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Circular Conversations and Missed Opportunities: Hierarchies of Nutrition Expertise in Post-Revolutionary Bolivia**

Conversaciones circulares y oportunidades perdidas: Jerarquías de experticia sobre la nutrición en la Bolivia post-revolucionaria

Conversas circulares e oportunidades perdidas: hierarquias de expertise em nutrição na Bolívia pós-revolucionaria

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Abstract
Resumen
Resumo
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Chronic malnutrition was one of the health problems the Movimiento Nacionalista Revolucionario tackled after the 1952 Bolivian National Revolution. Actors working on the local, national, and international levels had different definitions of nutrition, understandings of the problem, and proposed solutions. These debates demonstrate the existence of hierarchies of expertise; national officials deemed knowledge about nutrition produced outside of Bolivia more valuable than that created by Bolivians working on the local level. These hierarchies of expertise caused tensions, miscommunications, and circular conversations that stymied the development of effective and efficient national programs.

KEYWORDS:

Bolivian Revolution; Nutrition; Depresión; Public health; Expertise

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La malnutrición crónica fue uno de los problemas de salud que el Movimiento Nacionalista Revolucionario intentó resolver después de la revolución nacional boliviana de 1952. Los actores que trabajaban en el ámbito local, nacional e internacional tenían diferencias en cuanto a sus conceptos de nutrición, comprensiones del problema y propuestas de solución. Estos debates demuestran la existencia de jerarquías de experticia; los funcionarios nacionales consideraban que el conocimiento sobre nutrición producido fuera de Bolivia era más valioso que el generado por los bolivianos que trabajan en el ámbito local. Estas jerarquías de experticia causaron tensiones, problemas de comunicación y conversaciones circulares que obstaculizaron el desarrollo de programas nacionales eficaces y eficientes.

PALABRAS CLAVE:

Revolución boliviana; Nutrición; Salud pública; Experticia

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A desnutrição crônica foi um dos problemas de saúde que o Movimento Nacionalista Revolucionário tentou resolver após a revolução nacional boliviana de 1952. Os atores que trabalhavam local, nacional e internacionalmente tinham diferenças em relação a seus conceitos de nutrição, entendimentos do problema e propostas de solução. Esses debates demonstram a existência de hierarquias de expertise, porque as autoridades nacionais consideravam que o conhecimento sobre a nutrição produzida fora da Bolívia era mais valioso do que o gerado pelos bolivianos que trabalham localmente. Essas hierarquias de conhecimento causaram tensões, problemas de comunicação e conversas circulares que dificultaram o desenvolvimento de programas nacionais eficazes e eficientes.

PALAVRAS CHAVE:

Revolução boliviana; Nutrição; Saúde pública; Expertise

After Bolivia's Movimiento Nacionalista Revolucionario (MNR) took power in the 1952 National Revolution, it tried to address Bolivia's pressing political, economic, and social problems. Universal suffrage, nationalization of the mining industry, and agrarian reform are the most well-known of the MNR's reforms, but they also expanded public health programs. One target of the MNR's public health policy was malnutrition.

During the 1950s and 1960s, hunger and malnutrition became global concerns taken up by international organizations guided by discourses about development and the politics of the Cold War. International nutrition policy influenced national debates about food production and consumption. Yet, international organizations did not unilaterally impose nutrition policies on Bolivians. Instead, exchanges between the local, national, and international actors over nutrition policy caused tensions as well as miscommunications and oversights. Bolivia's nutrition programs can be understood as a product of «entanglements and dependencies», or the messy interplay between local priorities and international agendas and the dependency on external resources that often resulted from them (Pernet, 2014: 102 and 117). The debates about how best to solve Bolivia's malnutrition problem also demonstrated that Bolivian health workers participated in the «circulation» of knowledge rather than its top-down diffusion (Birn, 2006: 57). International nutrition standards' influence on Bolivian policies show that knowledge circulated in professional networks at all levels, but health workers' willingness to fine-tune international and national directives on the ground indicates that it was subject to constant negotiation. Attempts to solve malnutrition, therefore, were the product of entangled local contexts, national anxieties, and international trends.

Actors at each level had different definitions of malnutrition and proposed solutions. Local workers drew attention to deficiencies in people's diets and facilitated education and outreach programs. MNR officials emphasized nutrition's eugenic benefits, and targeted women in order to improve the country's future citizens. International actors, seemingly oblivious to these national conversations, argued that Bolivian doctors' lack of experience caused institutional disorganization, resulting in an imbalanced approach to nutrition policy. They also saw science, rather than food access, as the solution to nutritional problems. This discourse represented a shift in public health policy away from discussing access to basic staple foods to addressing how to create complex diets in developing societies based on the U.S. nutritional model (Aguilar-Rodríguez, 2007; Aguilar-Rodríguez, 2011; and Pilcher, 2006). The science of nutrition, based on quantitative analysis of the elements of a healthy diet, including caloric intake and food's nutrient value, shifted the discussion to individuals and the foods they had at their disposal. Actors at each level presented

malnutrition as an imminently solvable problem, and yet the disunity of approaches meant that the problem was never quite solved.

Debates about how to solve Bolivia's malnutrition problem were implicitly discussions over whether or not Bolivia could be a site of knowledge production. Historically, European and U.S.-based medical elites did not consider Latin America a site of serious medical research, although throughout the nineteenth and twentieth centuries, Latin American physicians increasingly asserted their right to produce knowledge about the contexts in which they lived and worked (Borges, 1993; Cueto, 1994; Peard, 1999; Stepan, 1991; Birn, 2006; Cueto and Palmer, 2015: 126-133). In the mid-twentieth century, international organizations set nutrition standards that shaped Bolivian approaches, which shows that, at least from international and national health officials' perspective, knowledge about nutrition developed in Bolivia was not as valuable as knowledge produced outside of Bolivia.

This case study shows the existence of hierarchies of expertise. Expertise is a social construction, an «inherently unstable form of authority» (Vandendriessche, Peeters, and Wils, 2015: 2) because its legitimacy relies on recognition by the state, the public, and intellectual institutions. In the field of nutrition science in the 1950s and 1960s, expertise was coded as international. Bolivians working in rural areas did produce knowledge about how to address nutrition through local initiatives, but national officials and the international health community did not recognize or legitimize it. Unlike the Uruguayan actors Anne-Emanuelle Birn identifies in the field of child health (2006) or the Central American Institute of Nutrition described in Corinne Pernet's work (2014), Bolivia did not become a respected producer of knowledge about malnutrition, nor a central hub for an international community of nutrition experts. While Bolivians did not succeed in asserting themselves as experts vis-à-vis their international counterparts, they did produce knowledge at the local level that converged with international expertise at some points, and diverged from it at others.

The three levels addressed in this article—local, national, and international—are not easily disentangled. Bolivians working in local health institutions, including regional health centers and mobile units, were themselves products of the «entanglements and dependencies» generated by global health cooperation (Pernet, 2014). These installations were often run by the Servicio Cooperativo Interamericano de Salud Pública (SCISP)—a bilateral public health program supported by the U.S. and Bolivian governments between 1942 and 1962. While many SCISP administrators were from the United States, doctors and other health workers were generally Bolivians trained by SCISP, who received grants to study public health in the United States or other Latin American countries. Additionally, the science of nutrition based on calories, vitamins, and nutrients certainly influenced local approaches,

but left room for a variety of interpretations. That the MNR and its health officials embraced international nutritional standards is clear, yet it was not always a neat and tidy transition from global discourse to local implementation. Indeed, these international discourses, national policies, and local approaches sometimes overlapped and sometimes conflicted, leading to, miscommunication, circular conversations, and missed opportunities.

Background

International organizations played a pivotal role in shaping global health and food policies in the twentieth century, especially in the post-war era (Staples, 2006; Carter, 2018; Cueto and Palmer, 2015: 106). In the 1950s, nutrition experts, working with international organizations, believed that hunger and malnutrition could be eradicated in a decade. Malnutrition was different from hunger; it was a modern problem distinct from previous ways of conceptualizing hunger as either an individual's moral failing or part of a divine plan to prevent overpopulation (Vernon, 2007). Whereas hunger was associated with poverty and lack of access to food, malnutrition was an inefficiency that could be solved by science and expertise (Barona, 2012: 327). The calorie became a «technology» for classification that created standards for nutrition that could be implemented by experts in order to solve the problem (Cullather, 2007; Escobar, 1995: 102-104; Jachertz and Nützenadel, 2011: 113). The calorie as a unit of measurement had, since the nineteenth century, been tied to the idea of scientific objectivity—in theory, it was a neutral measurement equally applicable to all people. An «apparatus of statistics increasingly molded the field of nutrition» (Pernet, 2014: 103) that led to nutrition being defined by language about vitamins, calories, and nutrients—measurable food elements easily transferred to different groups of people. Nutrition was a problem that science could solve, changing food's «subjective, cultural character» into something measurable (Cullather, 2007: 338).

Nutrition experts believed that the science of nutrition could improve diets and therefore living standards for people, a fact that took on added significance during the Cold War. Dietary science focused on chronic diseases and obesity in affluent societies, but had other objectives in so-called developing countries (Biltekoff, 2012). During the 1950s, international organizations increasingly espoused an ideology of development—the idea that specific programs and policies could uplift Third World countries and provide a foundation for political stability and economic prosperity. These policies focused on population control and social programs, including health and education, to alleviate poverty, and were supposed to accelerate the transforma-

tion of so-called traditional societies into modern nation-states in order to prevent communism from gaining a foothold in transitional nations (Latham, 2011: 3). Improved health care, including nutrition, was central to this process (Escobar, 1995). In this context, the calorie became a Cold War tool to help win «hearts and minds» in the Third World. International approaches to end hunger increasingly focused on technical aspects of food production to the exclusion of other approaches, including agricultural modernization, mechanization, fertilizers, pesticides, and high-yield seeds, many of which were failed experiments designed to create stability and loyalty in developing regions (Cullather, 2010). The United States used food production to wield power over domestic policies (Cullather, 2007; Paarlberg, 1985), which had an indelible effect on agriculture and foodways in the developing world (Perkins, 1997; Shiva, 1988).

However, people in target societies did not always readily adopt the science of nutrition peddled by international organizations and nutrition experts. Latin American doctors participated in these conversations and often used international networks to legitimate their own efforts and put pressure on domestic governments to adopt international health policies. They also became adept at triangulating their interests between regional initiatives and those originating from the United Nations (and its predecessor, the League of Nations) (Pernet, 2013; Carter, 2018). Additionally, while these dietary standards are often considered to be «objective reflections of nutritional truths», they actually represent social ideals held by primarily middle-class reformers that are often not easily transferrable to target populations across world regions (Biltekoff, 2012: 173). In Guatemala, for instance, people did not readily accept the metrification of food because, for them, «foods and eating were not translatable into unit measures or step-by-step instructions». These reductive approaches often caused confusion about what nutrition meant, leading to food choices that were counter-productive or even destructive (Yates-Doerr, 2015: 11 and 56). Therefore, local, national, and global entanglements shaped nutrition programs, but also generated confusion and tensions in Latin American countries, including Bolivia.

Nutrition on the National Level: The Problem of the Malnourished Indian

About a year after the MNR came to power, the Director of the Department of Biostatistics, Hubert Navarro, issued a 1953 report to Health Minister Julio Manuel Aramayo on the «reality of our sanitary situation» that outlined concerns about Bolivia's

mortality and morbidity rates. He identified malnutrition as particularly concerning, claiming, «we are a malnourished people» and that «proper nourishment is a fundamental part of the concept of preventative medicine» (Navarro, 1953: unpagued). The Ministerio de Salud Pública (MSP) called nutrition a «special preoccupation» because «raising the people's level of wellbeing through good nutrition is an essential foundation for the general health of the nation». A cause of general mortality, and infant mortality in particular, public health officials described malnutrition as dangerous for the nation's «vulnerable populations» like pregnant and lactating mothers and school-age children (Ministerio de Salud Pública, n.d.). Navarro proposed addressing malnutrition by focusing on the Bolivian family, whose «strength and normal development» he thought the state should ensure (Navarro, 1953: unpagued).

Navarro's report was not clear on what it meant to be malnourished beyond having a «deficient» diet, and it did not outline any firm guidelines for how to augment Bolivians' nutrition. He did identify a target population, claiming that rural and indigenous communities were the most malnourished sectors of the population. Navarro highlighted the «urgent need to complete a serious study on the nutrition of our Indian because this malnourished or subnourished organism creates a favorable terrain for dangerous infectious diseases, which, added to their absolute lack of hygiene, is the cause of the high mortality we see». As he argued, improving Bolivia's dire nutritional state «requires the economic evolution of the Indian together with an intensive educational campaign about nutrition» (Navarro, 1953: unpagued). As in other national settings, Navarro advanced a eugenic argument that a better diet could improve the race and by extension, the nation (Pilcher, 1998; Pohl-Valero, 2014; Pohl-Valero, 2016). For this reason, he directed government attention to rural and indigenous communities, whose meager diets, hygienic ignorance, and propensity to spread disease he thought negatively impacted national wellbeing.

Dietary surveys conducted by foreigners, however, demonstrated nutritional woes were not limited to rural or indigenous communities. In 1954, a group of nutritionists from the Harvard School of Public Health, acting under SCISP's auspices with the assistance of the local mobile health unit's staff, conducted a seven-day dietary survey of twenty households in the town of Montero and its vicinity in the lowland Santa Cruz province. The survey, which was done to determine the health needs of the region as a basis for future program planning, showed widespread nutritional deficiencies across different social strata. Montero was a town of approximately 2,300 people, mostly mestizo, involved in agricultural and livestock production. The survey included urban households, farm owners, and farm workers. Rice, yucca, bread, and sugar were the majority of foods consumed in all households, and the study found that all participants' diets lacked calcium. Out of the twenty households

surveyed, only one reported satisfaction with their food supply. Fifteen said they could not afford milk, meat, fruit, or vegetables, while four stated they had difficulty buying these items (Huenemann, Scholes, Scholes, and Scholes, 1957: 25-27). While the sample size of this study was relatively small and its conclusions are not necessarily representative, it gives us some insight into the complexity of the problem; an agricultural community had a local diet that was considered not well balanced by international nutritional standards, and its residents stated difficulty acquiring meat and vegetables, which were the ingredients at the center of most dietary advice focusing on nutrients and vitamins. Additional dietary surveys conducted in the 1980s in highland communities showed similar results. Carbohydrates in the form of wheat products provided the majority of calories for families in the highland community of Wariscata, who also had low protein, Vitamin A, and calcium intakes (Kim, Kashiwaaki, Imai, Moji, and Orias-Rivera, 1991). Another study presented similar findings among highland children (Moreno-Black, 1983). These studies show similar patterns across Bolivia's geographical regions over the span of three decades.

For these reasons, health officials turned their attention to creating programs to address these widespread nutritional deficiencies. Dr. Antonio Brown, the Director of SCISP's Medical Division, stated in 1953, «Bolivia's nutrition problem is one whose solution has not been confronted in a dedicated and practical way. It is not that the necessary ingredients to provide adequate nutrition to the entire population do not exist in Bolivia. It is primarily a problem of education. Our people do not know how to use the ingredients to create a balanced diet» (SCISP, 1953: 1). Brown suggested that an educational campaign targeting mothers with lessons about nutrition and hygiene would address Bolivians' lack of knowledge about how to use foods effectively. As in other countries, nutrition programs targeted women as the potential solution to the problem (Aguilar-Rodríguez, 2007; Stern, 1999).

The question of whether or not Bolivians' malnutrition stemmed from lack of ingredients or lack of knowledge was a subject of debate during the 1950s and 1960s. In 1952, Bolivia was two-thirds rural, and a few wealthy hacendados, approximately 4.5 percent of landowners, controlled 70 percent of agriculturally productive land (Alexander, 1958: 58). Seventy percent of the economically active population was engaged in agriculture, mostly for subsistence (Zondag, 1966). Bolivia's different climatic regions were good for producing different kinds of foods: potatoes and quinoa in the Altiplano, fruits and vegetables in the Andean valleys, and cattle ranching in the lowlands. Contemporary travelers noted the difficulty of transporting goods across these regions. Since a railroad only existed in the west, and the Cochabamba-Santa Cruz highway was not built until 1954, travel was accessible only by pack animal or airplane at great cost (Cole, 1958: 273). Indeed, Navarro's 1953 report noted the need

to modernize agriculture and improve transportation of foodstuffs between regions (Navarro, 1953: unpagued).

Bolivia's 1953 Agrarian Reform Law attempted to address unequal land distribution. Agrarian reform redistributed land to indigenous communities in an attempt to overturn centuries of land monopolization, end feudal subjugation of the indigenous population, and modernize agricultural production. It caused disorganization in the agricultural sector due to its slow pace and the lack of accompanying agricultural modernization. Additionally, small-holdings proliferated and agricultural cooperatives failed to replace the production of large haciendas. As a result, Bolivia suffered routine food shortages by 1956, necessitating importation of essential foodstuffs from the United States (Zondag, 1966: 143 and 190). Some officials argued that agrarian reform exacerbated malnutrition, while others urged it was the solution to the problem. Ing. Raúl Pérez Alcalá, for example, blamed the country's malnutrition on a history of land monopolization, an unequal balance of people to land cultivated, and land that was «primitively exploited» with quinoa, potatoes, and maize, leading to what he called a national «subsistence crisis» (Pérez Alcalá, 1958: 102). In his vision, agrarian reform would help modernize Bolivian agriculture and augment food production, thereby putting more ingredients at Bolivians' disposal.

Bolivian health officials could not agree on the problem's cause, and early attempts to address malnutrition were disjointed and targeted at individuals rather than looking at food production in different regions of the country. A 1952 presidential decree stated that the National Nutrition Department would be in charge of purchasing all foodstuffs used for nutrition augmentation programs. As early as 1952, the MNR made attempts to systematize nutrition programs on a national level, although they were not successful, as evidenced by similar proclamations reiterating these points in the 1960s (Quiroga, 1952; Paz Estenssoro, 1964: 10-11). The documentary record from the 1950s and 1960s shows an ad hoc approach to improving nutrition and an increasing reliance on the assistance of international agencies, like the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), regional organizations like the Pan-American Sanitary Bureau, and cooperative agreements with the U.S. government.

MSP bulletins from 1952 and 1953 show ad hoc approaches to solving malnutrition that focused on changing individual habits rather than improving food access. These bulletins provided health workers with news about MSP programs and guidance on how they should approach families about health campaigns. A series of columns defined nutrition and explained how to communicate aspects of a healthy diet to women and families. One bulletin defined nutrition as «that which serves to support and improve health [and] should consider the nutritional needs of each member of

the family» depending on age, overall health, and type of employment. For instance, this article stated that since a father tended to do intensive labor (meaning outside of the home) while a mother only did house chores, she required fewer calories. The bulletin recommended daily consumption of milk, meat, eggs, fruit, vegetables, and cheese, with an emphasis on proteins derived from meat and milk, noting that children specifically needed milk for normal development of bones and teeth. The article placed the onus for meeting these daily requirements on the mother—it was her responsibility to prepare foods that integrated the different nutrients to improve and sustain the family's health (Ministerio de Higiene y Salubridad, 1953a: 3-5).

Another bulletin told health workers that good nutrition had to be made into a habit and that they could intervene in people's daily routines in order to change nutritional habits, even if the report cautioned that «to establish a nutritional habit one should use the path of persuasion rather than imposition» (Ministerio de Higiene y Salubridad, 1953b: 5-6). These tactics, where health workers urged individual families to develop better food habits, indicated that the government had a vague definition of a nutritious diet and that efforts focused on individual decisions rather than food access. Additionally, these daily recommendations of foods to consume were likely inaccessible to many Bolivians, if the nutrition surveys cited earlier were any indication.

The first concerted effort by national institutions to address malnutrition began in 1955, when the Bolivian government reached an agreement with UNICEF to distribute milk through local health centers. Milk distribution programs were the national government's primary attempt to address malnutrition in Bolivia for the better part of a decade, as evidenced by speeches given by MNR leaders and the MSP's own publications. At the same time that there was little change in national initiatives to address malnutrition, the sources show a trend of increasing international collaboration and dependency in the 1950s and early 1960s. In part, this trend reflects Bolivia's financial crisis of the mid-1950s, when mining nationalization, agrarian reform, and hyperinflation disrupted the Bolivian economy and made the MNR reliant upon U.S. financial assistance, leaving little room in the national budget for social services. An MSP report from the early 1960s demonstrated a collaborative effort to address malnutrition in which the Bolivian Ministries of Public Health, Agriculture, and Education worked to improve nutrition in the countryside together with the FAO, the WHO, and UNICEF (Ministerio de Salud Pública, n.d.: 9).

At the national level, MNR discourse about malnutrition targeted individuals—specifically the indigenous population and mothers—rather than address food access. These programs were eugenic and paternalistic—they assumed that individuals could be improved through state intervention. National policies vaguely defined nutrition and articulated no clear standards for health workers; therefore, they were generally

ad hoc. Instead, the MNR government increasingly relied on international agencies for resources and solutions. While this reliance may have been pragmatic on the MNR's part, it fostered dependency on expertise derived from outside Bolivia. In contrast, on-the-ground programs show that local health workers developed programs that balanced international standards with local ingredients.

Nutrition on the Local Level: Learning the Ingredients for a Nutritious Diet, 1952-1956

Local health workers, including doctors, nurses, *visitadoras sociales* (social workers), and auxiliary health workers based out of regional health centers and mobile units, were the primary agents carrying out these directives on the ground. Defining who was a local health worker is complex. They were generally Bolivians affiliated with the MSP or SCISP. SCISP provided the funding for these health centers and mobile units to operate, but Bolivian nationals, trained by U.S.-based SCISP technicians and educated in the United States, staffed these centers and oversaw their daily operations (Pacino, 2017). Many of these local health workers were not originally from these communities—they were stationed in rural areas either as part of SCISP's training program or as a result of a 1956 governmental decree requiring all medical school graduates to serve in the provinces for two years before receiving their license (Costa Ardúz, 2000: 86). They were complex figures produced by the circulation of knowledge at the national and international levels, but they were doing their work in regional health centers and traveling directly to people's homes. Therefore, I use local as a reference to the place in which these individuals worked.

These workers mostly followed the MSP's prescriptions for focusing on mothers in order to improve family nutrition. Local and regional health centers were primary sites for supervising mothers, and workers at these health centers created programs to teach women appropriate nutrition for themselves and their families. However, health center staff were doing more than distributing powdered milk provided by foreign assistance agencies. The individuals working in Bolivia's different regions were often more proactive, innovative, and effective at improving nutrition in the countryside. They often adopted international standards, language, and directives, but not wholesale. Instead, they allowed for flexibility and ingenuity on the ground to enhance these programs' reach and efficacy.

These health centers trained nurses and *visitadoras sociales* in pre- and post-natal care and encouraged them to visit homes to «teach mothers the appropriate care for their children» through nutrition and hygiene (Estados Unidos-Bolivia, n.d.). Sani-

tary inspectors taught women what foods had the most nutritional value, explained the benefits of eating animal and vegetable proteins, and recommended supplements if necessary. These mobile health workers cooperated with the Servicio Agrícola Interamericano (SAI, Inter-American Agricultural Service), who like SCISP was a bilateral agency focused on agricultural development. SAI provided resources for health workers to teach families to cultivate vegetables and legumes, distribute seeds for community gardens, and give demonstrations on preparing salads, bread, and powdered milk for babies (SAI, 1954-1955). For instance, SCISP provided vegetable seeds for the Santa Cruz mothers' club, who, according to the center's director, «now [that they] know something about the necessity of vegetables for the human body's organic defense» proposed creating a garden at the health center (SCISP, 1954: 6).

With support from UNICEF and the national government, health centers also distributed powdered milk. The idea for making milk the cornerstone of a healthy diet first emerged in the United States, and international organizations like UNICEF and FAO exported it to developing countries. These organizations encouraged milk consumption, especially among children, by distributing powdered milk that could be reconstituted and thereby was accessible to people in rural regions without refrigerators (Aguilar-Rodríguez, 2011; Valenze, 2011). After 1948, UNICEF took a global role in promoting maternal and child health (Rosenfield and Min, 2009). An agreement signed between Health Minister Aramayo and Robert Davée, the Regional Director for UNICEF, stated that in 1955-1956 UNICEF would donate a total of 2,600,000 pounds of powdered milk –valued at \$107,000– to raise the number of beneficiaries from 27,500 to 45,000. The Bolivian government covered the cost of transportation and distribution to malnourished populations. Local health centers distributed the milk according to the following guidelines: 38,000 children and pregnant or lactating mothers received daily rations of 40 grams of milk for 300 days per year, while 1,400 children and mothers considered in a «serious state of malnutrition» received a daily ration of 70 grams for 300 days per year. A group of 5,600 mothers that utilized free hospital services received a daily ration of 45 grams for all 365 days of the year (La Nación, 1955; Ministerio de Higiene y Salubridad, 1954-1955).

In an attempt to encourage clinic visits, health centers distributed this powdered milk to the mothers and children that utilized their services. Milk distribution was meant to stimulate community interest in the health centers' activities as well as substitute daily milk consumption for the local custom of giving young children coffee (La Nación, 1953). Bolivian health officials, based on UNICEF standards and U.S. nutritional guidelines, posited that milk –a food rich in vitamins, calcium, and protein– would create healthy and robust citizens. As an important source of ani-

mal protein, milk was seen as necessary for physical development and a marker of civilization. It was associated with modernization because of its nutritional content and the knowledge and technology required for its pasteurization (Aguilar-Rodríguez, 2011), even though, as Corinne Pernet's (2014) work on the Central American Institute of Nutrition shows, powdered milk distribution programs created tension between international organizations and local agencies, fostered dependency, and did not always fit well into local foodways.

These milk distribution programs allowed trained medical personnel to regularly inspect mothers and children by bringing mothers into health centers or giving health workers an excuse to go to individual houses. This program's objective was to encourage maternal visits to local health clinics, but also to reward mothers that underwent pre- and post-natal exams, gave birth in hospitals, and brought their children in for regular medical check-ups. In exchange for allowing trained medical personnel to supervise their pregnancy, breastfeeding, and child-raising techniques, women received powdered milk to provide for their families' dietary needs. These programs were paternalistic in nature: they rewarded women for behavior that met health workers' standards and fostered dependency on the health centers for food access.

The Cochabamba health center reported that thanks to milk distribution programs, «in the last few months you can already see a complete change in the vitality of the youth and a decline in death from malnutrition» (SAI, 1954-1955). The same clinic also opened a lactation room (*lactorio*) in October 1955 (SCISP, 1955a: 6) and began to encourage new mothers to breastfeed their children because they considered milk, powdered milk, and condensed milk inferior to breast milk in nutritional value. The workers noted that breast milk was often the best source of protein and amino acids for children as long as the mother was well nourished, but were concerned that mother's milk in underdeveloped regions often lacked essential nutrients like iron and Vitamin A (SCISP, 1954: 6). As early as 1955, staff at the Cochabamba clinic felt that they had augmented local nutritional standards enough that they could promote breastfeeding over the use of milk substitutes.

The Cochabamba health center also carried out dietary surveys «to attend scientifically to cases of prenatal, preschool, and adult malnutrition» and initiated a series of radio talks to provide «knowledge about nutrition and normal and balanced diets» to the local population. The nutritionist, Ligia Claros Ramírez, who was trained by SCISP to run the nutrition program and used the language of quantification to describe nutrition, was herself a product of knowledge circulation and international entanglements. She conducted weekly dietary surveys among pregnant women and healthy children. According to the report, she then «gave the pertinent information to the dietician [who] gives the nurses a guide containing advice that they should

give to mothers about balanced diets and what they should eat, emphasizing a diet of higher nutritional value» (SCISP, 1955b: 11).

Additionally, Claros provided advice to other health center employees on creating their own nutrition programs. She wrote a series of articles for SCISP bulletins—geared towards health center employees—on the importance of having a balance of proteins, carbohydrates, and fats in one's diet, (Claros, 1955: 22-23; Claros, 1956a: 23-24). She focused on the importance of nutrition for pregnant and lactating women and argued, «if the mother's nutrition during pregnancy is inadequate, the fetus suffers the consequences more than the mother» (Claros, 1956b: 20-22). In order to protect fetuses and infants from being harmed by their mothers' ignorance and teach rural families the scientific underpinnings of a balanced diet, Claros outlined specific guidelines for health center workers, *visitadoras sociales*, and rural schoolteachers for nutrition education. In a two-part series entitled «Nutrition for Pregnancy», Claros defined pregnant women's nutritional needs and established a timeline for regimented dietary changes to best support the «normal development of the fetus». She recommended that pregnant women needed to eat a balance of plant and animal protein, receive adequate quantities of vitamins and minerals like calcium, and consume between 2,000 and 2,800 calories a day for healthy fetal growth. She also explained that food intake needed to be augmented in the fifth month of pregnancy. Furthermore, she emphasized regulating maternal nutrition to produce a new generation of healthy Bolivians by pointing out that «having a child born in good health or in a debilitated state with signs of hunger (demonstrated through lack of resistance to disease) depends on whether the mother's nutrition was good, deficient, or lacking» (Claros, 1956b: 20-22). Carefully regulating mothers' caloric, vitamin, and mineral intake to ensure the birth of healthy babies placed the onus of good nutrition on mothers' personal practices. In this way, like the national discourse espoused by MNR officials, Claros targeted mothers as both the cause of and solution to Bolivia's nutritional crisis. She used the international nutrition guidelines based on calories and vitamins, and melded them with national directives.

In both her radio addresses and publications, Claros did not recommend specific foods that she thought each individual should consume. She focused instead on the elements of a nutritious diet—protein, carbohydrates, vitamins, calories, fruits, and vegetables—leaving room for individual health workers to meet these requirements with local ingredients. Claros articulated the «scientific» approach to nutrition popularized by the international community and imported to countries like Bolivia: nutrition could be quantified by calories and nutrient measurements (Cullather, 2007). These guidelines most likely came through her association with SCISP. However, despite the promotion of milk and milk substitutes, which were not common

in Andean diets, she was not necessarily trying to supplant Andean foodways. By focusing on dietary elements rather than specific foods, she left options for people to consume wheat in the lowlands or quinoa in the highlands for their carbohydrates, or to eat different animal proteins or vegetables as available. Her understanding of nutrition was certainly influenced by international standards, but her suggestions for improving it left room for local interpretations.

The Cochabamba nutrition project became the model for other health centers to follow. In an assessment of the program at the end of 1955, SCISP reported, «the nutrition campaign is functioning well and producing good results» (SCISP, 1955b: 11). The Cochabamba experiment represented an attempt to deal with a national issue of global significance on a local level. If it did produce satisfactory results due to the staff's recognition of local problems and creative approach to developing solutions, the experiment had important implications for (re)organizing national nutritional programs.

Following the Cochabamba health center's model, other health centers reached out to mothers and families. Many offered classes on children's nutritional needs at different stages of their development. Classes for mothers at the Santa Cruz health center focused on infants' nutritional requirements, the benefits of breast milk and fruit juices, and introducing solid foods (SCISP, 1956a: 11-12). In 1956, the Santa Cruz health center also promoted breast milk over powdered milk, explaining, «nutrition through breastfeeding is important for the mother and the child and is preferable to artificial nourishment from a psychological, bacteriological, and nutritional point of view» (SCISP, 1956b: 12). This increasing emphasis on breastfeeding demonstrates a shift away from UNICEF's powdered milk distribution campaigns on the local level even though they were crucial for rural health in the early 1950s and continued into the 1960s. It also highlights a growing tendency to focus on utilizing local resources—food products, mothers, and health centers—to improve nutrition. By the mid-1950s, health centers diverged from national policy as they used their own knowledge and experience to develop local solutions.

Health center workers expertly found effective solutions to malnutrition by working with local communities and allowing for variations in local diets. They gained expertise by bringing people into health centers with the promise of milk distribution and developing outreach programs. Even if these programs were heavy-handed and paternalistic in nature, these health workers interacted with people in their communities and, as a result, embraced programs that worked and discarded those that were ineffective. They carried out national directives based on international standards, like milk distribution programs and targeting mothers. Yet they expanded upon them or abandoned them when necessary, such as when promoting breastfeeding

over the use of powdered milk, demonstrating the growing expertise of local health workers in dealing with malnutrition. International agencies funded these clinics, and their influence over the health centers' understanding of nutrition is evident, but these health workers translated international nutritional standards in a way that made them effective on the ground. In applying these international standards and national directives to the local level, they helped bridge the gulf between policy and implementation and thereby created valuable knowledge for improving Bolivians' nutritional state.

Nutrition on the International Level: The Instituto Interamericano del Niño's Child Nutrition Conferences, 1958-1962

However well-intentioned the Bolivian government's programs to combat child malnutrition, or how diligently individuals worked to promote better nutrition on the local level, the general international consensus was that Bolivia lacked the financial and technical expertise to create an effective national nutrition program. According to U.S. technical advisor Shirley Enochs, who was also the President of the Directing Council of the Instituto Interamericano del Niño (IIN, Inter-American Children's Institute), «not until 1958 was a mass attack launched on this basic problem through what might be termed community organization on an international scale». She singled out a series of Child Nutrition conferences, which she called, «a unique experiment in the mobilization of international and national agencies and representatives of many different professions for a war on hunger», as a starting point to bridge local, national, and international campaigns and create a program for waging, and winning, a battle against child malnutrition in Latin America (Enochs, 1960: 116).

The IIN, in conjunction with the Unitarian Service Committee, organized «a series of conferences on the nutritional needs of children», whose «objective is to bring together those persons at the national and regional levels in South American countries most directly concerned with nutrition for children» (ICA Airgram, 1958). The conferences reflected increasing inter-American cooperation, and they brought together national officials and experts in child nutrition from the United States as well as international agencies like UNICEF and FAO. These conferences focused on the host country's needs, and while they generally lasted a week, the delegates took no field visits to see the scope of the problem first-hand or visit people in local institutions working to address the problem. The first conference was held in Colombia in mid-February 1958, followed by a symposium hosted in La Paz from February 26

through March 3, 1958. The IIN then spontaneously organized two more symposiums in Brazil and Argentina, and the conferences continued into the 1960s with La Paz again playing host in 1962 (Enochs, 1960).

The 1958 La Paz symposium brought together experts from across the Americas in the fields of nutrition, anthropology, pediatrics, and public health. Bolivian doctors, affiliated with the Bolivian Pediatric Society, made the local arrangements and actively participated in the symposium's conversations. Attendees included notable figures such as Dr. Isabel Kelly, an anthropology professor at the University of California, Berkeley who was renowned for her public health work in Mexico and provided technical assistance for rural health teams in Bolivia in 1958, and Dr. Percy Boland, a pioneer in the study of maternal and infant mortality in Bolivia's Santa Cruz province. The International Cooperation Administration (ICA, in charge of SCISP after 1955) suggested that the conference emphasize the importance of nutrition for child development through a discussion of «how to achieve effective application of scientific knowledge in the family, in children's institutions, and in hospitals». The ICA also encouraged the discussion to focus on technical training, knowledge availability, meeting minimal food requirements, developing coordinated approaches, changing food habits, and the economics of food production and distribution (ICA Airgram, 1958).

Over six days, the symposium delegates engaged in two conversations. The first emphasized improving child nutrition through maternal health, specifically in relation to pregnancy and lactation. The delegates stressed preventative measures to enhance national nutrition and reduce strain on already stretched medical resources, claiming «it is easier and more economical to make the mother's diet better than to provide adequate protein based foods for children» (IIN, 1958: 9). To develop these preventative health measures, the delegates suggested using mothers' clubs and maternal health centers to teach expectant mothers about adequate nutritional needs and local food resources. They surmised these institutions could also ensure that school age children received a diet of adequate calories, proteins, vitamins, and calcium (IIN, 1958: 11 and 28-31). These recommendations demonstrated either a lack of communication between Bolivian health authorities and the international community, or a lack of attention paid by the international community to Bolivian nutrition initiatives already in practice, since their recommendations mirrored precisely what health centers in Cochabamba and Santa Cruz had done for years.

The second conversation augmented these recommendations and stressed changing customs and dietary behaviors. While the delegates emphasized the need to improve the Bolivian economy to give families better access to nutritional foods, they also acknowledged «a simple augmentation of purchasing power of the population

is not sufficient to ensure that people eat well if at the same time an effort to improve dietary education is not enacted». The report outlined three essential elements of this educational program: cultural – «changing the bad customs that keep people from taking advantage of the foods within their reach»; economic– «using family money in a better way, in agreement with the nutritional requirements of all family members»; and practice –encouraging and cultivating good food habits (IIN, 1958: 49).

While the economic aspect of this program recognized the need to improve individuals' quality of life, and the idea of practice emphasized developing good eating habits, the cultural component provides insight into international experts' assumptions about who was to blame for Bolivia's malnutrition problem. The delegates recognized the need to overcome «malas costumbres» (bad habits), described as food superstitions relating to pregnancy, menstruation, and breastfeeding, such as local proscriptions against eating certain fruits to avoid having twins. Another «dangerous» local habit to surmount was grouping foods as either *frio* (cold, to be avoided during pregnancy) or *caliente* (hot, recommended for pregnancy), which for many rural populations meant milk was *frio* but alcohol was considered «el más caliente de todos» (the hottest of all) (IIN, 1958: 50-51).

Therefore, the delegates' primary question was: «How can we change bad habits?» The answer was a program of nutritional education. As Dr. Henri Teulon, a Frenchman assigned to the FAO's regional office, explained, «it is true that an already educated, evolved, and literate people are closer to good nutrition than a highly illiterate people. In other words, the wrong attitude and erroneous beliefs that are the bases of bad habits and taboos tend to disappear with general education» (IIN, 1958: 53). He further explained that nutritional education should be divided into two groups: a program of «scientific nutrition» explaining protein, calories, and nutrients for the more educated populations, and for the less educated population, a program emphasizing the best way of eating for their particular circumstances directed «more at their instincts than their intelligence» (IIN, 1958: 54). The delegates divided Bolivians into two groups –the urban, educated, evolved, and literate population; and a backward, uneducated, and indigenous rural population deemed incapable of understanding the science of nutrition. By advocating a type of education directed at correcting rural populations' «wrong attitudes and erroneous beliefs» by appealing to their «instincts» rather than intellect, the symposium's organizers and participants exposed their assumptions about rural Bolivians; it was a two-pronged approach based on a racist conception about indigenous Bolivians' lack of intelligence. Rural, indigenous Bolivians had limited access to quality education and health care and a more precarious economic situation, and they were also, from the delegates' point of view, primarily to blame for Bolivia's malnourished

state. Finally, these suggestions overlooked the fact that health center employees had been working with local foods and customs to great effect for several years and had been teaching the science of nutrition to those very people that international experts thought were incapable of understanding it.

The symposium's participants underlined taking culture into account to achieve desired improvements through nutritional education program. For anthropologist Dr. Isabel Kelly, this approach meant understanding local prejudices and beliefs in order to avoid unnecessary conflicts between health workers and communities. According to Kelly, the notion of education cut both ways; while communities needed nutritional education, technical personnel also needed to understand communities before a rural health program could be effective. To encourage the practice of good food habits, the delegates recommended going beyond the family and developing a school education program because «children and the schools constitute the two most efficient pillars in programs of food education». They advocated creating preventative measures focused on pregnant and lactating women and coordinating with local institutions like schools, maternal and infant health clinics, and mothers' clubs. They also suggested a «direct action targeting the home by social workers, nutritionists, home educators, sanitary nurses, or community leaders.... because good nutrition is fundamental to the conservation and development of good health» (IIN, 1958: 59-62, 158). In this way, the conference came full circle by recommending the continuation of practices already in existence in places like Cochabamba.

During the symposium's closing ceremony, Bolivian doctors emphasized the conference's major conclusions: the problem of child malnutrition was a top priority in the field of child welfare; it affected economic development and was «highly detrimental to the general welfare of the population»; and «each American country must be urged to consider its solution a goal of honor» (Enochs, 1960: 117 and 121). Dr. Juilo Zeñon Espinosa, the Confederation of Doctors' Unions' delegate, echoed many conference participants by blaming malnutrition on Bolivia's «lack of an effective sanitary education», claiming Bolivian doctors, pediatricians and public health specialists had a responsibility to implement the symposium's recommendations (IIN, 1958: 175). Dr. Daniel Bilboa Rioja, President of the Bolivian Surgery Society, graciously thanked the international community for their «scientific contributions» and asked that it «not abandon us in the middle of the journey to pass through the thorns in the road, in search of the truth and of progress». He claimed, «Bolivia's dramatic economic situation will retard the achievement of grand and beautiful ideals if we do not have continental cooperation and solidarity in this opportune moment» (IIN, 1958: 176-177). Prominent Bolivian medical professionals showed their dependency by begging the international community for their continued support,

indicating that international expertise would provide solutions for malnutrition, and professing a commitment to the goals of development. This nutrition conference implicitly defined nutritional expertise as not Bolivian and thereby positioned local officials as inferior to their international counterparts in the hierarchy of expertise.

Four years later, in January 1962, the IIN held another Nutrition Symposium in La Paz, organized with assistance from UNICEF, UNESCO, and the WHO, demonstrating the increasing participation of global entities in addressing child nutrition in Latin America. Many of the objectives were the same as in 1958, such as improving family nutrition and utilizing local resources. However, the 1962 conference also emphasized better cooperation between national, private, and international agencies to maximize efficiency and coordinate activities between Bolivian Ministries of Health, Education, and Agriculture. While the delegates recognized enhanced transnational collaboration as important, the lack of communication at the local level particularly concerned them. They identified inadequate statistical information on nutrition as especially troublesome. The delegation recommended that the Department of Biostatistics keep standard and consistent records and suggested that all departments and doctors adhere to international classifications for morbidity and mortality. The conference recommendations cited Bolivia's «lack of sufficient and well prepared professional and technical personnel» as a specific reason for increased institutional coordination, which was certainly a slap in the face to health center employees (IIN, 1962: 5-19). It also urged that priority be given to strengthening the National Department of Nutrition as the center of all coordinated activities.

National medical organizations reiterated these circular conversations and assumptions about expertise. An article published in *Salud Pública Boliviana*, one of Bolivia's premier medical journals, following the 1962 symposium claimed the event demonstrated Bolivian authorities' interest in the problem, the importance of nutrition as a «basis for the country's socio-economic development», and «the intimate relationship between malnutrition and the development of Bolivian public health», completely overlooking all the people that had addressed malnutrition in a dedicated and concerted manner during the 1950s. The report also reiterated the fragmented nature of Bolivia's public health institutions and the importance of dietary surveys, but argued that «the definitive solution can only be put into effect through integration of socio-economic and public health problems» (Ministerio de Salud Pública, Comité Interdepartamental para Nutrición en la Defensa Nacional, 1962). The National Department of Nutrition was the focal point of efforts to better integrate public health work with «particular interest in nutritional improvement as a basis for optimal performance and an effective means of preventative medicine» (Ministerio de Salud Pública, Instituto Interamericano del Niño, 1962: 9-10).

In 1962, following the Nutrition Symposium, the MSP undertook a national nutrition survey that concluded the Department of Nutrition should coordinate all national efforts, establish realistic salaries for health professionals and opportunities to study abroad to increase available trained personnel, determine the nutritional value of Bolivian foods, solicit advice from the WHO to develop programs, and create a «program of nutrition education for the people» (Ministerio de Salud Pública, 1962: 17-27). The national health statutes in 1964 explained that nutrition programs had three main objectives. First, they wanted to «orient the production of basic foodstuffs to contribute to the protection, promotion, and reparation of the people's health.» Second, nutrition workers would «educate the people about the consumption of adequate foods for their biological, economic, and cultural necessities». Its third goal was to train nutritional professionals to oversee the department's various measures (Estatuto General de Salud Pública, 1964). While all of these recommendations were reminiscent of the 1952 presidential decree giving the National Nutrition Department responsibility for overseeing the purchasing and distribution of basic foodstuffs to curb malnutrition, they also represent a shift from the local to the national in terms of addressing nutrition. In doing so, the MNR government gave far greater authority to international experts' recommendations than to the people working on the local level, even though health center programs were successful according to SCISP and preceded international recommendations by several years.

Conclusion

Over the course of the 1950s and 1960s, Bolivia's nutritional crisis was always solvable in the opinion of a variety of experts, yet oddly never solved. An analysis of nutrition programs during this roughly ten-year period shows that Bolivian medical professionals, government officials, and international nutrition specialists had circular conversations, whereby the international community often recycled analyses already produced within Bolivian medical circles or recommended programs already in existence at the local level. This tendency to repeat conclusions and recommendations reflected a lack of communication between health professionals working at the local, national, and international levels. However, it also demonstrates that shifting national and international priorities impacted local policy recommendations. Bolivian doctors and public health officials paid credence to international discourse about nutrition even when these international experts recommended policies that had already achieved success at the local level.

An assessment of nutrition programs in Bolivia during the mid-twentieth century shows the existence of hierarchies of expertise. Health center workers developed effective strategies for improving nutrition by translating international nutritional guidelines into local programs, interacting with community members, and observing which approaches worked and which did not—in other words, through expertise developed in context. However, national officials gave more weight to international experts' recommendations, even when those recommendations suggested policies already in existence at the local level. There are myriad ways that international experts' recommendations replicated regional programs and undercut local expertise, including recommending that *visitadoras sociales* and sanitary inspectors engage families in education about nutrition, suggesting the establishment of joint programs with schools, targeting mothers to improve family nutrition, and encouraging health workers to learn about local customs and food preferences. The MNR government accepted the international community's recommendations without awareness of or consideration for similar programs already in existence, and used them to shape national policy, showing that the national government valued knowledge produced outside of Bolivia more than that produced within it when it came to matters of science and medicine.

Expertise about nutrition circulated in professional networks, but it was negotiated and contested at multiple levels. Local health workers drew from international standards and discourses about nutrition, but they did not unquestionably implement them. Rather, they adopted certain aspects of international recommendations, but adapted them to fit local circumstances. In this way, local health workers effectively married international nutrition standards and national directives with local ingredients, and thereby navigated the entanglements of global nutrition efforts. In doing so, these health workers produced knowledge and developed expertise in context. And yet, Bolivia still remained dependent on external funding and expertise for the development of its national nutrition programs. Therefore, this case study highlights the tensions, miscommunications, and missed opportunities that resulted from these entanglements.

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