More Than Just Homemakers: Transnational Home Economists' Role in India's Development, 1964-1971

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"Agriculture is the key to economic development," wrote Orville L. Freeman, U.S. Secretary of Agriculture.[1] In his 1968 book, *World Without Hunger*, Freeman claimed that individuals and governments across the globe could "free man-kind from the threat of famine" and nightmares of starving children would fade away if undeveloped countries learned how to produce the food they needed.[2] The way to create change, according to Freeman and to other U.S. government officials, was to teach self-reliance. For example, when "food-deficient lands," like India, were ready to initiate heightened attention to population problems and increase agriculture production outcomes, American funding would be provided. By 1966, this assistance included special "feeding programs for children; special emergency and disaster donations…research on improved crops and livestock, soil and water conservation."[3] This concentrated focus in the 1960s on imbuing Indian citizens, especially farmers, with self-sufficiency contributed to the agricultural wave of development intended to increase crop yields through chemical and technological modernization.

Increased interest in this agricultural movement known as the "Green Revolution" has emerged in recent years. On the one hand, American diplomatic historians argue that Cold War era U.S. government financial and technology aid given to postcolonial countries, like India, was a diplomatic tool to restrict communist expansion.[4] On the other hand, environmental scholarship analyzes the socioeconomic disparities, environmental ruin, and negative health impacts of the agricultural movement.[5] To date, however, little work has thoroughly examined the central role female home economists in the United States and India played in transnational development endeavors associated with the Green Revolution. As a result, scholarship endorses a narrative that characterizes women primarily as secondary actors, making their intellectual role marginal or nonexistent in one of the largest agrarian developments in transnational history. I

argue that Indian home scientists and American Home Science advisors, hired as experts and financed by the United States Agency for International Development (USAID), performed a central role in the Green Revolution.[6] To address this gap in the literature, I begin with an overview of Home Science in India and locate it within the context of the Cold War. I then explore the ways in which these women were instrumental in educating urban and rural Indian communities about modern domesticity as defined by science, suggesting how historicizing the efforts of professionalized home economists contributes to a more complete understanding of this agricultural movement.

In particular, attention focused on female home scientists in India during the 1960s highlights the benefits and challenges of establishing Home Science education for Indian women; investigates their responsibilities in conceptualizing and expanding modernization and development schemes in India; and challenges the absence of female leadership within historical accounts of the Green Revolution. Indian home scientists and their American advisors were significant and influential transnational leaders in Indian development during the 1960s. A half-century later, it is time to spotlight the women who implemented Indian and American modernization and development objectives at the micro-level.

Background

In 1961, India's Chief Home Economist, Dr. Rajammal Devadas, defined Home Science as "education for home and community living."[7] This institutionalized focus on homemaking sought to utilize scientific methods to improve and modernize women's daily activities pertaining to food, clothing, shelter, finance, health, child care, household beautification, home management, and personal relationships. According to Devadas, the advancement of science "altered the ways of home living…through electricity, machinery, transportation, international contacts, and new technologies in food production," therefore making it imperative to teach individuals and families how to use modern conveniences recently made available in postcolonial India.[8]

As one who received her PhD from Ohio State University, an American land-grant university, Devadas was uniquely positioned to make this argument. Beginning in the 1950s, she advocated for the use of community extension programs and the establishment of Home Science within Indian agricultural universities. Ideally, agricultural

universities would reach out to farm families in their own homes and communities with knowledge about new agricultural and domestic techniques and tools. Devadas argued that since agriculture was the "basic industry" of India, the "success of national development plans…the enhancement of the living standard…and the efficiency with which rural women tackle" the problems of food production and home resources were all connected.[9] Devadas advanced the idea that placing Home Science within agricultural universities would ultimately lead to stronger communities and families.

The version of Home Science that Devadas promoted during the Cold War intersects with three distinct historical contexts. The earliest is the history of American educational intervention in post-World War II India. These scholars claimed that 1949 was a decisive year in the development and modernization of decolonized India. In that year, three historical events converged in a common cause that affected the direction and structure of higher education in India. First, India's University Education Commission outlined the need for basic reforms in university education. Second, during his inaugural address, American President Truman called on the United States to share its technical knowledge with the "peace-loving peoples" of developing nations. This request became known as the Point Four Objective.[10] He intended it as a lateral transfer of knowledge and technical skills to help countries relieve their own poverty and suffering.[11] Third, American land-grant universities pledged their help in carrying out President Truman's global stability goals. This America-centric narrative neglected to consider Indian agency.

Based on the assumption that peasant farming was "economically irrational," the second historical context focused on agricultural extension programs, considered the best way to directly "diffuse the inventory of modern knowledge" to peasant communities in post-colonial countries.[12] Implementation of American-styled extension programs coincided with the expansion of community development programs in Asian countries during the 1950s. Community development programs proposed to meet the material and psychological needs of villagers. The government sought to accomplish enhancements by providing financial and technical aid for agricultural development, as well as upgraded communication and hygiene systems, intended to "transform the social and economic life of villagers."[13] Educational, recreational, and health facilities were also part of the government's planned welfare services. Through raising community

consciousness, aided by Indian extension workers, many hoped villagers would learn to help themselves.[14]

The third historical framework centers on American influenced agricultural programs that spread throughout India during the 1960s. In addition to establishing extension programs and agricultural education institutions, private foundations, U.S. and Indian government authorities and agricultural experts considered agrarian research a vital component of knowledge export to third world countries.[15] After investing in agricultural experiments in Mexico during the 1940s, the Rockefeller Foundation financed agricultural research stations overseas in the 1950s. These locations, including India, planted and harvested experimental strains of wheat and rice. In contrast to native varieties of wheat that generated more stock than seed, these biologically modified high-yield varieties (HYV) produced more grain. This integration of research, education, and extension activities facilitated what many saw as positive beginnings for the Green Revolution. The "Development Decade" of the 1960s was distinct for its "all-out drive for increased outputs of grain," and the land-grant university models, along with their technical experts exported to India, were key to implementing modern technologies that enabledpromised outcomes.[16]

Contracted American female technical experts advised Indian Home Scientists in the creation of American-styled Home Economics programs in newly established Indian agricultural universities. U.S. organizations, such as the Ford Foundation, the Rockefeller Foundation, and the United States Agency for International Development (USAID), funded these transnational exchanges. Although a considerable body of research has examined the capitalistic and anticommunist motivations of these groups, there remain many unanswered questions about the unequal financial and leadership support provided by these funding organizations. Preliminary research shows that throughout the 1960s, U.S. funding organizations sustained generous financial support for male-dominated academic fields in India's new agricultural universities like agricultural engineering and animal husbandry programs.

In contrast, Home Science departments, and eventually Home Science colleges[17], received less financial and leadership aid than male-only programs. However, because these Indian universities were organized on the American land-grant model of teaching, research, and extension, the expectations of school administrators and government officials required Home Science personnel to offer teaching within the

walls of the university, research on campus and out in rural areas, and community outreach or extension education in villages. Home Science extension education involved learning the needs of the villagers. Perhaps village women were concerned about the health of their families.[18] Extension workers, for example, would teach, then demonstrate how to build a smokeless cooking stove (*chula*) for the family to use in the kitchen. These services were meant to improve the lives of people who lived within each school's regional boundaries.[19]

H. M. Patel, secretary to the Indian Ministry of Agriculture, suggested dividing India into five regions. Each region would partner with an American land-grant university that could provide technical assistance meant to improve agricultural education.[20] J. V. A. Nehemiah, secretary of the Indian Council of Agricultural Research (ICAR) and Frank Parker, former director of soils research at the U.S. Department of Agriculture (USDA) and beginning in 1953, chief agriculturist and advisor to the Indian Ministry of Agriculture, created specific groupings of Indian states into regions.[21] The rural population served by the Punjab Agricultural University, for instance, covered just over 31,000 square miles and varied in topography from low mountains, with annual rainfall amounts of five feet, to desert soil with one foot of annual rain. In 1970, the population of Punjab was "13 to 14 million," three-fourths of whom were rural.[22] The American women sent as consultants to India were assigned a wider variety of responsibilities than their counterparts, grappled with less funding to undertake comprehensive outreach obligations for a large, diverse community, and were expected to accomplish this despite a lack of sufficiently trained home scientists in India to implement those objectives.

Hiring Faculty and Staff

Ohio State University (OSU) developed universities in Region II. This area included the states of Punjab and Rajasthan in Northwest India. In 1961, Punjab's state legislature passed the Punjab Agricultural University Act and, by 1963, Prime Minister Nehru dedicated the new Punjab Agricultural University (PAU) in Ludhiana. American agriculture technicians were staffed immediately, but the first Home Science advisor, Dr. Edna Ramseyer Kaufman, was not hired until December 1964. Her contract began the following July.

Hiring qualified and experienced faculty often presented a struggle for Home Science departments, and it topped Dr. Edna's[23] list of first priorities. Professional Indian home scientists were scarce during

the late 1960s. Although Home Science had existed in India since the 1910s, opportunities for advanced degrees were limited and located mostly in South India.[24] While there were a few colleges around India with long-standing Home Science departments, during the 1960s only the Maharaja Sayajirao University, Faculty of Home Science, Baroda, operated a graduate program that trained Home Science students and educators for advanced teaching and administrative positions based on the "land grant [sic] pattern."[25] This pattern referred to the educational method used to prepare future home economists in American land-grant universities, like OSU.

The Ford Foundation funded the enhancement of training programs at the University of Baroda (Baroda) in Gujarat from August 1960 to July 1970. This intensive focus on Baroda's Home Science college was meant to produce Indian educators with advanced degrees in childcare, home management, nutrition, textiles, and other Home Science fields. Doug Ensminger, the Ford Foundation representative in India, aimed to increase advanced education opportunities in India for Indian home scientists. Instead of sending female home scientists to America for advanced training, he hoped well-equipped Indian institutions could better train and prepare Indian educators to help rural populations. Although an advanced degree in Home Economics from an American university held more prestige in India, the education was mostly theoretical. As an alternative, the University of Baroda was located near villages where students could practice Home Science concepts, leading to hands-on training, more experienced extension workers, and eventually, future university leaders. Additionally, they would be more qualified to find employment throughout India at rural colleges and extension centers.[26]

Staff shortages continued to be a problem through the decade. According to Dr. Maria Friesen, Baroda could not "produce them fast enough for our consumption."[27] Friesen, Kaufman's successor who contracted to assist PAU from 1967 to 1969, often lamented in official reports and letters to Dr. Edna that the rapid development of Home Science at PAU produced staffing challenges. Their need for several trained faculty outpaced the number of experienced applicants. Noting in her monthly report that they hired three new teachers, she wrote, "If they sign their contracts, we will have a 'fresh graduate' with an M.S degree in child development from Baroda."[28] While glad to hire qualified educators from the limited supply, Friesen complained to Dorothy D. Scott, dean of OSU's Home Economics department,

"Working with inexperienced teachers isn't easy."[29] A year later in a personal letter to Kaufman, Friesen wrote that the teachers from Baroda "are wonderful to work with. Even though they are inexperienced they have the Land Grant [sic] philosophy."[30] When Kaufman's contract ended in 1967, only ten Indian Home Science institutions offered advanced degrees, usually covering only one specialization. Two years later when Friesen left India, five additional institutions granted post-graduate degrees, but they too only provided one specialization. Besides being the only higher education facility to train students within the land-grant framework of teaching, research, and extension, Baroda uniquely offered all five areas of expertise: Foods and Nutrition; Child Development; Clothing and Textiles; Home Management; and, Extension Education.[31]

Ohio State University's contracted Home Science advisor in Udaipur expressed similar staffing frustrations. Fanchon Warfield assigned to the University of Udaipur (UU), shared this common criticism about the shortage of qualified faculty. During the initial year of operation in 1966, Warfield recorded in her monthly report that future UU staff would include an associate dean and a guidance counselor.[32] Once hired, the dean would "help select the other staff members."[33] Warfield had likely interviewed prospective deans since her arrival in 1964. Five months after her arrival in Ludhiana, Kaufman recorded her employment interviews with Dr. Satya Sharma, a PhD graduate in Home Management from Ohio State University, and Dr. N. Naini, Cornell University Home Economics PhD graduate.[34] At one time, Dr. Naini was considered for the dean position but instead she chose Lady Irwin College in New Delhi where she obtained the position of Head of Extension and Education.[35] One useful strategy for finding trained home scientists involved developing connections with other Home Science colleges, departments, and centers throughout India. Those networks included Indian educators and administrators who received advanced degrees at land-grant universities in the United States.

Dr. Rajammal Devadas exemplified female Indian scholars who earned advanced degrees in America. Across India in particular, she became a highly respected home scientist and nutritionist after achieving her PhD in 1950. As such, she played a critical role in linking American Home Science advisors with potential Indian faculty and administrators. Considered the architect of the entire domestic education program at Avinashilingam Home Science College for Women

in Coimbatore, Tamil Nadu, India, her life's work focused on educating women, formally and informally. The college opened its doors in 1957 and encouraged enrollment and education of women from all socio-economic classes. At the time, the University of Baroda in western India, specialized in advanced degrees in Home Science, such as Food and Nutrition and Child Development, while Avinashilingam in South India, granted undergraduate degrees. For example, in one monthly report to OSU's Home Economics dean, Warfield mentioned a Home Management graduate from Avinashilingam. She delighted that such a "very fine girl from Coimbatore," accepted the offered position.[36] It is likely that Principal Devadas referred this new hire to Warfield. As a greatly esteemed nutritionist and alumna of OSU, Devadas maintained transnational social, academic, and governmental connections at multiple levels.

Indian women who earned doctoral degrees from American Midwest land-grant universities often filled critical leadership openings in new Home Science departments. Dr. Leela Phadnis, hired in 1967 as the Associate Dean of Home Science at the University of Udaipur (UU), was one such example. She earned her master's degree from Nebraska State University and her PhD in nutrition from Kansas State University. Before her employment at UU, she worked as the Head of Foods and Nutrition at Shreemati Nathibai Damodar Thackersey (SNDT) Women's College in Bombay.[37] Over the course of the hiring phase at UU, Warfield wrote in her monthly report that Phadnis possessed "fine qualifications," spoke "excellent English," and was interested in the position. However, Warfield worried that Phadnis asked for a salary higher than the administration would probably pay. Yet, Warfield thought Phadnis was "worth it."[38] Though no records exist to confirm the reasons supporting her appointment, one month later things were in place for Phadnis to assume her position as the new associate dean. Warfield's subsequent monthly report offers a likely clue into the administration's alleged willingness to hire a high salaried, very competent career woman. At the time, national and international concern for the health of Indian citizens contributed to the institutionalization of Home Science. The famine in Bihar from 1966 to 1967 is one extreme example of an external motivator.[39] Warfield enthusiastically endorsed Phadnis, claiming that since food and nutrition was "such an important area particularly in India, the university is very fortunate in securing a person with these qualifications."[40] During the 1960s, every hire brought legitimacy to the creation of new Home Science departments in these modern

agricultural universities in Northwest India that were modeled after American land-grant institutions.

Recruiting Students

Besides hiring qualified staff, recruiting future students was critical to the successful establishment of Home Science at PAU and UU. While other universities around India offered Home Science courses, like Lady Irwin College in New Delhi that was considered a finishing school for upper- and middle-class women, the agricultural universities were uniquely designed to offer enrollment access to anyone, especially people from rural circumstances. Before the Green Revolution, some local high schools, Christian Union High School being an example, taught home science subjects but did not classify those classes as part of a specific Home Science program.[41] Teacher colleges around the country, such as Baring Union Christian College in Batala, also offered a few Home Science courses usually focused on nutrition and home management.[42] In May 1966, Warfield attended a three-day workshop in Ajmer for such schools. Although she did not list the workshop's specific activities, she documented the attendance of twenty-seven participants from four states. Pleased with the turnout, Warfield considered it a successful venture as she wrote that the students were "a nice group and they participated well. I enjoyed working with them."[43] Beyond making community appearances to provide public awareness of Home Science as a field of study, American advisors traveled to local high schools to encourage young women's enrollment in new Home Science colleges in the updated, state-run agricultural universities.

Navigating India's high school system created frustration for American consultants and showed gaps in their understanding of Indian education methods. According to Warfield, for example, a student could graduate from high school but, before admission into a degree seeking program at a university or college, they had to attend a higher secondary school or enroll in pre-university classes at an institution. In 1966, the University of Udaipur did not offer a pre-university program for women. When Warfield wrote her March 1967 report suggesting that the university Home Science program "lost quite a few," she may have meant students lacked preparation for university-level studies and so dropped out.[44] While UU would admit women to pre-university studies in July of that year, to "raise the standard of performance" they would additionally screen applicants more carefully and "only those in first and second division would be admitted."[45] This increased need for

qualified applicants frequently forced Home Science advisors to visit secondary high schools in order to draw attention to the future opportunities a Home Science education provided women.

These continual visits to high schools and the placement of Home Science within newly created agricultural universities produced a great deal of public interest. Warfield reported to Scott that she received so many letters and phone calls requesting information about the program, she had "no time to do any other work."[46] As a point of illustration she wrote, "The principal of one of the local high schools said that if we had started earlier we could have had one hundred girls as easily as ten."[47] In the schools she visited in the state of Rajasthan, she found "headmistresses in every school interested and willing to cooperate."[48] Warfield made it her goal to recruit and enroll fifty girls for the initial year.[49] Although enthusiastic about the increased interest in Home Science, she also acknowledged other reasons potentially created the public excitement towards Home Science. For example, her monthly report claims she was "anxiously awaiting the slides to arrive." Perhaps those slides introduced the advantages of Home Science education to a broad audience. She also wrote that she intended to use them at area high schools in Udaipur and specifically invited mothers to attend. She continued, "Very few people have any conception of the scope and potential of Home Science, but they all admit that a girl stands a better chance of getting a good husband if she has had Home Science training."[50] To her point, Warfield told her supervisor that a headmistress told her she sent her daughter to a "French convent in Bombay to take a diploma course in Home Science because it added so much to her dowery [sic]. The daughter already had an AB degree."[51] Warfield recorded that she met the headmistress's daughter and thought her to be a "lovely and cultured girl," who claimed "she enjoyed her Home Science classes more than any other work she had ever taken."[52] Warfield's short report included no additional information about this young woman or her mother, the headmistress, nor the dowry intentions of other parents.[53] It is hard to know the reasons this undergraduate enjoyed her Home Science courses. However, it is possible she liked the courses because they increased her chances for marriage. Potential suitors valued a woman trained in the science of homemaking.

Developing Curricula and Understanding

Marriageability also dictated decisions about Home Science curriculum and the number of years required to accomplish the degree.

One year after meeting the headmistress, who actively created her daughter's dowry with Home Science training, Warfield recorded the lack of progress made in getting Home Science approved as a four-year degree. Preferring a three-year program instead, the Executive Council rejected the four-year program proposal she and Phadnis submitted.[54] Warfield lamented they were "feeling their way along giving a little here and there but always stressing the need for educating women for careers. India still does not see the need for educating women except to enhance their chances for a better marriage."[55] Creating curriculum and degree programs was new for Warfield and Phadnis; the authorization process proved frustrating. Initially, they both hoped a four-year degree would better educate and assist women in getting careers. Furthermore, Warfield interpreted the refusal of the Executive Council to approve a four-year degree as an indication that Indian society privileged marriage for women, not education. To her, the Council's actions claimed, "three years are just as good as four and does not cost as much."[56] It seems Warfield thought economics and tradition played a significant role in the rejection of their proposed curriculum. Why educate a young woman for a career, when her purpose was to marry and stay at home?

Cultural expectations and interpretations emerged from both sides. While some people envisioned Home Science as domestic training for future wives, others promoted education for women as an important stepping stone to a public career. For example, when American Home Science advisors visited high schools, they explained the curriculum and opportunities in India for home scientists.[57] In 1958, future job opportunities included: extension work in rural communities, dietitians, teachers, hostel managers, child care and nursery school workers, "experts in test kitchens, in soap manufacturing companies, and so…"[58] Although most high school girls took courses in science, American advisors noted that Indian education was "passive–just listening to lectures."[59] They assumed young women would struggle in college courses because they would be "put on their own and will have to learn to study."[60] Therefore, advisors requested any material from OSU that could teach Home Science students how to study. They wanted students to succeed and believed American-styled learning and study habits guaranteed that outcome.

However, the lack of Home Science textbooks and materials based in an Indian context equally frustrated Indian and American educators. In the early twentieth century, Western women with limited

knowledge of Indian culture created the first textbooks used in institutions to teach Home Science concepts. To remedy this, in 1959, Devadas published the first Home Science textbook written by an Indian. Because teaching materials and scholarship with an Indian perspective were limited, instructors used pamphlets and marketing literature from local businesses to teach concepts.

Even though faculty had ordered teaching materials from India and the U.S., they did not wait to make a difference nor fulfill their responsibilities. Dr. Edna set out on a tour of Home Science colleges in 1965 "to better understand the thinking of Indian Home Economists and Administrators" regarding Home Science curriculum and "class procedures and to become more aware of their concerns and needs."[61] Though notions of implementation differed, mutual respect and efforts to understand each other permeated the ranks of home scientists. To this day, Jagjeet Johal, one of the first professors hired by Dr. Edna, remembers the humility and respectfulness with which this American advisor spoke to colleagues, students, and villagers alike. Not only did Johal feel empowered by Kaufman to confidently lead her own classes in research and fieldwork, but after Johal earned her PhD at Ohio State, like Dr. Edna, she too became the dean of the Home Science college at Punjab Agricultural University. The two of them remained friends until Kaufman's death in 2001.[62]

Conclusion

More than fifty years have come and gone since Orville Freeman published his concerns about starving children in under-developed countries and the necessity of American citizens and organizations to support efforts to teach foreign populations self-reliance. U.S. and Indian governments realized that food aid alone would not solve India's food deficiencies. During the 1960s technical assistance localized, unlike the previous decade when broad assistance requested by the Indian government focused on assisting community development initiatives. Attention concentrated on creating and utilizing agriculture inputs such as fertilizers and pesticides; researching more efficient food storage and distribution methods; and developing rural agricultural universities.[63] These activities centralized in a few locations around India. As a result, in 1961 the Indian government contracted with five U.S. land-grant universities to advise seven new Indian agricultural universities in the production of agriculture knowledge, meant to educate rural populations and modernize traditional agriculture.[64]

Indian home scientists and their American counterparts guided the development of institutionalized Home Science programs in those agricultural universities. This essay aimed to historicize those women's experiences.Without an adequate examination of women as intellectuals, activists, and influencers, we undervalue their significant roles in the conceptualization and expansion of modernization and development in India, leading to a one-sided notion of the 1960s agricultural movement's meaning and legacy.

[1] Orville L. Freeman, *World without Hunger* (New York: Frederick A. Praeger, Inc., 1968), 46.
[2] Ibid., xi.
[3]*Foreign Relations of the United States*, 1917–1972, Volume VII, Public Diplomacy, 1964–1968, Document 84**,** accessed November 4, 2019**,** https://history.state.gov/historicaldocuments/frus1917-72PubDipv07/d84**.**
[4] See: Kim Berry, "Lakshmi and the Scientific Housewife: A Transnational Account of Indian Women's Development and Production of an Indian Modernity," *Economic And Political Weekly* 38, no. 3 (March 2003): 1058-1959, accessed September 9, 2017, https://osu-on-worldcat-org.proxy.lib.ohio-state.edu/oclc/5550234302; Michael E. Latham, *The Right Kind of Revolution: Modernization, Development, and U.S. Foreign Policy from the Cold War to the Present* (Ithaca, NY: Cornell University Press, 2011), 4-5; Nick Cullather, *The Hungry World: America's Cold War Battle against Poverty in Asia* (Cambridge, Mass: Harvard University Press, 2010), 2.
[5] See: Vandana Shiva, *The Violence of the Green Revolution: Third World Agriculture, Ecology, and Politics*. 2016.; John H. Perkins, *Geopolitics and the Green Revolution: Wheat, Genes, and the Cold War* (New York: Oxford University Press, 1997).
[6] For purposes of clarification, Home Science, an Indianized version of Domestic Science from Great Britain and Home Economics from the United States, is the nomenclature used in India and consequently in this conference paper. See Rajammal P. Devadas, *The Meaning of Home Science* (Coimbatore: Sri Avinashilingam Home Science College, 1958), 1; Mary Hancock, "Home Science and the Nationalization of Domesticity in Colonial India," *Modern Asian Studies* 35, no. 4 (2001): 873, accessed November 22, 2017, https://osu-on-worldcat-org.proxy.lib.ohio-state.edu/oclc/5548995351.
[7] Rajammal P. Devadas, "Home Science in Rural Development," in *Extension Education in Community Development*, edited by M.G. Kamath (New Delhi: Ministry of Food and Agriculture, 1961), 398-399.
[8] Devadas, *The Meaning of Home Science*, 2-3.
[9] Devadas, "Home Science," in Kamath, 398-399.
[10] Hadley Read, *Partners with India: Building Agricultural Universities*. (Urbana-Champaign: University of Illinois at Urbana-Champaign, 1974), preface.
[11]Latham, *The Right Kind of Revolution*, 31.
[12]Arthur A. Goldsmith, *Building Agricultural Institutions: Transferring the Land-Grant Model to India and Nigeria* (Boulder: Westview Press, Inc., 1990), 17.
[13] Garvin Karunaratne, "The Failure of the Community Development Programme in India," *Community Development Journal* 11, no. 2, (1976): 95-118.
[14]Rekha Mehra and K. Saradamoni, *Women and Rural Transformation: Two Studies* (New Delhi: Naurang Rai Concept Publishing Company, 1983), 4; Benjamin Robert Siegel, *Hungry Nation: Food, Famine, and the Making of Modern India* (United Kingdom: Cambridge University Press, 2018), 190-191.
[15] K.C. Naik, *A History of Agricultural Universities* (New Delhi: Navchetan Press (P) Ltd., 1968), 15-22; Kathleen M. Propp, *The Establishment of Agricultural Universities in India: A Case Study of the Role of USAID-U.S. University Technical Assistance* (Urbana: Univerisity of Illinois Press, 1968) 10-12.
[16]Cullather, *The Hungry World*, 107.

[17] Women were the only students who enrolled in Home Science programs at the university level until the 1980s. Arvinda Chandra, Anupama Shah, and Uma Joshi, *Fundamentals of Teaching Home Science* (New Delhi: Sterling, 1989), 3.
[18] Ellen L. Moline, "Extension Education in Home Science," in Kamath (New Delhi: Ministry of Food and Agriculture, 1961), 313-314.
[19] Rajammal P. Devadas, "Home Science," in Kamath, 402, 405.
[20]Five universities were needed and eventually, five committed to send two-man survey teams to India to consider the feasibility of their respective university's participation. Those preliminary five universities were: University of Illinois-Urbana Champaign, University of Tennessee, Kansas State University, University of Missouri, and Ohio State University. Pennsylvania State University joined the partnership in 1967. Read, *Partners with India*, 24.
[21] Ibid.
[22] Indian Council of Agricultural Research (ICAR), *The Punjab Agricultural University: An Assessment of Progress to 1970* (New Delhi: ICAR, 1970), 4.
[23] "Dr. Edna" was a nickname used by friends and colleagues. Kirsten Zerger, oral history interview, North Newton, KS, July 2019.
[24] Hancock, "Home Science," 900.
[25] Maria S. Friesen to Lois Gilmore, January 3, 1969, Home Economics, Ohio State University Archives, Columbus, OH.
[26] Doug Ensminger, Early Interest and Involvement in Home Economics Work in India, folder B.18, Oral History Interview 1972, Ford Foundation Archives, Rockefeller Center Archives.
[27] Friesen, Gilmore letter.
[28] Maria S. Friesen to Dorothy D. Scott, December 12, 1967, Home Economics, Ohio State University Archives, Columbus, OH. Friesen seems to imply that the recent graduate student was young in years and professional experience.
[29] Ibid.
[30] Maria Friesen to Edna Ramseyer Kaufman, letter, July 1968, India, Box 3, MLS.MS.300, Edna Ramseyer Kaufman Papers, Mennonite Library and Archives, Bethel College, North Newton, Kansas.
[31] P.L. Srivastava, "Development of Home Science Degrees in India," (PhD diss., The Maharaja Sayajirao University of Baroda, 1975), 280-285.
[32] Fanchon Warfield to Dorothy D. Scott, February 1966, Home Economics, Ohio State University Archives, Columbus, OH.
[33] Ibid.
[34] Upper and middle-class women, and especially women from Christian families or those who finished undergraduate degrees from Christian colleges, earned advanced degrees in the United States before the signing of Operational Agreement Number 28 in April 1954. Siddhi Macwan, "Methodist Church and Making of Methodist Christian Community in Baroda From 1880 1980," (PhD diss., The Maharaja Sayajirao University of Baroda, 2010), 90, 154-155. Operational Agreement Number 28 encouraged and funded the transnational exchange of Indian educators seeking advanced degrees in the United States. Propp, *The Establishment of Agricultural Universities in India*, 17. Indian Home Scientists earning advanced degrees is outside the scope of this conference paper.
[35] Edna Ramseyer Kaufman to OSU Agriculture and Education Mission to India Committee, monthly report, January 1966, India, Box 3, MLS.MS.300, Edna Ramseyer Kaufman Papers, Mennonite Library and Archives, Bethel College, North Newton, Kansas.

[36] Fanchon Warfield to Dr. Dorothy D. Scott, February 1967, Home Economics, Ohio State University Archives, Columbus, OH. In referring to this potential hire as "girl," it is unclear if Warfield held feelings of superiority toward the other woman. Perhaps its use was indicative of a difference in age, not race.
[37] Fanchon Warfield to Dorothy D. Scott, March 1967, Home Economics, Ohio State University Archives, Columbus, OH.
[38] Ibid.
[39] Siegal, Hungry, 204-208.
[40] Fanchon Warfield to Dorothy D. Scott, April 1967, Home Economics, Ohio State University Archives, Columbus, OH.
[41]Jagjeet K. Johal, oral history interview, Penngrove, CA, May 2018.
[42]Edna Ramseyer Kaufman to OSU Agriculture and Education Mission to India Committee, monthly report, December 1965, India, Box 3, MLS.MS.300, Edna Ramseyer Kaufman Papers, Mennonite Library and Archives, Bethel College, North Newton, Kansas.
[43] Fanchon Warfield to Dorothy D. Scott, May 1966, Home Economics, Ohio State University Archives, Columbus, OH.
[44] Fanchon Warfield to Dorothy D. Scott, March 1967, Home Economics, Ohio State University Archives, Columbus, OH.
[45] Ibid.
[46] Ibid.
[47] Ibid. Warfield's report does not clarify what the principal meant by "started earlier." Beginning in 1921, the Women's India Association (WIA) urged the government to include Home Science classes in girls' secondary schools and by the 1930s, it was institutionalized. See, Hancock, "Home Science," 871-903.
[48] Fanchon Warfield to Dorothy D. Scott, February 1966, Home Economics, Ohio State University Archives, Columbus, OH.
[49] Ibid.
[50] Ibid.
[51] Ibid.
[52] Ibid.
[53] The Dowry Prohibition Act of 1961 explicitly bans the giving of "property or valuable security," either directly or indirectly, as a consideration from the side of the bride's parents or relatives to the groom or his parents and/or guardian for the agreement to wed the bride-to-be. "The Dowry Prohibition Act, 1961," accessed December 19, 2019, http://www.vakilno1.com/bareacts/dowryprohibitionact/dowryprohibitionact.html. With the passage of time, the notion of bride price, practiced in the Vedic period, gradually disappeared and the concept of dowry became dominant in modern times. See Namratha S. Ravikant, "Dowry Deaths: Proposing a Standard for Implementation of Domestic Legislation in Accordance with Human Rights Obligations," *Michigan Journal of Gender and Law* 6, no. 2 (2000), 449, 454, accessed December 16, 2019, https://osu-on-worldcat-org.proxy.lib.ohio-state.edu/oclc/8091425848; S. Krishnamurthy, *The Dowry Problem: A Legal and Social Perspective*, 1st ed. (Bangalore: IBH Prakashana, 1981), 22, accessed December 16, 2019, https://osu-on-worldcat-org.proxy.lib.ohio-state.edu/oclc/10117835; Mytheli Sreenivas, *Wives, Widows, and Concubines : The Conjugal Family Ideal in Colonial India*, Contemporary Indian Studies (Bloomington: Indiana University Press, 2008), 202-204; Geraldine Hancock Forbes, *Women in Modern India*, The New Cambridge History of India, Iv, 2 (Cambridge England: Cambridge University Press, 1996), 67, 113, 242.

[54] Although Warfield used the term "Executive Council" in her monthly report to label the academic organization that approved curricula, it is likely the actual group was the "Academic Council." Academic Councils consisted of the Vice-Chancellor, Deans of the various faculties and post graduate studies, Directors of Research, Student Affairs, School of Basic Science and Humanities, and Extension, the librarian, six department heads, and the Registrar. This governing body was included in university proposals submitted to state legislators for approval to establish agricultural universities. KullalChickappu Naik, *A History of Agricultural Universities: Educational, Research and Extension Concepts for Indian Agriculture* (Delhi: Navchetan Press, 1968), 161-162.

[55] Fanchon Warfield to Dorothy D. Scott, April 1967, Home Economics, Ohio State University Archives, Columbus, OH.

[56] Ibid.

[57] Fanchon Warfield to Dorothy D. Scott, February 1967, Home Economics, Ohio State University Archives, Columbus, OH.

[58] Ministry of Education Government of India, *Home Science in Colleges and Universities in India*. The Home Science Association of India, 1958, 44.

[59] Fanchon Warfield to Dorothy D. Scott, March 1966, Home Economics, Ohio State University Archives, Columbus, OH.

[60] Ibid.

[61] Edna Ramseyer Kaufman to Dorothy D. Scott, October 1965, Home Economics, Ohio State University Archives, Columbus, OH.

[62] Jagjeet Johal, oral history interview, May 2018.

[63] Ibid.

[64] Propp, *The Establishment of Agricultural Universities in India*," 16-17. See also, Read, *Partners With India*, 22.