicef which, according to him, was "a congenial organization...concerned to see things happen".[51] Greaves' decision to pursue Unicef over FAO reflected the deeper rifts in the application of nutritional knowledge that he had observed first hand. Like many of his peers, Greaves was anxious to affect nutritional problems discernibly. In the nutritional community, the perception that Unicef was the centre for such action had become popular. On a macro level, Unicef certainly was experiencing dramatic growth as well as change in its outlook. In 1966 the Executive Board met for the first time in Africa, where Unicef then had programmes in forty-one countries, its largest continental contingency. Its total annual income in that year reached $35.2 million and the Board planned to nearly double that amount by the end of the decade.[52] During the late-1960s, Unicef continued to direct its central nutrition efforts through ANPs, while also working with the World Food Programme (WFP) on feeding programmes for children and protein-rich food development.[53] Progress during the decade revealed that the WFP had done much to improve Unicef's focus on programmes for children, rather than simply feeding projects. At an internal meeting with Labouisse, Unicef emphasized that it "should not compete with the World Food Program" but should co-operate.[54] Unicef administrators, insofar as they were concerned with food supplies, saw Unicef as an "executing agency" for the food supplies WFP provided. Thus their vision of Unicef as an aid agency had changed demonstrably.

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[49]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.

[50]Ibid.

[51]J. P. Greaves, interview, 8 December 1995.

[52]'Milestones in Unicef's History 1946-1985', January 1986, Unicef Archives, PR-NU-001, p. 4.

[53]'General approaches including food and nutrition policy', 1973, New York, Unicef, Unicef Archives, CF-NYHQ-05ANS-005, p. 73. See also: 'Statement of the Executive Board', June 1968, E/ICEF/576, paragraphs 56 and 63; 'Statement of the Executive Board', June 1965, E/ICEF/528, paragraph 170 and annex II; 'Statement of the Executive Board', June 1965, E/ICEF/528/Rev.1, paragraphs 183-184, 188, annexes III and IV; 'Statement of the Executive Board', June 1967, E/ICEF/563, paragraphs 86, 90-93.

[54]B. H. Fraser, note to H. R. Labouisse, 1 September 1965, UN Archives, CF-NYHQ-09.E (64-80), folder G0013.

Out of its programmatic shifts, Unicef continued harping on its "country approach" and sought to redirect individual projects toward more holistic services integrated into national development plans. This shift for Unicef resonated through its projects country-by-country as administrators encouraged creativity in programmatic formulation.[55] In the words of Unicef's Executive Director, Henry Labouisse, the characteristics of future Unicef programmes should reflect "greater flexibility, ingenuity, and exploration of unconventional methods."[56] At a time when FAO and WHO were pointing out which type of experts should be brought together to solve hunger problems, Unicef was designing a framework for which **services** had to be united to solve these problems. In much the same way that a child's health depended on a variety of factors, Unicef's administrators asserted that programmes should draw on a "whole child approach" which called for the integration of the various ministries involved in the well-being of children.[57] As the decade drew to a close, Unicef increasingly discussed tangible applications for national nutrition planning.[58] WHO and FAO, too, wished to push nutritional issues onto national agendas but continued to encounter obstacles. Dr. Ken Bailey, then the WHO Regional Adviser for Nutrition in the Western Pacific, worked fervently for inter-ministerial interest in nutrition but often found the task overwhelming. According to him, in the late-1960s: "There was a recognition at the level of national planning level that nutrition needed a coordinated approach, that was usually agreed. The frustration was these inter-sectoral committees would send lower and lower level people who would check back with their ministry and not get anything done."[59]

FAO maintained its substantial commitments to the WFP and FFHC through the end of the decade. WFP continued to explore new methods for linking local food production to its food supplementation projects, and further, it attempted to link itself more closely to national development plans.[60] The FFHC, which had thrived under Sen, found itself struggling under A. H. Boerma, who became the Director-General in 1968. In the opinion of Charles Weitz, the co-ordinator of the FFHC, the campaign

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[55]'Milestones in Unicef's History 1946-1985', op. cit., note 52 above, p. 5.
[56]Henry R. Labouisse, 'Strategy for Unicef programme cooperation', December 1968, in John Charnow and Sherwood G. Moe (eds), *Henry R. Labouisse, Unicef Executive Director, 1965-1979*, New York, Unicef, 1988, CF/HIST/MON/88-011, p. 24.
[57]Ibid., p. 23.
[58]'General approaches including food and nutrition policy', op. cit., note 53 above, p. 74. See also: 'Statement of the Executive Board', June 1968, E/ICEF/576, paragraphs 56 and 63 and 'Statement of the Executive Board', May 1969, E/ICEF/590, paragraphs 75-77.
[59]Ken Bailey, interview, 1 April 1996.
[60]*Report of the Thirteenth Session of the Conference, 20 November - 9 December 1965*, Rome, FAO, 1966, pp. 22, 25-27.

had done much to educate governments and the public about the precarious balance between global population growth and agricultural productivity. Weitz, however, did not count any nutritional ventures as among the FFHC's top accomplishments.[61] FAO also experienced a degree of change during the late-1960s, though it is difficult to identify in concrete terms. According to an evaluation of FAO's nutrition programmes, FAO nutrition staff were becoming aware that "agriculturists, nutritionists, and food economists needed to collaborate closely in formulating programmes and policies to eradicate hunger."[62] This type of ideological development is one of the many themes which run through this history of nutritional policy.

One theme prominent on the policy front was that every few years administrators and policy makers announced, at times in collusion with scientific developments, new or reinvented plans for truly impacting hunger and malnutrition in developing countries. They seemed to realize, from time to time, the ingredient that had apparently been missing from their policies and programmes which would, in fact, eliminate hunger and malnutrition. During the 1950s what was missing was often identified in scientific terms such as protein mixes or food supplementation. In the 1960s the focus became more ideologically driven: increased attention to the pre-school child and the insertion of nutrition concerns into national development plans were popular notions. After Unicef's conference at Bellagio, FAO and WHO frequently spoke of the co-ordination of various types of nutrition and nutrition-related experts in nutritional planning. But for many nutritionists, planning would hardly be the golden key to solving persistent nutritional problems. Jelliffe cynically commented that it was an "unequivocal fact that not all the health problems of pre-school children (or any other age-group) can be attacked immediately. This is so anywhere in the world, especially in less well-to-do areas with large problems and the so-called 'shortage syndrome' - that is with insufficient staff, money, equipment and everything else."[63] While administrators dreamily discussed how the next project could really have impact and influence nutritional change in an entire country, or even across a region, nutritionists like Jelliffe had a much cooler view of the situation. Jelliffe often

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[61]Charles H. Weitz, letter to Boerma, 5 January 1968, FAO Archives, FFHC registry file, 13/4. WHO's Nutrition Section had little regard for the FFHC. After being invited to provide a representative at the FAO Third Freedom From Hunger Conference, Bengoa, the head of WHO's Nutrition Unit, informed his director that "We have learned from past experience that these meetings are not of very great interest to WHO." As a result, WHO was usually unrepresented at FFHC activities. J. M. Bengoa, letter to Dr. Karefa-Smart, 15 September 1967, WHO Archives, FAO FFHC, box A.0944 and WHO Director-General, letter to FAO Director-General, 30 September 1969, WHO Archives, FAO FFHC, box A.0944.

[62]McNaughton, op. cit., note 49 above, p. 4.

[63]Jelliffe, op. cit., note 44 above, p. 223.

stressed how health programmes had to balance priorities: if the admission of one chronically ill child resulted in neglecting ten easily-treated dehydrated children, then a preference would have to be shown.[64] These were issues that policy makers, perhaps blinded by a combination of their idealism and sense of power, wished to leave to the field workers. In a world of scarce resources, the workers in the field were constantly balancing ethical considerations with the magnitude of the nutrition problems they faced. Invariably, some sick children would receive treatment and live, while many others, who if given treatment might be saved, would die.

Applied Nutrition Programming

If the first half of the decade can be said to have seen the germination of applied nutrition programmes, then it might be said that the second half was spent searching for the intangible fruit. While the ANPs of the early-1960s were, according to one group of experts, administered by "specialists having no previous experience themselves in work of this kind and often with little knowledge about experience gained elsewhere", during the late-1960s these specialists could apply their experience.[65] According to inter-agency evaluators in 1965, efforts to share experience in ANPs throughout the developing world and increase the quantity and quality of staff had "not yet come to full fruition."[66] While the first nutrition projects based in rural communities had sought solely to encourage production and consumption of nutritious foods, later projects began to contextualize the projects in more economic terms. Issues of microeconomic development -- purchasing power, exchange of currency, markets for products -- as well as inter-ministerial co-operation increasingly informed the character of ANPs.[67]

Much of FAO's focus on applied nutrition remained educational. Its publication of a second edition of Jean Ritchie's influential 1950 pamphlet, *Teaching Better Nutrition*, revealed much about the transformation that had occurred in attitudes toward hunger. Ritchie, a nutrition educator based at the LSHTM, noted that educational research for ANPs "does not seem to have progressed very far".[68]

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[64]Ibid.

[65]*Report of the Joint FAO/WHO Technical Meeting on Methods of Planning and Evaluation in Applied Nutrition Programs, Rome, 11-16 January 1965*, Rome, FAO, FAO Nutrition Meetings Report Series no. 39, 1966, p. 10.

[66]Ibid.

[67]Ibid., pp. 12, 51-3.

[68]Jean A. S. Ritchie, *Learning Better Nutrition - a second study of approaches and techniques*, Rome, FAO, FAO Nutritional Studies no. 20, 1967, p. 2.

Exacerbating the lack of advanced teaching knowledge, Ritchie felt, was the failure of agencies and governments to engage comprehensive evaluation programmes.[69] The major changes during the previous decade and a half that she identified were a shift from dogmatic teaching to active learning and the embrace of many different professionals -- food technologists, social workers, economists -- into the development fold.[70] Ritchie's low esteem for the progress of education in applied nutrition was one of many signs that ANPs were failing.

FAO, Unicef, and ANPs

In January 1966, Unicef's strong-minded Deputy Executive-Director of programming, D. B. Sinclair, wrote an unusually acerbic letter to the Deputy Directors-General of WHO and FAO. The letter is worth quoting in large part because it provides unusual insight into the enmity between the agencies and since such strong feelings were rarely committed to paper. Sinclair wrote that "Unicef has for some time been concerned about the difficulties which exist in the FAO/WHO relationships in the field of nutrition which are making it increasingly difficult in a number of cases to arrive at any satisfactory development of jointly-assisted projects."[71] When WHO arranged for nutrition projects in the Western Pacific region and invited Unicef to participate, FAO would ask to be included and WHO would decline. Reversed scenarios were commonplace. This disagreement between the agencies had, in Sinclair's opinion, been detrimental to their joint undertakings: "There is ample evidence that governments do not wish to be involved in projects which are subject to jurisdictional wrangles, and that the UN image is not improved by them."[72] Perhaps more than other agencies, Unicef insisted on maintaining a shining image world-wide, because of its large contingencies of staff based in developing countries and its historical broad base of support. Although this particular occasion might be identified as an exception in inter-agency relations, Sinclair's words suggest that the contrary is true. She angrily noted, "While we are raising this issue in connection with certain specific projects, I would like to make it clear that this is not an isolated instance and that there have been other occasions on which initiatives taken by FAO

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[69]Ibid., p. 2.
[70]Ibid., p. 3.
[71]D. B. Sinclair, letter to O. V. Wells, New York, 21 January 1966, UN Archives, CF-NYHQ-09.E (64-80), folder G0013. See also: D. B. Sinclair, letter to Dorolle, 21 January 1966, WHO Archives, folder 1, box A.0918.
[72]Ibid.

have not included WHO to the extent that the latter agency believed was appropriate."[73] Sinclair further claimed that the haggling between FAO and WHO and delays promulgated by the tempestuous situation had resulted in the exceedingly low level of Unicef assistance to nutrition ($2.7 million) in 1965. That figure was nearly half of the average amount allocated to these projects during the previous years.[74]

Although Sinclair insisted that Unicef was concerned about the amount of aid going to nutrition programmes, she nevertheless threatened the nutrition sections of both agencies: "Increasing requests in other fields [besides nutrition] are more than sufficient to absorb Unicef's limited resources, and if agreement is difficult to reach on nutrition requests, allocations will inevitably be directed elsewhere."[75] A short piece of extremely confidential correspondence between WHO's Chief Medical adviser at Unicef and the Assistant WHO Director-General, suggests that Sinclair's anger toward WHO and FAO was not meant to be received equally. WHO's adviser cautiously wrote:

> The question of FAO or WHO/FAO relations in the field of nutrition has, as you know, been the subject of repeated discussions both here and at Headquarters, and of correspondence between New York and Geneva. For your personal information, while - as it was discreetly pointed out to me - WHO is not blamed for most of the difficulties referred to in Mrs. Sinclair's letter, identical letters had to be forwarded to both agencies.[76]

However the Sinclair letter was intended, WHO and FAO decided to work together to clarify their positions. In Rome in February, WHO and FAO representatives including the head of the Nutrition Section, José María Bengoa, and Autret, the director of the Nutrition Division, twice met to discuss inter-agency relations on nutrition.[77] The

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[73]Ibid.

[74]Burhan Ilercil, 'Unicef Program Statistics, 1947-1979', November 1985, New York, Unicef Archives, CF/HIST/IC-85-3. See also: Unicef Executive Board reports, 1948-1965, and L. J. Teply, 'Unicef activities relating to meeting protein needs', 15 March 1968, Unicef Archives, Teply file, PR-NU-001.

[75]D. B. Sinclair, op. cit., note 71 above.

[76]S. Flache, letter to L. Bernard, 25 January 1966, WHO Archives, folder 1, box A.0918.

[77]Bengoa, a Venezuelan, had become the chief of WHO's Nutrition Section in 1964. Much of his popularity had stemmed from his advocacy of nutrition rehabilitation centres for children. As early as 1955 he had recommended that these centres be established to offer the care children suffering from PCM needed and to do so at a substantially lower cost than hospitals. These centres not only helped children recuperate, but also trained mothers in vital nutritional lessons to avoid recurrence. The centres especially flourished in Latin America. See: *A Practical Guide to Combating Malnutrition in the Preschool Child*, New York, Research corporation, 1970, pp. 4-6.

representatives rehashed their respective responsibilities and agreed to ground rules which essentially called for mutual inclusiveness on any project undertaken in the nutritional field. The internal document they produced does little to illuminate the degree of conflict that existed; it only fatuously mentioned that "there were a number of areas of activity in which co-ordination was necessary and in which difficulties had arisen in the past."[78] Unicef was given little attention in the proceedings except for a call for establishing a more rapid process for agency technical approval of Unicef-funded projects.[79] In contrast to the calm tone of the documentation, Bengoa claims that 1966 marked a year when FAO/WHO relations reached "crisis" proportions which necessitated the establishment of "rules of the game."[80] In retrospect he believes the conflict was infantile and unnecessary. According to him, he deserved a share of the blame for the conflict since he and Autret "were defending our points of view with excessive force and maybe we did not know how to be flexible as would have been desirable."[81] At the heart of at least some of the problems, therefore, were WHO and FAO institutional egos. A later meeting on the subject of co-ordination implied that the main problem had been that on occasion, one agency or the other had initiated and conducted nutrition projects "without consultation with the other".[82]

After the FAO/WHO administrative meeting in February to flesh out their differences, Oris Wells, FAO's Deputy Director-General, responded to Sinclair's concerns. Wells was particularly irked that Unicef would attribute lower nutrition allocations to FAO/WHO tangles and commented that "the two agencies cannot agree that lack of agreement between them" was a factor.[83] Wells asserted that allocations

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[78]'Report of an FAO/WHO intersecretariat meeting to discuss interagency co-operation in the field of food and nutrition', Rome, 21-24 February 1966, Bengoa personal collection, p. 60 also found at WHO Archives, folder 2, box A.0918.

[79]Ibid., p. 63.

[80]I have translated Bengoa's remarks from Spanish. José María Bengoa, personal correspondence, 14 March 1996. In WHO correspondence from the time, Bengoa noted that the immediate cause of Sinclair's inflammation -- co-ordination problems in Cambodia and Malaysia -- were "no more than symptoms of the present tension." J. M. Bengoa, letter to Bernard, 7 February 1966, WHO Archives, folder 1, box A.0918. See also: 'Minutes of the FAO/WHO meeting held on Thursday 4 February 1965 at WHO Headquarters, Geneva', 1965, WHO Archives, jacket 1, box. A.0918; 'FAO comments on the minutes of the FAO/WHO meeting held on 4-5 February 1965 at WHO Headquarters, Geneva', 1965, WHO Archives, jacket 1, box. A.0918.

[81]José María Bengoa, personal correspondence, 14 March 1996.

[82]'The role of WHO representatives in the joint fields of WHO-FAO responsibility', 7 November 1966, WHO Archives, folder 2, box A.0918, p. 5

[83]Oris V. Wells, letter to Sinclair, 8 March 1966, UN Archives, CF-NYHQ-09.E (64-80), folder G0013. Wells mentioned that Autret would visit with Unicef and WHO representatives in April to smooth over any lingering concerns. Dorolle, WHO's Deputy Director-General, made essentially the same remarks a few months later. P. Dorolle, letter to Sinclair, 2 May 1966, WHO Archives, folder 2, box A.0918.

to applied nutrition had probably been reduced because of its rapid expansion and development during previous years and Unicef's activities in other fields. Nevertheless, FAO and WHO felt that their discussions had resulted in an improved format for co-operation and for appraising Unicef nutrition projects. Between FAO and Unicef, the situation also seemed to improve as Autret adopted a highly positive and constructive tone toward inter-agency relations.[84]

At Unicef, administrators of ANPs had adopted a new attitude of "increased flexibility" which called for essentially a country-based approach toward individual programmes. Throughout the agency, Unicef administrators were continuing their attempts at decentralizing the execution of projects so that they might be evaluated below headquarters' level.[85] It was Unicef's hope that a diversification of ANPs on the country level would, according to Teply, enable the agency to reach more than the "minute proportion of the population in need" which current projects did.[86] Teply and others concerned with nutrition generally found applied nutrition to have had little, if any, impact. Nonetheless, Teply believed that it was agreed that Unicef had "to work at applied nutrition as we know it or something very much like it" in order to achieve results and "a real spreading effect."[87] Although it was difficult to measure nutritional improvements inspired by ANPs, Teply asserted that "there were indications of a permanent 'take' in some of the projects".[88] Overall, however, no one was able to underscore data that showed positive impact. Thus, ANPs continued to trouble Unicef administrators, not in the least part due to their ongoing concern that FAO was sometimes placing superfluous nutrition experts at the project sites in the field.

In February 1967, at what was to be the last meeting of the FAO/Unicef Joint Policy Committee, Unicef declared that it would no longer provide funds for FAO experts on ANPs. This incident was a tremendous blow to the Nutrition Division at FAO since nearly 60% of its funding for field projects had originated from Unicef.[89] Paul Lunven, an FAO nutrition administrator who served at that meeting as the

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[84]See: M. Autret, 'Comments on FAO/Unicef relations', 30 October 1968, FAO Nutrition Library Rome, NU: MISC/68/28 and M. Autret, 'The Nutrition Division activities in the FAO/Unicef joint programme', 1969, FAO Nutrition Library, Rome, NU: MISC/69/7.

[85]Charles Egger, interview conducted by John Charnow, 11 October 1983, Unicef Archives, interview file, pp. 22-3. Egger succeeded Sinclair as Deputy Executive Director of programmes in 1967.

[86]L. J. Teply, letter to E. J. R. Heyward on Assessment - Applied Nutrition, 14 June 1967, Unicef Archives, CF-NYHQ-05ANS-002 (Egger), folder D0157.

[87]Ibid. For more information about FAO/Unicef relations specifically in this area see: 'Report of the Sixth Session of the FAO/Unicef Joint Policy Committee, Rome, 6-8 February 1967', 13 March 1967, E/ICEF/557*, paragraphs 20-26.

[88]Teply, op. cit., note 74 above.

[89]Paul Lunven, interview, 27 March 1996.

secretary, recalled how the Unicef move was welcomed by the high-level administrators at FAO. Lunven explained that other FAO divisions and departments had been envious of the Nutrition Division's essentially exclusive relationship with Unicef.[90] In the view of the FAO department heads, Unicef was paving the way for greater co-operation with FAO in other areas such as forestry, fisheries, and agriculture. Nevertheless, in the Nutrition Division Lunven perceived resentment for the move principally because its administrators believed that Unicef was meant to be only an aid agency. By closing itself off to FAO nutrition experts, it was clear that Unicef would begin recruiting its own in-house nutrition experts.[91]

Although it seemed that Unicef would be pleased to have greater co-operation with FAO in other fields, enthusiasm for mutual ventures in nutrition rapidly dissipated. In the summer of 1967, Dr. Michael Latham, often a consultant on FAO and WHO applied nutrition activities, wrote a brief article which encapsulated the central problems he perceived with ANPs in the UN. The difficulties governments had dealing with three UN agencies for their nutrition programmes led Latham to ask: "Is it too outrageous (or too Utopian) to ask whether all nutrition activities could not be better dealt with by a single U.N. agency?"[92] Although there would not be one nutrition agency at the UN, Unicef wished to make its nutrition programme adequately autonomous to remedy nutrition's splintered approach. In 1968 Charles Egger, Sinclair's successor, complained that ANPs were isolated from protein-rich food efforts as well as from ongoing milk conservation programmes. While trying to establish a working group on the issue of poor agency co-ordination, Egger placed heavy blame for poor programmes and policies on FAO: "the guidance given by FAO...is at best uneven. They have certainly not been able to advise us on the major policies to be followed either on a country or a regional level based on studies carried out in the countries and/or regions concerned, and - possibly partly as a result of this - I have sensed a certain apathy and pessimism on the part of our own field staff."[93]

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[90]The nutrition division was one component of the Agriculture Department of FAO. Thus, its relationship with Unicef had helped it maintain a more prominent status than many other FAO divisions.

[91]Paul Lunven, interview, 27 March 1996.

[92]Michael C. Latham, 'Some observations relating to applied nutrition programs supported by the U.N. agencies', *Nutrition Reviews*, July 1967, 25(7), 193-97, on p. 196. Latham at the time was affiliated with the Harvard School of Public Health, and his critique raised some concern at WHO and FAO. See: J. M. Bengoa, letter to Director-General, 22 September 1967, WHO Archives, box A.0917.

[93]Charles A. Egger, letter to E. J. R. Heyward on 'setting up of a working group at headquarters to review our policy in the field of food and nutrition in the various regions', 29 March 1968, Unicef Archives, CF-NYHQ-05ANS-001.

Apparently, the top Unicef administrators viewed FAO relations and guidance on nutritional issues as hopeless.

Perhaps due to the lack of positive reinforcement from its nutrition programmes to date, Unicef in 1969 again funded its nutrition programmes at a level relatively low compared to previous years. The Executive Board expressed its concern that only $2.9 million, just 8.5% of all Unicef programme commitments, were allocated to nutrition programmes. This figure did not include some nutrition expenditures such as school nutrition education and other joint programmes.[94] Unicef had been terribly disappointed with new ANPs, many of which ironically were "not well related to national plans of development".[95] The Unicef Board found that nutrition activities in Latin America were often "isolated ventures" which were unsuccessful at forming the broad tapestry which organizational idealists had envisaged.[96] More than any nutrition crisis, Unicef was stressing the need for national planning as its nutrition projects wavered.[97]

Scrimshaw believed that the fatal flaw of ANPs -- their unsustainability -- was confirmed when the projects ended and the governments did not have the means or motivation to provide the resources to extend them. According to him, ANPs were a reactionary but unrealistic approach to malnutrition in view of national resources and the ability of FAO and WHO to maintain a presence in one field.[98] Béhar agreed with Scrimshaw but carried the critique more deeply into the motives and methods of the programmes which originated from a negative reaction to food distribution programmes. Theoretically, by teaching children in school how to cultivate their own protective foods in school gardens, food supplementation could eventually be terminated. However, Béhar noted that in ANPs,

> the problem was that although the food didn't come from abroad, the ideas came from abroad. In a way it was similar to food distribution in the sense that they were imported products. And the whole planning was done in Rome or Geneva and then the package came here...the design was done there. The agencies were the ones, and I was partly responsible because I was involved in telling the governments what to do and I was considering that it was right. But I was too ambitious [in

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[94]'Nutrition', May 1969, E/ICEF/590, paragraph 74.
[95]'General Progress Report of the Executive Director', op. cit., note 43 above, p. 10.
[96]Ibid.
[97]Black incorrectly identified the late-1960s as the time of the emergence and popularity of the applied nutrition approach. Maggie Black, *The Children and The Nations: The Story of Unicef*, Hong Kong, UNICEF, 1986, p. 164.
[98]Nevin S. Scrimshaw, interview, 26 July 1995.

> Guatemala], people were not motivated...we were forcing teachers to do more work and they were resisting because there were not any additional stimuli to do it. Then, in the health centres, the health education was...too much based on foreign ideas, it was all [outside] their understanding and culture. Even the concept of three basic food groups, still, it was outside [their] understanding.[99]

Béhar critiqued several ANPs that were established in Central America and often found that the projects were utterly dependent on foreign aid. The seeds planted in the gardens, the cooking implements used for food preparation, were all provided from overseas.[100] When funding was slashed, the programmes rapidly withered. As the decade drew to a close, ANPs seemed destined to be cut off from their foreign support and were thus left to their demise.

Malnutrition, Learning, and Behaviour

As we have seen, on the scientific frontier nutritionists were perpetually looking at new ways not only to impact malnutrition -- through improved treatments and preventive dietary regimens for example -- but also to convince the world that hunger and malnutrition deserved more attention. This trend began with the findings of the first *World Food Survey* which showed that half the population of the planet was malnourished; by highlighting this figure, FAO had hoped to rally support for broader programmatic initiatives. Soon after, scientists underlined the vicious disease of kwashiorkor as the reason for fighting malnutrition. Later, policy maker concerns meshed with scientific findings as the dialogue on nutrition and working efficiency exemplified. In this tradition, Scrimshaw in 1967 once again attracted attention to the work of nutritionists and malnutrition. Based on considerable evidence collected by nutritional researchers, he gave further credibility to the notion that, in addition to the stunted physical growth that resulted from malnutrition, brain development and intellectual growth might also be affected.

In an momentous article entitled 'Malnutrition, Learning and Behavior', published in *The American Journal of Clinical Nutrition*, Scrimshaw drew an analogy between the experimentally observed denigration of learning abilities, memory, and behavioural traits in malnourished animals, and the similarly expected results in hungry and malnourished children. Scrimshaw propounded that for children in developing

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[99]Moisés Béhar, interview, 29 December 1995.
[100]Ibid.

countries, "Permanent physical impairment resulting from malnutrition is certain and mental retardation is probable."[101] It was the probability of a link between retardation and malnutrition that Scrimshaw wished fellow nutritionists would address. The only scientific data he could cite for such a relationship had been established mainly in pigs and rats, though INCAP had recently undertaken promising studies that appeared to support his hypothesis. The key problem in proving the supposition was the difficulty scientists encountered in controlling for confounding factors such as gross neglect and poor living conditions. How could one attribute poor intellectual performance to malnutrition when a child lived in squalor? Regardless of the precise nature of the hypothesized relationship, Scrimshaw solemnly pronounced that "it will be evident that the effects of early malnutrition are so far-reaching that the nutrition and health of young children cannot be neglected if development schemes and aid programs are to achieve their full objectives in developing countries."[102] Interestingly, the paper noted that because of the timing of brain development in children -- peaking before the age of one -- nutritional marasmus, which strikes children in this age group, would be an important nutritional disease to address.[103] In keeping with his ongoing struggle for the recognition of infection as an integral part of the cycle of malnutrition and hunger, Scrimshaw noted that improved diet had to be accompanied by preventive and curative applications for infectious disease in order to be successful.[104]

In his characteristically dramatic manner, Scrimshaw observed that the relationship between malnutrition and mental retardation was a topic "of such overwhelming importance to the future of the world that definitive research" was essential to determine and define the exact degree of interaction.[105] Further, he highlighted how the productive futures of developing countries would rely on the intellectual (particularly technical) capacities of their populations and that educational programmes and spending on schools and teachers will be of lower value if children are "being damaged now in mind and body."[106] In Scrimshaw's view, strong data were

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[101]Nevin S. Scrimshaw, 'Malnutrition, Learning and Behavior', *The American Journal of Clinical Nutrition*, May 1967, 20(5), 493-502, on p. 497. Although in the development community there was little questioning of permanent stunted growth emerging from malnutrition, a few studies suggested otherwise. See: Samuel Dreizen, Charles N. Spirakis, and Robert E. Stone, 'A comparison of skeletal growth and maturation in undernourished and well-nourished girls before and after menarche', *The Journal of Pediatrics*, 1967, 70(2), pp. 256-63.

[102]Scrimshaw, op. cit., note 101 above, p. 493.

[103]Ibid., p. 494.

[104]Ibid., p. 496.

[105]Ibid., p. 499.

[106]Ibid., p. 500.

needed to convince economic planners and governments to pursue more vigorously the prevention of malnutrition and hunger.[107]

Scrimshaw's suggestions rippled through the health community and resulted in substantial publicity. In March 1967, he and John Gordon, his collaborator on nutrition and infection, organized a well-known conference on the topic which they later published in book form.[108] The book and conference sought to inter-relate the issues closest to Scrimshaw's and Gordon's hearts: malnutrition, infection, and learning. Their views encouraged administrators to cavort about the continuum of childhood health in an expanded context which incorporated mental health into nutritional dialogue. An article that preceded the Scrimshaw piece in the *American Journal of Clinical Nutrition* and to which Scrimshaw also contributed, circulated widely in the corridors of Unicef. 'Hunger: does it cause brain damage?' presented a historical review of relevant research and followed INCAP investigations. The author concluded that waiting for further scientific evidence on the relationship was tantamount to "global suicide".[109]

Scrimshaw demonstrated great dexterity in conveying urgency to all hunger issues he investigated. Undoubtedly due to his personal influence, the Joint FAO/WHO Expert Committee on Nutrition provided 'Nutrition and Mental Development' a major heading in its seventh report in 1967. Some took issue with the hypothesis -- labelling it a fear of nations of retarded people -- while others questioned the utility of such a finding.[110] If the deaths of millions of children annually were not sufficient reason for nations to mobilize resources, then why would mental retardation make a difference? This type of rhetoric rarely came up in the dialogue with national planners -- either between nutritionists and planners or policy makers and planners -- since the interested parties were caught up in expanding nutritional programmes. The new fear of nutritionally-induced mental retardation could well be seen in comments in nutritional publications. For example, Jelliffe noted that while childhood mortality and morbidity had negative financial consequences, far "more important from the national planner's view-point is the dubious prospect of trying to achieve intensive educational, technical and economic advancement with a population many of whom many not be

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[107]Ibid.

[108]Nevin S. Scrimshaw and John E. Gordon (eds), *Malnutrition, Learning, and Behavior*, Cambridge, Massachusetts and London, The MIT Press, 1968.

[109]Judith Randal, 'Hunger: does it cause brain damage?', *Think*, November-December 1966, pp. 3-7. I found this article with a covering letter from Max Milner in which he spoke of passing it on to Labouisse. Labouisse had earlier expressed interest in the subject. Max Milner, letter to Sherwood Moe, 13 February 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

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

able to reach their intellectual potential."[111] A group of nutritionists reassessing childhood malnutrition treatments declared in 1969 that "No nation can afford a generation of men and women incapable of functioning in accordance with its genetic potential."[112] Despite these bold declarations, it remained clear to all that if there was a link between "genetic potential" and adequate nutrition, then there was sure to be at least one more generation which would not reach its potential.

The Impending Protein Crisis

The tone surrounding world food and hunger issues grew increasingly ominous and stark in America during President Johnson's second term. In his 1967 State of the Union message, Johnson called peace and the "race between food supply and population increase" the great human challenges of the day, a comment which inspired a voluminous White House Paper entitled *The World Food Problem.*[113] This remarkable document deplored the rise in the number of hungry people in the world notwithstanding the operations of FAO, WHO, Unicef, the World Bank (IBRD), and other agencies.[114] The report called for increased governmental aid on every level possible to help bring population growth under control and boost food production. Of particular concern to the Johnson administration and to the UN secretariat was the protein "gap", the increasing rift between world protein requirements and supply. Beginning in 1966, the UN Advisory Committee on Science and Technology to Development (ACST) began following up a UN resolution to determine which resources were currently being "directed towards the implementation of proposals designed to close the protein gap".[115]

The ACST enlisted Scrimshaw to write a document on protein needs and issues in the developing world.[116] Scrimshaw's report made it clear to the UN that there were "no short-cuts" to solving protein problems and that the problem, exacerbated by population growth, was rapidly growing worse in numerous

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[111]Jelliffe, op. cit., note 44 above, p. 224.
[112]*A Practical Guide to Combating Malnutrition*, op. cit., note 77 above, p. 1.
[113]*The World Food Problem: A report of the President's science advisory committee*, I, 'Report of the panel on the world food supply', The White House, May 1967, p. 1.
[114]Ibid., pp .2-3.
[115]Teply, op. cit., note 74 above. On average, Unicef spent between $500,000 and $800,000 on protein food development annually between 1960 and 1967.
[116]In the literature the UN Advisory Committee on Science and Technology to Development is alternatively referred to by the acronyms ACST and ACAST. *Report of the Sixth Session of the FAO/Unicef Joint Policy Committee*, op. cit., note 87 above, appendix 2, p. 3.

developing countries.[117] As a result of the report -- provocatively entitled *Feeding the expanding world population: international action to avert the protein crises* -- the UN stressed that expanded food production, unless directed toward the needy, would do little to alleviate international protein problems.[118] The UN further emphasized that agencies had to be sure that they were not overly focused on technical aspects of the problem and should instead look toward multi-faceted approaches. If they were not successful in bringing the problem "in hand", then, the UN feared, "the outlook is grave".[119]

The ACST report encouraged some agencies to jockey for power as they saw "the protein problem" attracting world-wide attention and expected increased financial support for protein-related programmes. The new FAO Director-General, A. H. Boerma, believed that the Secretary-General would offer his fullest support to joint FAO/PAG activities that served to co-ordinate actions on the protein problem by UN member countries. Boerma suggested that the PAG "should serve as a focal point for concerted action" and, contended that "a major financial effort on the part of the United Nations family, as well as by Governments, is necessary for any substantial progress in the field."[120] The PAG was ecstatic to receive such support, especially since its relations with FAO had been rather tenuous in the past. Apparently, however, FAO's support for the PAG was only superficial.

According to Scrimshaw, it was evident during this time that WHO and Unicef liked the PAG since its expertise had been top-notch. On the other hand, the FAO frowned on the PAG since Autret asserted that FAO had sufficient expertise on its own.[121] In May 1968, FAO became the supervising and administering agency of the

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[117]'The Protein Problem', 1 October 1968, UN Economic and Social Council, New York, E/4592, p. 6.

[118]Ibid., p. 10. See: 'Feeding the expanding world population: international action to avert the protein crises', July 1967, Advisory Committee on the Application of Science and Technology to Development, E/4343. Significantly, ACST (under Scrimshaw's influence) did not believe that the ongoing Green Revolution would go far toward stemming the protein gap for young children since cereals were relatively low in essential proteins. See: 'The Protein Problem, addendum, comments of the Advisory Committee on the Application of Science and Technology to Development', UN, E/4592/Add.2, 8 October 1968, p. 4. Scrimshaw authored the report during a cruise to Europe for a nutrition conference in Hamburg. His indelible mark can be read in the urgency of the findings and in the support of the PAG. Pokrovsky and Bhatia aided him in the task and added credibility to the final product. 'Protein Advisory Group Report on the Twentieth Meeting', Paris, PAG Meeting report document 3.14/17, 19-23 June 1972, Unicef Archives, CF-NYHQ-05ANS-002, p. 5. See also: Nevin S. Scrimshaw, interview, 25 July 1995.

[119]'The Protein Problem', op. cit., note 117 above, p. 7.

[120]'The protein problem: addendum, letter to the under-secretary-general for economic and social affairs from the Director-General of the Food and Agricultural Organization', E/4592/Add.4, 15 November 1968, pp. 1-3, on p. 3.

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

PAG, thereby providing it with greater control over PAG activities.[122] In less than a year, Unicef became upset with the manner in which FAO was dealing with the PAG. Heyward wrote a letter to FAO in which he sought to convey "the growing impression that FAO, as administering agency, does not intend to give the support necessary to make the PAG effective."[123] Heyward was irked that FAO had discouraged interaction between other agencies and the PAG, except during PAG sessions, and worse, that FAO was using "negative control" to inhibit the travel of the PAG Secretary and other PAG activities. Rather than expressing what FAO wished the PAG to accomplish, Heyward alleged that "FAO has so far given no indication of anything it does want done." (emphasis his)[124] At one point in the letter Heyward's tone turned furious:

> If FAO wishes to keep a tight control, perhaps you would prefer to move the Secretariat to Rome, where at least the control would be less remote. Your indication that if another person is contributed to the Secretariat, he would be stations in Rome, points in this same direction. Unicef would not like to lose them, but the present situation is not satisfactory.[125]

There would be no such move to Rome for the PAG, and Heyward's remarks seemed to have some positive effect. A week later, Autret wrote a conciliatory piece about FAO and the PAG in which he reasonably outlined the PAG's responsibilities and FAO's working relationship with the group, especially in light of the protein crisis.[126] For better or worse, the protein crisis would force FAO and the PAG to work together more closely.[127]

In 1969, the PAG commented on an ACST protein survey distributed by the Secretary-General's office and underlined the projects which seemed most

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[122]M. Autret, 'FAO and the Protein Advisory Group', 14 March 1969, FAO Nutrition Division Library Rome, NU: MISC/69/6, p. 3.

[123]E. J. R. Heyward, letter to Wells, 7 March 1969, FAO Archives, I. PAG membership 2/4. In this letter, which was marked "Personal and Confidential" and was not written on Unicef letterhead, Heyward commented on the shallowness of FAO's commitment to the PAG. It seemed to Heyward that Boerma and the FAO governing bodies were publicly expressing support for the PAG while, in fact, denigrating it.

[124]Ibid.

[125]Ibid.

[126]Autret, op. cit., note 122 above. This document nevertheless reflected the Nutrition Division's serious concerns over the PAG infringing on FAO's areas of expertise. See pp. 8-9.

[127]See: *Report of the 15th Session of the FAO Conference*, 8-27 November 1969, Rome, FAO, paragraphs 141-54 and 284-301.

promising.[128] Among several African nations, the scientists considered the development of the fishing, cattle, and soybean industries central to boosting protein consumption. Thus, when fish production figures showed an increase of roughly 50% between 1966 and 1967 along the Ivory Coast, the PAG excitedly noted that such a rate would enable annual fish consumption, which was at 17 kilograms per person in 1960, to rise to 20 kilograms in 1970. Alongside nutrition education programmes and applied nutrition projects, the PAG opined that the combined efforts would "lead to greater consumption of protein rich foods like fish by the most vulnerable groups (young children aged 1-4 and pregnant and lactating women)."[129]

FAO figures were clearly indicating that protein was one of many deficits with which the developing world would have to contend. In particular, FAO statisticians noted that the rate of agricultural production in roughly one third of developing countries was not keeping pace with the rate of population increase. One did not have to assume perfect food distribution to know that the same food supply for more people invariably signified less food for the poor. It was therefore the hope of food technologists that technological improvements -- higher yielding grains and expanded fertilizer use -- would bridge this food gap.[130] Although the FAO Conference urged closer attention to food habits, women's training, industrial worker feeding, and handbook and manual production, protein concerns dominated the budget.[131] By 1969, FAO's protein activities involved more than thirty-seven millions dollars, four million of which came from the Nutrition Division's regular programme and the remainder from other agencies.[132] Contemporaneously, a few forward-looking nutritionists were considering the world protein gap in a vastly different context.

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[128]For the immediate PAG response to the ACST report see: 'The protein problem: addendum, comments of the FAO/WHO Unicef Protein Advisory Group', 7 October 1968, E/4592/add.1.

[129]'Note on the protein problem: report by the PAG secretariat', September 1969, in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975, E139-E145, on p. E140.

[130]*Report of the Fourteenth Session of the Conference, 4-23 November 1967*, Rome, FAO, 1968, pp. 14-15.

[131]Ibid., p. 64.

[132]*Report of the Fifteenth Session of the Conference, 8-27 November 1969*, 1969, Rome, FAO, item 11 of the provisional agenda, table 1, p. 10. To put these figures in perspective, FAO's entire budget at the time was roughly 50 million dollars plus extra-budgetary income of an additional 112 million dollars. Ralph W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981, p. 78. These statistics should be considered with caution, since they were produced under the influence of the UN's desire to see its agencies devoting huge funds to protein issues. Since the regular programme of the Nutrition Division was slightly over one million dollars, some acrobatic accounting techniques were used to arrive at these numbers. See: *Report of the Fourteenth Session of the FAO Conference*, op. cit., note 130 above, annex 1, p. 6.

Jelliffe, for example, believed that the greatest problem in protein supplies was emanating from the decline of breastfeeding in developing countries. With increasing urbanization and its concomitant "dedomestication of women", Jelliffe foresaw a doubly troubling problem: women would halt breastfeeding early and search for substantial quantities of breastmilk substitute. He bemoaned that attempts to reverse this trend had had no impact and also had not been undertaken thoughtfully. Further, national food planners and nutritionists rarely considered breastmilk as a food, perhaps, Jelliffe speculated, "because it is not served on a plate, or grown, or bought".[133] In Jelliffe's unpopular view, the decline in breastfeeding could only widen the much-discussed "protein gap" because it would take away one successful protein source and create the need for another.[134]

The term "food crisis" was very much in vogue late in the decade as major disasters emerged at Biafra in Nigeria and in India during 1966-1967. Ironically, at the very time when long-term development issues were being discussed agencies had to refocus their attention on emergency food situations.[135] Relations between the UN and the PAG increased and improved as PAG members successfully emphasized the importance of protein in global nutrition. Their approach resembled FAO's macro perspective on food consumption and production in the world: assumptions about nutritional status of the population were based on total food available. The nuances of income groups and the socio-cultural background that could prevent equal distribution were not deeply explored. A critical characteristic of food and protein surveys since the first ones were undertaken was that, invariably, they monitored overall changes in the level of production of a particular type of food and then extrapolated how this change would affect individuals' diets. The PAG was primarily interested in boosting general levels of protein production in developing countries and encouraged the UN Secretary-General to engage countries in discussion on this issue.

The lurking question that the PAG frequently overlooked was whether the educational and agricultural programmes would (or had) improved the protein status of the vulnerable members of the population. All the PAG logic seemed grounded in the assumption that any increase in food production of any type would necessarily result in an increase in individual consumption of that food. The PAG could therefore

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[133]Derrick B. Jelliffe, 'Breast-milk and the world protein gap', *Clinical Pediatrics*, 7(2), February 1968, pp. 96-99, on p. 99.

[134]Ibid. For a brief description of the industrial and organizational developments which followed the breastmilk issue, see: Gabrielle Palmer, *The Politics of Breastfeeding*, London, Pandora Press, 1993, pp. 199-227.

[135]Abundant literature supports this perspective. I found Teply's files at Unicef to be extremely revealing about the return of the E, formerly representing emergency, in Unicef's name.

comment with ease that in many developing countries, "the major problem areas are known, awareness of what needs to be done exists, even plans to increase production and consumption of various protein sources have been worked up, but there is a lack of sufficient help, financial and technical, to start with implementation."[136] This optimism seemed to suggest, once again, that the theoretical research problems of malnutrition, at least in the case of protein, had been solved, and the only remaining obstacle was the execution of programmes. Echoes of this could be heard at all the UN agencies. At Unicef, Teply stated in 1968 that "Enough is known to provide a reasonable basis for meeting protein and calorie needs of the world's children through various alternatives."[137] Seeing the need for protein expertise diminishing and the need for implementation increasing, the ACST had recommended that the PAG be expanded, which it was in 1968, to include other areas of expertise -- including human nutritionists, agronomists, economists, paediatricians, food technologists, sociologists, and marketing experts.[138] The task before them, and before all the UN agencies, was to fill the protein gap.[139] The protein gap de-personalized the fight against hunger in children that had had so many emotional elements during the previous decades. At the technical agencies, the previously ubiquitous photographs of children suffering from marasmus and kwashiorkor were gone; in their place one could find charts depicting protein deficits.

Against the powerful backdrop of PAG certainty on protein questions were a few rather subtle cries for a middle-of-the-road approach. Unicef had a fairly muted response to the ACST report, though like its peers, expressed concerns about the ramifications of protein deficiencies on "the health, mental alertness and dynamism of the population" in developing countries.[140] Unicef personnel were moderately sceptical of advances in protein flours and other technologically advanced approaches to PCM. Teply enjoyed recounting an anecdote, set in the Philippines after a nutrition conference, to Unicef staff: "There was a great deal of discussion about village units to make coconut flour. I threw a bombshell by asking 'How far can one go in child feeding with fresh coconut?' None of the experts present, including Dr. Gopalan of

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[136]'Note on the protein problem', op. cit., note 129 above, p. E145.
[137]L. J. Teply, op. cit., note 45 above, p. 1.
[138]This increase in types of expertise was reflected in the inflation of the PAG budget from $33,000 in 1966 to $120,000 in 1970. *Report of the Fifteenth Session of the Conference*, op. cit., note 132 above, p. 29.
[139]Ibid., p. 30.
[140]Rosalind Harris, letter to all non-governmental organizations having consultative status with Unicef, 8 March 1968, UN Archives, CF/NYH/05EB, CF-NYH-6, folder S0072.

India...could provide the answer."[141] At the time, however, Gopalan, the director of the Nutrition Research Laboratories in Hyderabad, was hardly as enthralled by the protein mania as were his peers. To the chagrin of many nutritionists, he referred to the protein gap as the "so-called 'protein problem'" which formed only a small part of broader nutritional concerns.[142] His classic 1968 article on kwashiorkor and marasmus powerfully re-assessed the roles of calories and protein in the pathogenesis of kwashiorkor and led him to conclude that caloric increases, even in a child with kwashiorkor, could promote better protein utilization. Gopalan remarked that this insight had to be promoted "in these days of unceasing quest of protein concentrates and protein isolates."[143] Perhaps due to his prominence as a native researcher operating in India, one of the countries with the highest levels of PCM in the world, Gopalan often inspired controversy. He believed, like McLaren, that correction of caloric deficiencies should be the major thrust of efforts in India. It was unwelcome news at the PAG secretariat to hear of Gopalan stating that "The distribution of expensive protein-rich foods to children in the face of such calorie insufficiency would be a most wasteful and uneconomic procedure."[144] With increased calories, Gopalan felt, the protein problem itself would be "considerably minimised".[145] He frowned on industrial plans to mass produce protein-rich foods because "The average man in the rural area at present cannot afford even the raw natural foods in amounts which are needed to meet his hunger. It should be obvious that formulations derived from processing these foods will be even farther beyond his reach."[146] In the same vein, researchers investigating malnutrition and infection in Colombia commented that "All the sophisticated gadgetry of modern medicine is of little avail at the village level- where the children and their mothers are. Neither the Western consultant, nor the Western-trained and oriented local physician can hope to accomplish much until he

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[141]L. J. Teply, letter to M. Gaan on Philippines applied nutrition, 28 February 1967, UN Archives, CF/NYH/05EB, CF-NYH-6, folder S0072.

[142]C. Gopalan, 'The "Protein Problem"', presented at the symposium on science for citizens, New Delhi, November 1969, in *The Works of C. Gopalan*, LSHTM Archives, p. 9.

[143]C. Gopalan, 'Kwashiorkor and marasmus: evolution and distinguishing features', in R. A. McCance and E. M. Widdowson (eds), *Calorie deficiencies and protein deficiencies*, London, Churchill, 1968, 49-60, on p. 53. Waterlow remarked over two decades later that this paper impacted the nutritional community in three major ways: "it showed the artificiality of regarding malnutrition, as it evolves in a community, as a single-factor disease; it restored the balance when the pendulum had swung too far towards exaggerating the importance of protein; and it displayed the dangers of basing public health policy on inadequate scientific evidence." See 'Classics in Indian Medicine', *The National Medical Journal of India*, May/June 1992, 5(3), 145-51, on p. 151.

[144]Gopalan, op. cit., note 142 above, p. 13.

[145]Ibid.

[146]Ibid.

begins to grasp, in the specific environment in which he is working, how the eco-system, there, is operating to produce PCM."[147]

In spite of the criticism protein received from a few vocal nutritionists, Unicef and its counterparts had latched onto it. In 1982, Les Teply, apparently concerned about his place in protein history, sent John Charnow, the unofficial Unicef historian, a revealing note about the nature of protein in the Unicef establishment. Teply, a former member of the PAG, noted that "nutritionists in general, including the Unicef Senior Nutritionists [Teply included]" had "advocated a reasonable course" for protein programmes and policies during the late-1960s and up to the present time. Referring to the protein mania that then revealed itself, Teply lamented that "a number of Persuasive Protein Promoters got the pendulum to swing too far in one direction."[148] Attached to this note Teply included a letter he had written in October 1966 to Cyril Hunnikin, a food conservation engineer then working for Unicef in Thailand. While counselling on the constituency of high-protein weaning foods, Teply had suggested that "There is a real question of whether mothers can be persuaded to use concentrates...as a true supplement, adjusting the addition to the diet roughly in relation to the need for supplementation...However, I am willing to be convinced that a true concentrate other than skim milkpowder [sic] can in fact be used by mothers without undue wastage."[149] At least in Teply's mind, this was the type of practical questioning which highlighted what he perceived to be the informed opinions promoted by nutritionists on protein issues. These pragmatic protein proponents, while uncertain of the efficacy of protein solutions, were anxiously hoping that one would emerge. Apparently many of Teply's colleagues adopted a similar cautiously-optimistic stance toward Unicef programming advice. Concerns over the efficacy of protein-rich foods were apparent at the top of the agency. In Labouisse's 1967 progress report to the Board, he expressed concern that such products were invariably not economically sustainable and that the ability for markets to maintain demand should be the determining factor for initiation of such projects.[150] In Labouisse's mind, protein programmes had to be approached with the same research questions about the same issues that a new product on the supermarket shelves in a developed country

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[147]Joe D. Wray and Alfredo Aguirre, 'Protein-calorie malnutrition in Candelaria, Colombia - 1. prevalence: social and demographic causal factors', *The Journal of Tropical Pediatrics*, September 1969, 76-98, on p. 96.

[148]Les Teply, interoffice memorandum to J. Charnow, 15 October 1982, Unicef Archives, Teply file, PR-NU-001.

[149]Les Teply, letter to Cyril Hunnikin, 10 October 1966, Unicef Archives, Teply file PR-NU-001.

[150]Henry Labouisse, 'General Progress Report of the Executive Director', 1 May 1967, E/ICEF/558, paragraph 62.

would have: consumer marketing, product acceptability, and distribution.[151] Labouisse's viewpoint resulted in mixed signals within the agency about the purpose and methods of protein programmes.

Dr. G. Sicault, the Unicef regional director in Paris, expressed his concern to Heyward that protein-rich food efforts suffered from a host of confusing problems, the greatest of which was a "confusion between the goals we are trying to reach in the promotion of a weaning-food".[152] A common expert consultancy then involved developing industrial-style marketing campaigns for high-protein childhood foods in order to spur their purchase among the poor. Sicault felt that many of the protein programme problems had lagged because of the utilization in the developing world of "marketing experts coming from the USA, the UK or France, who know nothing about the population, about feeding habits, commercial channels, etc., and who have to learn everything before coming to any preliminary conclusion".[153] Sicault thereby flagged the long-lingering concern of Unicef -- that expert consultants were slowing the quality and speed of their operations and were promoting an "unrealistic" approach. In Sicault's emotional words: "If there were no urgency in this matter, and if there were not so many children dying every year from malnutrition, I would personally say we have plenty of time to discuss surveys, evaluation of surveys, super experts, etc.; but I believe that all this unrealistic view of marketing by foreigners is delaying action."[154] Sicault's statement in part reflected statements made years earlier at Bellagio when Unicef administrators urged the implementation of programmes even if all the expert-urged data had not been gathered.[155] On an administrative level Sicault's words represented a rise in the anti-expert rhetoric: experts from outside the agency seemed to retard programme implementation, were too expensive, and cost children's lives.

In Black's history of Unicef, she asserted that 1967 essentially marked the end of Unicef's foray into the manufacture of high-protein foods.[156] Although the evidence reflects new-found reservations on the part of Unicef staff, protein initiatives had

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[151]Ibid., paragraph 73.

[152]G. Sicault, letter to E. J. R. Heyward, 15 November 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

[153]Ibid.

[154]Ibid.

[155]Apparently the uneasiness Unicef felt toward FAO on nutrition was often engendered by too little or too much input. In a piece of Teply's correspondence following a trip to Brazil, he remarked that "there is insufficient technical support from the FAO side as far as national nutrition programming in Brazil is concerned." L. J. Teply, letter to Alice Shaffer, Unicef Representative in Brazil, 10 November 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

[156]Black, op. cit., note 97 above, pp. 162-63.

hardly ended. Unicef took a strong lead in defining the nature of protein policies and initiatives during the latter part of the decade. In 1967 Max Milner, Unicef's senior food technologist, began addressing the failure of concerted protein programmes in reaching their intended recipients. In a letter to FAO and WHO, Milner expressed his desire to supplement the breadth of the protein-rich weaning foods programmes. Milner's rationale, which well reflected his awareness of protein implementation obstacles in the field, was

> based simply on the fact that in most societies with which we are concerned, the concept that children should be weaned on special foods is still largely unknown and...it will take many years of intensive effort to accomplish substantive change in this situation...I believe we should enlarge our joint activities to improve the nutritive value of the staple foods used by families, which are also the major components of children's diets during and after the time of weaning.[157]

Milner's comments mirrored the growing current, in the context of the Green Revolution, of raising the protein levels in the foods consumed by **all** family members, rather than by only the pre-school children. As the urgency of international protein problems was increasingly swept into the limelight, the general focus of policy was more broadly targeted to the macro-level scarcity of protein rather than the micro- or familial-level maldistribution of it.

Unicef did run several of its operations in much the same vein as FAO and WHO. Milk conservation projects, for example, continued to be a significant part of Unicef's operations though they failed to show demonstrable signs of improving childhood health. Throughout the 1960s, Unicef and FAO worked closely with the Kenyan authorities on plans to improve liquid milk sales and production as well as the development of cheese, whole and skim milk powder production. A Unicef food conservation officer noted that these programmes were aligned with

> Unicef's aims as they involve both direct and indirect aid to the mother and child population as well as having a sound economic effect to improve the standard of living in the country...I think we have given a clear demonstration of protein which has been made available to the population and the economy of both rural and city life have been benefited accordingly.[158]

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[157]Max Milner, letter to Dr. Marcel Autret and Dr. E. de Maeyer, 16 March 1967, Scrimshaw personal collection.

[158]Robert L. Cooper, letter to headquarters, 26 April 1967, Unicef Archives, CF-NYH-06H, box T021.

Thus, like FAO, Unicef continued to work under the operational paradigm that increased production of a nutritious food would invariably result in improved nutrition for mothers and children.

Management Decisions

The 1960s were the first years when UN nutritional programmes were sufficiently intact for spirited idealistic clashes about their nature to arise. And arise they did. Although the debates are difficult to locate in historical sources, protein advocacy and opposition clearly reached a boggling level by the turn of the decade. The groups were strategically well-defined: one group consisting of players like Scrimshaw felt that protein could not receive too much attention and had to be a central focus of all nutritional undertakings; another group, consisting of researchers, felt that protein was one of many important nutritional issues but had come to dominate the discipline; the last group included researchers like McLaren who felt that the pendulum should swing primarily over caloric territory since calories were the most important nutrient. While this sequestration may not precisely describe the course of nutritional interests in science and policy at the time, it does offer a diagram which well sums up the general climate of nutritional thought.

Carpenter has pointed out that papers by protein sceptics like McLaren and Jelliffe were exceedingly rare between 1955-1967. While they were trying to draw attention to energy, protein funding and the general wave of protein enthusiasm were reflected in the vast majority of publications relating to protein mixtures without any attention to caloric needs.[159] Béhar, who considered himself to have fit in the moderate group from above, stated that he and most of his colleagues agreed that "kwashiorkor was the top of the iceberg; we were much more concerned with the underlying causes...the problem was not [so much that] they were at risk for kwashiorkor but that they could not develop to their full genetic potential because of sub-clinical malnutrition."[160] Béhar's words allude to Sen at the beginning of the decade when he launched the FFHC and envisaged the major nutritional problem to be "hidden hunger". In Béhar's mind, "All studies on mental development, growth, mortality, original infection, all those studies were oriented to our understanding of

[159]Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 184-85.
[160]Moisés Béhar, interview, 29 December 1995.

hidden hunger."[161] He and his researchers "were not concerned about kwashiorkor [as much as] we were concerned about those children who were not growing well...and they represented the majority of the children."[162] To the staff at INCAP as well as at other nutritional institutes, kwashiorkor was simply an indicator of the general nutritional situation. The physicians and many policy makers, however, continued to be disease-oriented; the logical policy to address an obsession with kwashiorkor was to prioritize the world's protein needs. Thus, while marasmus, calories, vitamin deficiencies, and more importantly, hidden hunger, remained unattractive political outcasts, protein was politicized. It was as though the broad category of health that this dissertation treats -- hunger and malnutrition -- had been condensed into a singular interest. Having had little luck with ANPs or other programmes in solving problems of hunger and malnutrition, the frame on which the debate was built shifted to protein, "the most significant nutritional problem", and promised success, or at least aversion of disaster.

The late-1960s highlight how easily policy proclivities could move in one direction or another based on the views of nutritionists, physicians, and health advocates who carried great influence in all the UN agencies. These policy swings may in part be accounted for by antiquated management structures unable to cope with increasing revenues and complex programmes. Even a large agency like Unicef, whose total income was approaching $60 million at the end of the decade, had a surprisingly primitive management and policy structure that promoted inconsistency, indecision, and contradiction. It was during this time period that Stein, who had consulted for Unicef considerably, began broaching these issues at an executive level. He found executive-level decision-making to be an informal process principally controlled by a handful of people, usually the Executive Director, Deputy Executive Director, and Heyward. Staff meetings, according to Stein, were "discursive" and rather than building policies or investigating options, only served to inform everyone of ongoing activities. On the occasions when field staff came in to report from the field, their presentations served informational purposes alone. The results of these arrangements began to fluster personnel at the end of the decade. The central problem was that frequently, key executive personnel could not obtain the vital information they needed in order to make informed decisions -- division directors and field staff were not consulted in a comprehensive or effective manner.[163] Margaret Gaan, who

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[161]Ibid.

[162]Ibid.

[163]Herman Stein, interview conducted by Jonathan Power, 7 and 16 December 1982, Unicef Archives, interview file, pp. 16-17.

by the late-1960s was in charge of Unicef's Asia desk, felt that executive level decision-making created a disastrous state of affairs, particularly in the relations between the field and headquarters. She contended that "decisions were made at that time at Headquarters without reference" and that Headquarters had become "an organization in itself."[164] Gaan believed that only field personnel developed commitment since they were the ones who had the chance to view programmes while "It's impossible to develop commitment at Headquarters when you're arguing about whether you should have two windows, or one window, or a grey chair or a blue chair."[165]

Although FAO and WHO had different management structures, they were similarly ill-suited to pressing consistently for specific objectives. It is therefore comprehensible how at the same time that the nutritional debate was engulfing protein, a vertical health concentration, the same agencies were promoting horizontal national plans. Governments were not approached and told to integrate protein concerns into every government ministry; they were asked to include childhood nutrition. This incongruity highlights the unstable path of nutritional policy. Apparently, nutritional issues were sufficiently large to enable the advocacy of plans built on contradictions.

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[164]Margaret Gaan, interview conducted by John Charnow, 21 November 1983, Unicef Archives, interview file, p. 15.
[165]Ibid.