

## **What is an economy? Women's work and feminist economics in the construction and critique of national income accounting**

Luke Messac

### **Abstract**

Concerns over women's work were present at the advent of the modern method of national income accounting, and they featured prominently in some of the most radical critiques of this method at the close of the twentieth century. During and after the Second World War, Phyllis Deane, a young researcher working under the supervision of Richard Stone, Austin Robinson, and Arthur Lewis, grappled with the conceptual difficulties involved in measuring the "national" incomes of mostly rural subsistence colonies in British central Africa. In constructing her estimates, Deane relied heavily on a multidisciplinary survey of nutrition and agricultural practice conducted in interwar Nyasaland. Deane's work was essentially an exercise in reductionism and bounding; she sought to extract from this intensive survey a single monetary estimate of production.

Yet Deane also proved unwilling to exclude too much. She broke with her advisors' favored convention that activities not involved in market exchange should be excluded from estimates of national income. Successive national income accountants around the world would reach disparate conclusions on method, particularly on the question of the 'production boundary'—that is, the dividing line between those productive activities that were included in the national income, and those that were not. This issue became most contentious in the sphere of 'non-monetary' or 'subsistence' production performed mostly by female producers. While almost all statisticians decided to include subsistence crop production, they 'imputed' the value of such production in very different ways. And while some statisticians included firewood collection, beer brewing, and cooking in national income, many others thought such activities beyond the bounds of "the economy." Early decisions about imputations and inclusions of non-monetary production influenced the international standards enshrined in the United Nations *System of National Accounts*, first published in 1953.

Beginning in the 1970s, second-wave feminists criticized the invisibility of women's work in national income estimates. In response, accounts in many nations began to include more non-monetary activities. Yet by the 1990s, many feminist critics—most notably New Zealand-born political economist Marilyn Waring—sought to move beyond GDP as a measure of welfare. These feminists instead called for greater reliance on measures such as the Human Development Index and time-use surveys, measures that required the same multidisciplinary and intensive methods as the nutrition surveys that had served as the substrate for initial calculations of colonial national income. Drawing upon the archives of the UN Statistical Office and the UK National Archives, this paper argues that female scholars and women's work were central both to the postwar construction and the late-twentieth century critique of national income.

In the wake of a devastating 2008 financial crisis and a recovery whose benefits were not widely shared, an international commission chaired by Joseph Stiglitz delivered a thoroughgoing critique both of the methods and uses of national income accounting. ‘GDP mainly measures market production, though it has often been treated as if it were a measure of economic well-being. Conflating the two can lead to misleading indicators about how well-off people are and entail the wrong policy decisions.’<sup>1</sup> Yet such critiques are long-standing, and have been made with particular persistence by female economists concerned about the invisibility of women’s work.

The historiography of national income accounting has grown in recent years. Timothy Mitchell points to Keynes’ early employment in British India as a key influence in creation of ‘the economy’ as a ‘self-contained object whose “problems” could be measured, analyzed, and addressed as a form of knowledge that appears to stand outside the object and grasp it in its entirety.’<sup>2</sup> Mary Morgan has examined the uncertainty that attended the application of national income accounting to the colonies, arguing that much of the epistemic discord can be attributed to disciplinary differences between economics

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<sup>1</sup> Joseph E. Stiglitz, Amartya Sen, and Jean-Paul Fitoussi, *Mismeasuring Our Lives: Why GDP Doesn’t Add Up* (New York: The New Press, 2010).

<sup>2</sup> Timothy Mitchell, *Rule of Experts : Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002).

and anthropology.<sup>3</sup> Daniel Speich, Michael Ward and Diane Coyle<sup>4</sup> chronicled the postwar globalization of national income accounting.<sup>5</sup> Morten Jerven has explored both the decisions about the accounting methods in some newly independent African states as well as the systematic dearth of information African statisticians have had to use as the basis for national income estimates.<sup>6</sup>

Yet the role of female economists as both ambivalent founders and radical critics of the methods of national income accounting has not been fully appreciated. Nor has the central concern with the visibility of women's work in the critical writings of these economists. Drawing upon the archives of the United Nations Statistical Office, the UK National Archives, and the Malawi National Archives, this paper argues that female scholars and women's work were central both to the postwar construction and the late-twentieth century critique of national income.

Phyllis Deane and Marilyn Waring, though perhaps not widely known outside of the community of national income accountants, were anything but marginal figures. Deane compiled the earliest "national" income calculations in all of Africa, and helped Richard Stone—who would go on to win the Nobel Prize in Economics—to universalize his

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<sup>3</sup> Mary Morgan, "Seeking Parts, Looking for Wholes," in *Histories of Scientific Observation*, Eds. Loraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011).

<sup>4</sup> Michael Ward, *Quantifying the world: UN ideas and statistics* (Indiana University Press, Bloomington, IN, 2004).

<sup>5</sup> Daniel Speich, "Travelling with the GDP through Early Development Economics' History," 2008, <http://eprints.lse.ac.uk/22501/>; Michael Ward, *Quantifying the World: UN Ideas and Statistics* (Indiana University Press, 2004); Diane Coyle, *GDP: A Brief but Affectionate History* (Princeton: Princeton University Press, 2014).

<sup>6</sup> Morten Jerven, *Poor Numbers : How We Are Misled by African Development Statistics and What to Do about It*, 2013; Morten Jerven, "Users and Producers of African Income: Measuring the Progress of African Economies," *African Affairs*, February 8, 2011.

method. As a young economic researcher working under Stone's supervision, Deane grappled with the conceptual difficulties involved in measuring the "national" incomes of mostly rural subsistence economies in British colonial Africa. In constructing her estimates, Deane relied heavily on a multidisciplinary survey of nutrition and agricultural practices conducted a decade earlier in Nyasaland. Much of the in this survey had been collected by female anthropologists, nutritionists, and biochemists. Deane's work was essentially an exercise in reductionism and bounding; she sought to extract from this intensive survey a single estimate of "national" colonial production. Yet Deane also proved unwilling to exclude too much. She broke with her advisor's favored convention that activities not involved in market exchange should be excluded from estimates of national income.

Though Stone's eventually succeeded in making his preferred methodology—which excluded most household labor from national income—the global standard, later critics echoed Deane's early work in questioning the assumptions that underpinned an index (the GNP) with growing power in international discourse. By the 1980s, the reform of national income accounting methods had become a feminist cause. Marilyn Waring argued first for the imputation of unpaid household labor in national income, and later for alternative indices, particularly time-use surveys. Her favored measures demanded some of the same multifactorial and intensive methods of the nutrition surveys that had served as the substrate for initial calculations of colonial national income. Between the interwar period and close of the twentieth century, methods of measuring human welfare had come full circle.

This paper will proceed in four parts. The first section chronicles the nutrition survey that amassed the data that was later used to compile Africa's first national income calculation. This section highlights the intensive, multidisciplinary methods used to measure human welfare, as well as the survey's concern for inter-personal, inter-temporal, and gendered differences in nutritional status and well-being. The next section recounts Deane's searching critique of her own national income accounts, as she struggled to reconcile the reductionism required to compile the accounts and the realities of quotidian life that such simplification obscured. The third section demonstrates how Deane's critiques were silenced with the rise of modernization theory, as national income—and its Gross National Product—became the hegemonic barometer of human welfare and human progress. In 1953 and again in 1968 almost entirely all-male committees prepared a handbook of national income accounting, the United Nations *Systems of National Accounts*. This manual advised national accountants to exclude most household and subsistence labor. Finally, the fourth section documents the broader reconsideration of the importance of non-monetary, female-dominated production activities beginning with the 1970s. Feminist activists and scholars, and particularly Waring, played a central role in the resuscitation, and radical extension, of Phyllis Deane's early postwar critiques of national income.

### **Amassing a multivariate data set: the Nyasaland Nutrition Survey**

In the years leading up to the Second World War, British Nyasaland (today's Malawi) was the site of an ambitious study meant to inform future interventions. In 1937, the UK Economic Advisory Council established a Committee on Nutrition announced its plans to

support a series of multi-disciplinary nutritional surveys in colonial holdings throughout the empire.<sup>7</sup> Nyasaland's Governor, Harold Kittermaster, made it known that he was eager to have a study conducted among his subjects, and in March 1937 the governors of the East African territories—who had been tasked with selecting the site for the first study—granted his wish.<sup>8</sup>

The Nyasaland Nutritional Survey began in three villages in Nkhotakota district in September 1938, under the leadership of Benjamin Stanley Platt. Though only in his mid-thirties, Platt was already physician and biochemist of considerable repute. He had spent the previous six years in Shanghai, where he had conducted controlled trials and published findings the links between thiamine (Vitamin B1) deficiency, rice preparation, and the symptoms of beriberi.<sup>9</sup> The survey team included another doctor, HG Fitzmaurice, who had been the medical officer stationed in Nkhotakota for two years the survey began. Fitzmaurice and his successor, WTC Berry, were tasked with examining all the adults in the three villages using Platt's 10-page-long examination form, and periodically weighing the infants and young children.<sup>10</sup> For the team's nutritionist, Platt chose Jessie Barker, a young researcher who had worked on nutrition surveys in the UK. Her job was to record the weight of all food before cooking and as consumed, and to pack samples to be sent to a laboratory in Aberdeen for biochemical analysis. Barker's nickname in the villages was *Mwadya chiyani* (Chichewa for "What have you eaten")

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<sup>7</sup> W. T. C. Berry, *Before the Wind of Change* (Suffolk, England: Halesworth Press, 1984).

<sup>8</sup> Cynthia Brantley, *Feeding Families : African Realities and British Ideas of Nutrition and Development in Early Colonial Africa* (Portsmouth, NH: Heinemann, 2002)., 4-5.

<sup>9</sup> Kenneth J. Carpenter, *Beriberi, White Rice, and Vitamin B: A Disease, a Cause, and a Cure* (University of California Press, 2000).

<sup>10</sup> Brantley, *Feeding Families.*, 7-9

due to the frequency with which she asked the question.<sup>11</sup> The team's anthropologist, Margaret Read, was to study the impact of social organization on nutrition.<sup>12</sup> Richard Kettlewell, an official in Nyasaland's Department of Agriculture, was the team's agriculturalist. The final expert on the survey team was Geoffrey Herklots, an economic biologist whom Platt had met at the University of Hong Kong.<sup>13</sup> For their part, the Africans in the three villages that were to be the focus of the study had been promised exemption from the hut tax for the duration of the study.<sup>14</sup>

Early results from this multi-disciplinary survey soon revealed the complexity of nutritional problems in Nyasaland. In Shanghai, Platt's studies of beriberi had shown that simple nutritional supplements, or slight alterations in the preparation of rice, could ameliorate biochemical deficiencies. But to Platt's surprise, medical examinations of in the three villages revealed not a single clear case of any deficiency disease—beriberi, no scurvy, no pellagra—known to be amenable to cure with a specific vitamin or mineral.<sup>15</sup> Platt's dreams of another a silver-bullet nutritional cure—along the lines of the thiamine supplementation for beriberi he helped develop in Shanghai—would go unrealized.

But the survey data was rich. Disaggregated by age and sex and collected over ten months, this trove proved sufficient to establish that although the villagers did not exhibit

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<sup>11</sup> *Ibid.*, 9.

<sup>12</sup> *Ibid.*, 4-5.

<sup>13</sup> *Ibid.*, 10

<sup>14</sup> Veronica Berry and Celia Petty, *The Nyasaland Survey Papers 1938-1943, Agriculture, Food and Health* (Academy, 1992).

<sup>15</sup> Brantley, *Feeding Families*. Page 107. Some of the clinical survey data was lost when, while Platt was driving to Zomba with survey papers in 1940, the door of his car burst open and scattered onto the muddy road and in the bushes. Berry and Petty, *The Nyasaland Survey Papers 1938-1943, Agriculture, Food and Health.*, 13.

florid deficiencies of any particular micronutrient, many suffered from what one physician on the team called “seasonal semi-starvation.” Using data from studies of Europeans, Platt assumed a basal metabolic rate (the rate of calorie usage during sleeping), as well as metabolic rates associated with a number of activities (harvesting maize, weeding, etc.) for both men and women.<sup>16</sup> Drawing upon the team’s fieldwork studies of time devoted by their subjects to specific types of labor, Platt estimated the number of calories required to meet energetic needs. Seeking to compare caloric needs to caloric consumption, Platt used Barker’s records of the amounts and kinds of food eaten in a number of the survey households as representative samples, and multiplied these tallies by the per-unit calorie figures for each kind of food that she had sent for biochemical analysis in Scotland. Platt used weighted averages of the population by age and sex to offer a single figure comparing calorie requirements to calorie consumption for each village in each month between December 1938 and September 1939 (Table 1).<sup>17</sup>

The data revealed that in each village there were months in which consumption did not meet requirements; in one village this happened in two months, in another it happened in seven months, and in a third it happened in nine of the months. The “energy deficit” could be astounding; in the maize-growing village of Jere in January 1939, a period during the growing season that demanded long days pulling weeds even as granaries containing the 1938 harvest began to run short, calorie intake was 28.5% below calorie

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<sup>16</sup> Brantley, *Feeding Families.*, 100. More evidence that Platt was not prepared to study seasonal food shortages is made evident by the timing of medical exams, which were completed before the rainy season (aka the ‘hungry season’ when maize-growing areas experienced the greatest hunger, as the previous year’s crop ran out and the labor in the fields was hardest).

<sup>17</sup> *Ibid.*, 71-73. Brantley focuses on the reductionism that went into crafting this table, noting that it does not disaggregate on the basis of age or sex. But Platt does disaggregate on the basis of age, sex, and types of labor in many other tables. His approach involved far less aggregation, than say, GDP or other measures of welfare that have become popular (see below).

<b>AVERAGE CALORIE INTAKE PER DAY PER INDIVIDUAL FOR DIFFERENT MONTHS</b>			
<b>HILL VILLAGE</b>			
<b>Month</b>	<b>Calorie Requirements</b>	<b>Calorie Intake</b>	<b>Percent Surplus</b>
December	2245	2130	-5.1
January	2208	1580	-28.5
February	2022	2006	-0.8
March	2115	1721	-18.6
April	1967	1722	-12.4
May	1573	1401	-11
June	1895	1786	-5.8
July	1966	2304	+17.2
August	1620	1617	-0.2
September	1843	1691	-8.2
<b>Average</b>	<b>1942</b>	<b>1784</b>	<b>-8.2</b>
<b>FOOTHILL VILLAGE</b>			
December	1899	1537	-19.0
January	2051	2108	+2.8
February	1823	2354	+29.2
March	1980	2229	+12.6
April	1760	2004	+13.9
May	1733	1485	-14.3
June	1610	1947	+21.0
July	1771	2958	+67.0
August	1646	2308	+40.0
September	1726	2033	17.8
<b>Average</b>	<b>1784</b>	<b>2050</b>	<b>+14.8</b>
<b>LAKE SHORE VILLAGE</b>			
December	1773	1907	+7.5
January	2001	1895	-5.3
February	1862	1567	-15.9
March	1940	2099	+8.2
April	1812	2154	+18.9
May	1753	1429	-18.5
June	1824	1234	-32.3
July	1729	1460	-15.5
August	1787	1393	-22.1
September	2053	1803	-12.2
<b>Average</b>	<b>1852</b>	<b>1733</b>	<b>-6.4</b>

*Table 1: Average calorie intake per day per individual for different months of the year. Source: The Nyasaland Survey Papers, 1938-1943: agriculture, food and health. Eds. Veronica Berry and Celia Petty. London: Academy Press, 1992, 138.*

requirements. This table demonstrated both a chronic *absolute* deficiency and acute seasonal shortages in the number of calories available to villagers.<sup>18</sup> Though the survey failed to prove its original hypothesis—that the main nutritional problems were specific micronutrient deficiencies—the methods of data collection and analysis allowed the surveyors to demonstrate inter-temporal and inter-village variations in nutritional status.

### **Phyllis Deane and the hesitant birth of a method**

Platt never published a final report on the survey. Seconded to London at the start of the war, he deposited the papers at the London School of Hygiene and Tropical Medicine without even fully analyzing the data. But the survey had a surprising legacy. The data formed the basis of the earliest “colonial national income” estimate not only for Nyasaland, but also for any colony in Africa. Though the survey was not intended for use in the Meade-Stone method of national income calculation (indeed, the 1941 paper that established this method had not yet been published when the survey was completed), an economic researcher named Phyllis Deane would later use the survey within the Meade-Stone framework.

In the years following the Second World War, the economists responsible for the development of a novel system of national income accounting sought to expand the use

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<sup>18</sup> A 1939 Colonial Office report, entitled *Nutrition in the Colonies* and authored, in large part, by Platt, concluded that the deficiencies in agricultural production led not only to known dietary deficiencies (e.g. beriberi and pellagra) but also “deficiency states which while not resulting in manifest disease prevent the full enjoyment of health.” Writing in 1944, social anthropologist Lucy Mair reported that recent expert opinion said these deficiency states exacerbated all manner of disease (including ulcers, leprosy, tuberculosis, hookworm disease, malaria), and increased the rates of maternal and infant mortality. See Lucy Philip Mair, *Welfare in the British Colonies* (New York: Royal Institute of International Affairs, 1944), 95-96.

of their new tool around the globe. In the earnest spirit of the postwar dawn, they hoped this new technology would aid in the reconstruction of Europe and in a rapid increase in living standards among colonized peoples. In many ways their dream would come to fruition; national income accounting, and especially its final aggregate measure of production (the gross national product), quickly became a universal centerpiece of economic policy.

Though it would become a staple of peacetime economic policy-making, the methods of national income accounting were devised in the midst of war. In the opening years of World War II, British planners sought a means to see, comprehensively and quickly, the progress of Britain's wartime production. In a 1940 pamphlet titled *How to Pay for the War*, John Maynard Keynes made some initial attempts to measure the magnitude of production.<sup>19</sup> That same year James Meade and Richard Stone, both students of economics at Cambridge during the 1930s, were invited to join the Central Economic Intelligence Staff of the War Cabinet Offices 'to undertake the task of measuring the national income and its composition' to aid in the war.<sup>20</sup> Britain, in a state of total mobilization, could ill afford bottlenecks and shortages and would therefore need an up-to-date and comprehensive picture of the national economy.

It was appropriate that when Stone and Meade published their novel method of national income accounting in 1941, they would choose *The Economic Journal*, a publication

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<sup>19</sup> John Maynard Keynes, *How to pay for the war: a radical plan for the Chancellor of the Exchequer* (Macmillan and Co., London, 1940).

<sup>20</sup> Austin Robinson, 'Foreword,' in Phyllis Deane, *The measurement of colonial incomes: an experiment*. (Cambridge University Press, Cambridge, 1948), v.

edited by Keynes.<sup>21</sup> Their method was well-suited to complement the analytic Keynes had articulated in 1936 in *The General Theory of Employment, Interest and Money*.<sup>22</sup> Keynes had argued that fiscal and monetary policy could (and should) be used to increase effective demand in the face of economic downturns. This approach demanded accurate, comprehensive, and recent macroeconomic statistics for analysis and policy response. Stone and Meade's method was, then, a product of Keynes' prescriptions for both the Great Depression and war mobilization.

Stone and Meade's method of national income accounting was not without forerunners. Political economists including William Petty (1664)<sup>23</sup> and François Quesnay (1758) had devised various statistical methods of measuring aggregate production or income.<sup>24</sup> During the early decades of the twentieth century other economists and statisticians in the U.S. and Europe, including Bowley and Stamp (1927),<sup>25</sup> Clark (1932),<sup>26</sup> Kuznets (1934),<sup>27</sup> and Lindahl, Dahlgren and Kock (1937)<sup>28</sup> had published their own studies of national income. Yet Meade and Stone's method would become a global standard, in part because of its perceived rigor. As a form of triple-entry accounting, the method's

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<sup>21</sup> James Meade and Richard Stone, "The Construction of Tables of National Income, Expenditure, Savings and Investment," *The Economic Journal* 51, no. 202/203 (June 1941).

<sup>22</sup> John Maynard Keynes, *The General Theory of Employment, Interest and Money* (Kessinger Publishing, Whitefish, 1936).

<sup>23</sup> Sir William Petty, *Verbum Sapienti* (1664, published 1691), in *The economic writings of Sir William Petty, Vol. 1*, Charles Henry Hull, ed. (Cambridge University Press, Cambridge, 1899).

<sup>24</sup> François Quesnay, *Tableau économique*, 1758, French National Archives, Paris.

<sup>25</sup> Arthur Lyon Bowley and Josiah Stamp, 'The national income, 1924,' *Journal of the Royal Statistical Society*, 90, 2 (1927), 376-378.

<sup>26</sup> Colin Clark, *The national income, 1924-31* (Macmillan & Co., London, 1932).

<sup>27</sup> Simon Kuznets, 'National income, 1929-1932,' *National bureau of economic research* (June 1934): 1-12.

<sup>28</sup> E.R. Lindahl, E. Dahlgren, K. Kock, eds., *National income of Sweden, 1861-1930*, (King & Son, London, 1937).

formal precision lent it the appearance of accuracy.<sup>29</sup> While other measures of the national income involved the aggregation of *either* production figures *or* income statistics, Meade and Stone demanded equality in the final tally of three separate columns: income, output, *and* expenditure. In their 1941 article, Meade and Stone presented their work as a tool not only for economic planning in a single country, but also as a universal method capable of comparing nations and imperial holdings around the globe.<sup>30</sup> The exigencies of war aligned with their long-term ambitions.

In 1941 Stone, Meade, and colleague Austin Robinson had approached the National Institute for Economic and Social Research (NIESR), an independent economic research institute in London established in 1938 with funding from Rockefeller and other foundations, with a proposal to fund ‘a suitable research worker who might attempt the task of measuring certain colonial incomes.’<sup>31</sup> The NIESR accepted the proposal. For this position the economists chose Phyllis Deane, a 23-year old recent graduate in history and economics from the University of Glasgow. The wartime mobilization had generated a demand for trained economists, lowering (at least temporarily) the barriers women faced in securing important posts in economic research institutions: another young female

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<sup>29</sup> Part of the power of Meade and Stone’s method was phenomenological; multiple-entry booking has long presented particularly convincing facts by drawing ‘on the rule-bound system of arithmetic’ to appear to ‘guarantee the accuracy of the details it recorded.’ Mary Poovey, *A History of the Modern Fact : Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: University of Chicago Press, 1998), 30.

<sup>30</sup> Meade and Stone, ‘The construction of tables of national income,’ 216.

<sup>31</sup> Austin Robinson, ‘Foreword,’ in Phyllis Deane, *The measurement of colonial incomes: an experiment*. (Cambridge University Press, Cambridge, 1948), v.

investigator, Phyllis Ady, held a fellowship from the Colonial Research Council to measure the national income of the Gold Coast.<sup>32</sup>

For Deane the task was to attempt to measure ‘certain colonial incomes,’ first using sources available in London and, later, by conducting fieldwork. The project was, according to Austin Robinson (who, along with Richard Stone and (later) W. Arthur Lewis, would serve on Deane’s Advisory Committee), ‘an experiment’ in the application of the techniques of national income accounting to the British colonies.<sup>33</sup>

Deane and her advisors chose Northern Rhodesia (today’s Zambia) and Nyasaland (today’s Malawi) for the study; Jamaica was added later. Robinson wrote that the team chose Northern Rhodesia because ‘we thought, perhaps wrongly, that it was a relatively simple territory with which to start.’ He did not elaborate on why this territory was particularly ‘simple,’ though he mentioned he had worked on studies of the territory and knew where to find relevant statistical material. Robinson explained that Nyasaland had been chosen precisely because of the availability of Platt’s survey data, which could be used to estimate subsistence agricultural production as well as native incomes and consumption.<sup>34</sup>

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<sup>32</sup> M Fortes, RW Steel, and P Ady, “Ashanti Survey, 1945-46: An Experiment in Social Research,” *The Geographic Journal* 110, no. 4/6 (December 1947): 149–77.

<sup>33</sup> *Ibid.*, v.

<sup>34</sup> Austin Robinson, ‘Foreword,’ in Phyllis Deane, *The measurement of colonial incomes: an experiment*. (Cambridge University Press, Cambridge, 1948), vii-viii. Robinson also explained that the geographic contiguity of Northern Rhodesia and Nyasaland also seemed to present the opportunity for cross-checking individual estimates. Aside from the survey data, Deane relied on data provided in written correspondence with officials and settlers in the colonies.

Deane compiled initial estimates of the “national” income of these territories from her desk in London.<sup>35</sup> In the manuscript documenting this initial desk study, published in 1948, Deane expressed profound uncertainty about the production boundary in territories where the great majority of production was never exchanged for money. In her searching critiques of the Meade-Stone method, the tenet most in need of revision was the notion that goods produced within a household and not exchanged on the market should be excluded. This practice was fairly well established in earlier methods of national income accounting.<sup>36</sup> But even in industrialized nations this exclusion of female household production was not without controversy. Historian Nancy Folbre has chronicled the nineteenth-century transformation of married women in the U.S. census from productive laborers to economic ‘dependents.’ Women’s groups and a few male statisticians tried (unsuccessfully) to convince others that married women working in family enterprises or providing domestic services were ‘occupied,’ and that their classification as dependents helped justify lower wages.<sup>37</sup>

By the time Phyllis Deane began to publish her thoughts on the production boundary in the late 1940s, economic statisticians in Scandinavia and the United States had already sought to measure the value of ‘housewives’ services,’ often for the purpose of inclusion

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<sup>35</sup> A seemingly arbitrary substitution of ‘colony’ and ‘nation’ is evident throughout Deane’s writings on national income accounting in colonial settings.

<sup>36</sup> As the economist Arthur Cecil Pigou famously quipped in 1920, ‘if a man marries his housekeeper or his cook, the national dividend is diminished.’ See Arthur Cecil Pigou, *The Economics of Welfare* (London: MacMillan and Co, 1920).

<sup>37</sup> Much of the impetus for this change came from the mid-nineteenth century ‘cult of domesticity’ (which banished the logic of economic interest from the moral realm of the home), the rise in male labor outside the household, and the insistence of male trade unionists on their roles as the family’s sole breadwinners. Nancy Folbre, “The Unproductive Housewife: Her Evolution in Nineteenth-Century Economic Thought,” *Signs* 16, no. 3 (1991): 463–84.

in national accounts.<sup>38</sup> And at around the same time as Deane's first major publication in 1953, an estimate of national income in Nigeria by Alan Prest and Ian Stewart used an entirely different production boundary in which *all* intra-household transfers were included in national income. Perhaps because their proposal seemed such a radical departure from contemporary methods, it was not widely adopted.<sup>39</sup>

Though Deane did not extend the production boundary as far as Prest and Stewart, she insisted that the then-standard rule of excluding most of women's household labor was untenable in Nyasaland and Northern Rhodesia. 'Most of the labour for the basic unit of production, the family, is supplied by the woman. She does most of the recurrent agricultural work, most of the planting, the weeding, the fetching and carrying, the routine harvest work and the preparation of food.'<sup>40</sup> Deane knew that including subsistence agricultural production in national income would be fairly uncontroversial, but she wondered how far should the boundary be expanded. 'Which of the activities of African women, for instance, in cultivating the soil, in grinding the corn, in cooking and otherwise preparing the food, in collecting firewood or wild foods, and so on, should be included as part of economic activities to be measured, and which should be classified as "uneconomic activities"?'<sup>41</sup> To include some of these 'non-monetary' activities, while including others, appeared to her entirely arbitrary. Deane's solution to this problem appeared, in *The measurement of colonial national incomes* (1948), to be determined less

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<sup>38</sup> Luisell Goldschmidt-Clermont, "Economic Measurement of Non-Market Household Activities: Is It Useful and Feasible?," *International Labour Review* 129, no. 3 (1990): 279–99.

<sup>39</sup> Alan Richmond Prest and Ian G. Stewart, *The National Income of Nigeria, 1950-51* (His Majesty's Stationary Office, 1953).

<sup>40</sup> Phyllis Deane, *Colonial Social Accounting*. (Cambridge [Eng.]: University Press, 1953).

<sup>41</sup> Phyllis Deane, *The Measurement of Colonial Incomes: An Experiment* (Cambridge: Cambridge University Press, 1948), 20-21.

by principle than by the availability of data. ‘Practical considerations, dominated by the type of material available, determine the answers to many questions of this kind.’ Deane did find a way circumvent the dearth of time-use survey data in her estimation of the value of the grinding of corn. For this estimate she used the difference between the market prices for ground corn meal and unground ears of corn. But she chose not to impute prices for the collection of firewood or the cooking of food in rural areas because, even with the Nyasaland survey papers, it was ‘impossible to evaluate the time taken’ for these activities using the data at her disposal.<sup>42</sup>

But Deane was clearly unsatisfied with this production boundary. In order to expand it, she spent years collecting data on the activities that had not been included in her initial estimates. As early as 1946, writing in a publication of the U.S. National Bureau of Economic Research, Deane explained, ‘If expediency is to determine the line between services that are and are not to be included, field research must be done. At present it seems illogical to exclude the value of women's services in collecting firewood, preparing and cooking food, and so on, yet include their work on the land.’<sup>43</sup>

Deane spent eighteen months in 1946-47 in Northern Rhodesia and Nyasaland, collecting and compiling the datasets she thought necessary to estimate national income with a more inclusive production boundary. In doing this, she worked closely with the Rhodes-Livingstone Institute (RLI), a group of British anthropologists based in Livingstone,

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<sup>42</sup> Ibid., 20-21.

<sup>43</sup> Phyllis Deane, “Measuring National Income in Colonial Territories,” in *Studies in Income and Wealth* (National Bureau on Economic Research, 1946), 145–74., 155.

Northern Rhodesia.<sup>44</sup> First she adapted for her own use a village budget survey first developed by RLI anthropologist Godfrey Wilson.<sup>45</sup> Then she used this survey at RLI field sites in Nyasaland (led by Clyde Mitchell) and Northern Rhodesia (led by Elizabeth Colson and John Barnes). In each locale Deane conducted village budget surveys of her own design. Though she wished she could recapitulate the methodology of the 1938 Nutrition Survey, Deane acknowledged that she possessed neither the staff nor the time to collect data with the same intensity.<sup>46</sup> Still, she believed that by interviewing a random sample of villagers about production and consumption habits, she could amass information sufficient to make “basic and reliable (though not accurate)” estimates.<sup>47</sup>

The result of this fieldwork was a book, published in 1953 and entitled *Colonial Social Accounting*, in which Deane used an expanded production boundary. Whereas her 1948 publication had not included estimates for firewood collection, her 1953 accounts did.<sup>48</sup> Deane also included small-scale village industrial output by non-specialists (for instance, beer production by people whose were not primarily brewers). Deane did not place much faith in the accuracy of these estimates, which required ‘putting quantitative

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<sup>44</sup> Researchers affiliated with the Rhodes-Livingstone Institute sought to understand the impact of impact of broader political and economic forces on village life. See Harri Englund, “Extreme Poverty and Existential Obligations: Beyond Morality in the Anthropology of Africa?,” *Social Analysis: The International Journal of Social and Cultural Practice* 52, no. 3 (Winter 2008): 33–50., p. 44.

<sup>45</sup> Phyllis Deane, “National Income: Problems in Social Accounting in Central Africa,” *Human Problems in British Central Africa: The Rhodes-Livingstone Journal* 5 (1947): 24–43., 34.

<sup>46</sup> Phyllis Deane, “Problems of Surveying Village Economies,” *Human Problems in British Central Africa: The Rhodes-Livingstone Journal* 8 (1949): 42–49., 44.

<sup>47</sup> Phyllis Deane, “Village Economic Surveying in Central Africa,” Colonial Research Fellowships, Plans and Reports of Miss PM Deane, October 28, 1948, CO 927/17/5, UK National Archives.

<sup>48</sup> Deane, *Colonial Social Accounting*., 281.

interpretations on qualitative observations.’<sup>49</sup> But after her fieldwork, she felt certain enough of the economic importance of these activities to include them in the national income. Deane hoped that her estimates would be used to guide economic policies, with two ends in mind. “We start,” Deane explained, “from the assumption that for all communities an *increase in the volume* of economic goods and services produced, and an *improvement in its distribution* over time and among persons and groups, are important ends of economic policy.”<sup>50</sup> Deane’s passion for fieldwork was driven by a conviction that in order to address distributional concerns, the economic contributions of all producers and consumers, including subsistence producers and women, should be counted.

### **National income reigns supreme**

One of the most remarkable facets of Deane’s decisions is how widely they diverged from those made by her adviser, Richard Stone. To see why Deane’s work was such a problem for Stone, it is first necessary to understand his aims in the context of the postwar moment. By the war’s end, the impending demobilization of millions of soldiers and idling of productive capacity as well as costs derived from the destruction wrought by war made economic growth in Europe seem imperative. Yet growth was also a need keenly felt in the Colonial Office. Labor strikes roiled the British West Indies and the Northern Rhodesian Copperbelt during the 1930s, while the calls for self-determination became a rallying point for burgeoning nationalist movements throughout the Empire. In response, the Colonial Office adopted the rhetoric of ‘development’ as the postwar

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<sup>49</sup> Ibid., 262.

<sup>50</sup> Ibid., 120.

apology for imperial rule.<sup>51</sup> Stone and Robinson argued that the development project required the comprehensive map of the colonial economy that the triple-entry method provided.<sup>52</sup> Furthermore, Meade and Stone claimed their accounting system provided a tool not only for economic planning in a single country, but also for comparing nations and imperial holdings around the globe.<sup>53</sup>

In the postwar international agencies that propounded global standards for an array of political and economic activities, Stone secured a platform through which to promote his tool. In 1945, he chaired a Subcommittee on National Income Statistics of the League of Nations Committee of Statistical Experts. The subcommittee's memo, authored by Stone and published in 1947, pointed to a rapidly growing literature on national income accounting in 'economically less developed countries,' including studies in India and Palestine as well as Deane's work in the British West Indies and British central Africa. The memo promoted the triple-entry system of Stone and Meade (1941) over the single-entry methods used by other economists.<sup>54</sup> In 1953, Stone oversaw the United Nations Statistical Office publication of the first *System of National Accounts and Supporting*

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<sup>51</sup> Frederick Cooper, *Africa Since 1940: The Past of the Present* (New York: Cambridge University Press, 2002); Stephen Constantine, *The Making of British Colonial Development Policy, 1914-1940* (Totowa, N.J.: F. Cass, 1984).

<sup>52</sup> In the years following the war, the Cambridge economists would proselytize the virtues of national income accounting. When Deane's preliminary report was published in 1948, Austin Robinson's foreword was far less uncertain in its conclusions about the utility and moral necessity of colonial accounting than was the author. 'To my mind,' Robinson explained 'an estimate of the national income is the necessary beginning of a serious economic study of any country... What do we really know today about the standards of life of the millions in the colonial empire for whose welfare we are responsible?' Austin Robinson, 'Foreword,' p. x.

<sup>53</sup> Meade and Stone, "The Construction of Tables of National Income, Expenditure, Savings and Investment.", 216.

<sup>54</sup> "Measurement of National Income and the Construction of National Accounts: Report of the Sub-Committee on National Income Statistics of the League of Nations Committee of Statistical Experts," *Studies and Reports on Statistical Methods* (Geneva: United Nations, 1947).

*Tables (SNA)*, which provided detailed standards for national accounts and made special reference to nonmonetary transactions in ‘underdeveloped’ settings.<sup>55</sup>

Because Stone’s committee sought a universal method, the production boundary set out in the 1953 *SNA* differed sharply from the one Deane used in *Colonial social accounting*. The *SNA* explained that its production boundary sought to include ‘household activities that are clearly akin to those which are usually undertaken in enterprises and the exclusion of those for which the analogy with enterprises becomes tenuous.’<sup>56</sup> This boundary included ‘primary production’—that is, ‘agriculture, forestry, hunting, fishing, mining and quarrying’—whether exchanged on the market or used for a household’s own consumption. But the *SNA* diverged most significantly from Deane’s production boundary in its exclusion of ‘all non-primary production performed by producers outside of their own trades and consumed by themselves.’ This meant that much of the beer production and small-scale manufacture (e.g. weaving of mats) included in Deane’s estimates was excluded from estimates prepared according to the *SNA*.<sup>57</sup> To Stone and the members of the Expert Groups devising the *SNA*, the imperative for international comparability of national income estimates demanded strict limitations on the production boundary.<sup>58</sup>

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<sup>55</sup> “A System of National Accounts and Supporting Tables: Report Prepared by a Group of National Income Experts Appointed by the Secretary-General” (New York: United Nations, 1953).

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*, 5.

<sup>58</sup> In later writings, Richard and Giovanna Stone offered a more pragmatic reason for the *SNA*’s exclusion of “household and amateur activities.” They explained, “This treatment is not a matter of principle but convenience...Attempts to extend the production boundary by valuing household and amateur activities come up against an almost complete lack of information.” This is the same problem that Deane had encountered in making her own estimates of colonial national income,

One important reason for the invisibility of women's work in international standards of national income was the almost complete absence of women on the expert committees who devised them. The nine-member 1947 Sub-Committee on National Income Statistics at the League of Nations had included one woman, Hildegard Kneeland. The five-person Expert Group responsible for the 1953 *SNA* included no women at all. And the ten members of the Expert Group charged with revising the *SNA* in 1968 included only one woman, Margaret Mód.<sup>59</sup> Thus, the combined membership of the first three groups tasked with deciding on postwar national income methods was 8.3 percent female, 91.7 percent male (see Table 2).

The only two women on these committees were intensely interested in the epistemological blindness of economic metrics to women's work. Since the late 1920s, from her post at the United States Department of Agriculture, Hildegard Kneeland had published time-surveys of women's work.<sup>60</sup> For her part, Margaret Mód's research used household surveys to measure inequality.<sup>61</sup> She was the principal author of a 1966 Expert

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and was the impetus for her field studies in Nyasaland and Northern Rhodesia. But whereas Deane (and later, Marilyn Waring) saw this lack of data as a fundamental problem in national income that demanded immediate remedy, Richard and Giovanna Stone presented it more as a curiosity to be solved at some later date. Richard Stone and Giovanna Stone, *National Income and Expenditure* (London: Bowes and Bowes, 1966), 30-31.

<sup>59</sup> International Monetary Fund, *System of National Accounts, 1993* (International Monetary Fund, 1993), xlv-xlv.

<sup>60</sup> Hildegard Kneeland, "Women on Farms Average Sixty-Three Hours Work Weekly in Survey of Seven Hundred Homes," in *US Department of Agriculture, Yearbook of Agriculture, 1928* (Washington, D.C.: Government Printing Office, 1929); Hildegard Kneeland, "Is the Modern Housewife a Lady of Leisure?," *Survey* 62 (1929).

<sup>61</sup> Margaret Mód, "Social Stratification in Hungary: A Survey of 15,000 Households Carried out in 1963" (6th World Congress of Sociology, Evian-les-Bains, France, 1966).

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**1947 Sub-Committee on National Income Statistics of the League of Nations  
Committee of Statistical Experts:**

Richard Stone (Department of Applied Economics, University of Cambridge, UK)  
Horace P. Brown (Commonwealth Bureau of Census and Statistics, Australia)  
Johannes B.D. Derksen (Central Bureau of Statistics, the Netherlands)  
Claude M. Isbister (Department of Trade and Commerce, Canada)  
George Jaszi (Department of Commerce, USA)  
*Hildegarde Kneeland* (Department of Agriculture, USA)  
Raul Ortiz Mena (National Development Bank, Mexico)  
Arne Skaug (Director of Statistics, Norway)  
Julius Wyler (New School for Social Research, USA)

**1953 Expert Group, *System of National Accounts and Supporting Tables:***

Richard Stone (Department of Applied Economics, University of Cambridge, UK)  
Loreto M. Dominguez (Pan American Union)  
Kurt Hansen (Ministry of Finance, Denmark)  
George Jaszi (Department of Commerce, USA)  
Moni Mohan Mukherjee (Ministry of Finance, India)

**1968 Expert Group, *System of National Accounts and Supporting Tables:***

Richard Stone (Department of Applied Economics, University of Cambridge, UK)  
Odd Aukrust (Bureau of Statistics, Norway)  
Bernardo Ferran (Central Bank, Venezuela)  
Earl Hicks (Statistics Division, International Monetary Fund Research Department)  
George Jaszi (Commerce Department, USA)  
Jacques D. Mayer (Central Statistical Office, France)  
Michael Donal McCarthy (Central Statistics Office, Ireland)  
*Margaret A. Mód* (Central Statistical Office, Hungary)  
Kees Oomens (Central Bureau of Statistics, the Netherlands)  
S.G. Tiwari (Planning Commission, India)

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*Table 2: Membership of committees devising international standards for national income  
(female members in italics).*

Group report on income distribution statistics.<sup>62</sup> Mód frequently argued that national statistical offices should publish both a ‘national account—picturing the economy’ and a ‘social account—representing society.’ While the national account would allow for the calculation of the gross national product, the social account would demonstrate—both “in value terms” and “in their actual natural appearance”—a variety of demographic, manpower and social statistics, disaggregated “according to income-types and population groups.”<sup>63</sup>

It was no coincidence, then, that the 1968 *SNA*—which, unlike the 1953 *SNA*, included Mód—proposed a more expansive production boundary. The 1953 report claimed that a ‘comprehensive system’ that took into account household labor and the distribution of income might be preferable, but argued that a system was ‘hardly possible at the present time.’<sup>64</sup> The 1953 *SNA* production boundary excluded the non-primary products (small manufactures, e.g. beer, mats) of primary producers (e.g. farmers). But the 1968 revision allowed for the inclusion of non-monetary building and construction work, as well as

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<sup>62</sup> “United Nation Statistical Commission, Report of the 14th Session” (New York: United Nations, 1966), Box S-1003-0030, Folder 1, United Nations Archive and Records Management Section., 17.

<sup>63</sup> Margaret A. Mod, “Relation between National and Social Accounting,” *Econometrica: Journal of the Econometric Society* 39, no. 4 (July 1971): 129–31.

<sup>64</sup> The 1953 *SNA* argued it was impractical to devise a more complex and comprehensive means of measuring national income: ‘It is possible to conceive of these related systems being put together into a still more comprehensive system for individual countries and ultimately of the linking of these systems...The actual construction of such a comprehensive accounting system is hardly possible at the present time. Nor, given the practical needs and resources, should it be the immediate objective of economic statisticians engaged in this field.’ “System of National Accounts (1953).”

‘home processing of primary commodities such as brewing beer, making furniture, and spinning or weaving textiles.’<sup>65</sup>

In the years after 1953, it was not altogether clear which production boundary—Stone’s restrictive one or Deane’s more expansive one—would prove more popular among national accountants. During the 1960s, as statisticians in newly independent African states began to compile their own national income accounts, the status of non-monetary output remained unsettled. Morten Jerven has documented how in Julius Nyerere’s Tanzania, national income methods were revised after independence to include hut construction and rent.<sup>66</sup> In Zambia, another newly independent nation led by a leftist leader (Kenneth Kaunda) with an ideological commitment to the nation’s peasantry, post-independence national income accounts included more categories of non-monetary production.<sup>67</sup> Even though excluding such production might have allowed for the appearance of higher post-independence rates of growth (if, as development economists predicted, non-monetary production gave way to the monetary sector), these governments found greater ideological consistency in rendering of the peasantry bureaucratically visible.<sup>68</sup>

At the same time, maximizing GNP growth was, to many politicians and officials in new nations, the singular and indisputable aim of economic policy. Writing of the pressing

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<sup>65</sup> Derek Blades, “Subsistence Activities in the National Accounts of Development Countries with Special Reference to Latin America,” *Review of Income and Wealth* 21, no. 4 (December 1975): 391–410., 394.

<sup>66</sup> Jerven, “Users and Producers of African Income.”, 180.

<sup>67</sup> *Ibid.*, 178.

<sup>68</sup> *Ibid.*, p 180.

material needs of an impoverished Kenyan populace shortly after independence, Finance Minister Tom Mboya explained, ‘The only permanent solution to all of these problems rests on rapid growth.’<sup>69</sup> Even Julius Nyerere struggled to square his commitment to egalitarianism with the imperative for growth: ‘We have to increase our production of goods if we are to enable everyone to live in conditions of human dignity...It is necessary to stress this because the production of wealth for its own sake is not a socialist purpose.’<sup>70</sup> Economist and social democrat Gunnar Myrdal had worked to expand Sweden’s welfare state provision, but in writing about poorer countries he claimed that social programs should await further increases in resources.<sup>71</sup> While serving as Director of Census and Statistics in Malawi in 1968, a recent Oxford graduate named Derek Blades published the first national income estimates for the new nation. In his report he equated aggregate measures of national income with human welfare. ‘The simplest indicator of economic progress of a community,’ explained Blades’ report, ‘is the movement of real income per head of the population. This is not an unqualified measure of improvements in the standard of living for the average inhabitant of a country but has been found a useful guide.’<sup>72</sup> Thus, even in Malawi, once the site of a globally recognized, multi-disciplinary study of nutrition and welfare, a single measure of aggregate production had come to be understood as an indicator of human flourishing.

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<sup>69</sup> Daniel Speich, “The Kenyan Style of ‘African Socialism’: Developmental Knowledge Claims and the Explanatory Limits of the Cold War,” *Diplomatic History* 33, no. 3 (2009): s449–66.

<sup>70</sup> Julius K. (Julius Kambarage) Nyerere, *Freedom and Socialism. Uhuru Na Ujamaa; a Selection from Writings and Speeches, 1965-1967* (New York: Oxford University Press, 1968)., 9.

<sup>71</sup> Gunnar Myrdal, *Rich Lands and Poor : The Road to World Prosperity* (New York: Harper & Row, 1957).

<sup>72</sup> “Malawi National Accounts Report, 1964-67” (Zomba: Government of Malawi, 1968), Malawi National Archives., 7.

## **The feminist critique of national income's methods and uses**

This consensus on the primacy of growth in the monetary sector began to break in the early 1970s, as the production boundary began face serious critique both inside and outside the community of economic statisticians. Powerful voices and agencies in international development called for a renewed focus on non-monetary production in general, and unpaid female labor in particular. While these calls would not immediately refashion international standards for national income accounting, they would lead a number of governments to reconsider production boundaries in their own statistics.

This change in accounting methods coincided with a crescendo in criticism of capital-intensive development projects. Dudley Seers argued that economic growth and social development had been conflated, and called for a shift in focus from aggregate production to measures of “poverty, unemployment, and inequality.”<sup>73</sup> Influenced by a commission chaired by Lester Pearson that chronicled the disappointing outcomes of the previous two decades of World Bank investments, World Bank President Robert McNamara called for a new focus on ‘basic needs.’<sup>74</sup> In 1972, the Bank opened a Nutrition Unit devoted to research and recommendations on the problems of malnutrition.<sup>75</sup> In a September 1973 speech in Nairobi, McNamara called for a renewed

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<sup>73</sup> Dudley Seers, “What Are We Trying to Measure?” (World Conference of the Society for International Development, New Delhi, India, 1969).

<sup>74</sup> Lester B Pearson, *Partners in Development: Report of the Commission on International Development* (New York: Praeger Publishers, 1969).

<sup>75</sup> Devesh Kapur, John P. Lewis, and Richard C. Webb, *The World Bank: Its First Half Century*, 2 Volume set edition (Washington, D.C: Brookings Institution Press, 1997)., 253-254.

focus on helping ‘the developing countries...to increase the productivity of the small farmer.’<sup>76</sup>

Some of the most radical critiques of regnant economic frameworks concerned the systematic devaluation of women’s work. A popular feminist call for ‘wages for housework’ began with the Power of Women Collective in Italy and spread throughout Europe and North America. Silvia Federici argued that women’s work of social reproduction subsidized the costs of officially recognized, measured, and mostly male “economic” production.<sup>77</sup> The Neo-Marxist economic anthropologist Claude Meillassoux argued that this epistemic blindness to the work of social reproduction was part of a longer history of exploitation of (heavily female) subsistence labor under colonial capitalism.<sup>78</sup> Danish economist Ester Boserup contended that women were invisible in economic indices and this blindness led to developmental projects that adversely affected women’s lives.<sup>79</sup>

In this milieu, the exclusion of non-monetary production in national income accounts came under heightened scrutiny. Under the direction of Derek Blades (who had left Malawi in 1972), the Organization for Economic Cooperation and Development (OECD) Development Centre undertook a global survey of the treatment of non-monetary

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<sup>76</sup> Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World*, With a New preface by the author edition (Princeton, N.J: Princeton University Press, 2011); Kapur, Lewis, and Webb, *The World Bank*.

<sup>77</sup> Silvia Federici, *Wages Against Housework*, Power of Women Collective (Falling Wall Press, 1975).

<sup>78</sup> Claude Meillassoux, *Maidens, Meal and Money: Capitalism and the Domestic Community* (Cambridge: Cambridge University Press, 1981).

<sup>79</sup> Ester Boserup, *Woman’s Role in Economic Development* (London: George, Allen & Unwin Ltd., 1970).

activities in the national accounts of developing countries.<sup>80</sup> Of the 65 national statistical offices that responded to the OECD's questionnaire, 42 included non-monetary building; 28 included non-monetary handicrafts; and 25 included non-monetary food processing. Yet the *SNA* (even in its revised form) continued to exclude many important non-monetary activities. This exclusion had global consequences, as the United Nations aimed to ensure through its technical assistance programs that "the developing countries" used their "limited material and skill resources" to produce "consistent and balanced systems of statistical information promoted by the United Nations standards."<sup>81</sup> And indeed, many governments followed the UN's lead in excluding important forms of unpaid labor from national accounts. For instance, Blades' survey found that only 6 out of 65 respondents included non-monetary water portage. This activity that had not been included in the 1968 *SNA* production boundary, even as it remained a ubiquitous and time-consuming activity in the lives of hundreds of millions of rural women.<sup>82</sup>

Feminists believed that the inclusion of domestic labor in national income statistics would have political consequences. For some advocates, the imputation of prices for unpaid domestic labor in the national income carried the useful implication that such activities *should* be paid. This ideological congruence between increased statistical

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<sup>80</sup> In this study, a 'developing country' was any country that received development aid from the members of the Development Assistance Committee (DAC) of the OECD. It included countries in Southern Europe while excluding poorer nations in the 'communist bloc.' Derek W. Blades, *Non-Monetary (subsistence) Activities in the National Accounts of Developing Countries* (Development Centre, Organisation for Economic Co-operation and Development, 1975).

<sup>81</sup> "Draft Report to the Economic and Social Council on the Fifteenth Session of the Statistical Commission, Held at the UN Headquarters from 28 February to 8 March 1968" (Statistical Commission, March 5, 1968), Box S-1003-0030, Folder 1, United Nations Archive and Records Management Section., 3.

<sup>82</sup> Blades, "Subsistence Activities.", 396.

visibility of women's work and remuneration for such labor was most clearly articulated by the Wages for Housework movement. As Judith Ramirez, a prominent Canadian activist in this movement, declared in 1981, 'The failure of the world's economies to recognize the economic worth of women's work has devastating consequences. Women receive only one-tenth of the world's income though we perform two-thirds of the world's work.'<sup>83</sup>

Yet the leaders of Wages for Housework rarely critiqued the *SNA* specifically. Such a critique would come in the late 1980s, from a feminist scholar named Marilyn Waring. After a decade-long tenure as a Member of Parliament in New Zealand (1975-1984), where she had served as Chair of the Public Expenditure Committee, Waring left politics to pursue a doctorate in political economy. In her revised dissertation, she claimed her time in government had convinced her that "the UNSNA is an essential tool of the male economic system...When international reports and writers refer to women as statistically or economically invisible, it is the UNSNA that has made it so."<sup>84</sup> Her remedy for the invisibility of women in economic indices was the wholesale imputation of monetary values to "unpaid work, productive and reproductive," so as to "make this work visible, influencing policies and concepts, and questioning values."<sup>85</sup>

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<sup>83</sup> See, for instance, Judith Ramirez, "The Global Kitchen: A Speech on the Value of Housework Debate," (Speech, Inter-University Consortium for International Social Development, July 27, 1981).

<sup>84</sup> Marilyn Waring, *Counting for Nothing: What Men Value and What Women Are Worth*, 2nd edition (Toronto ; Buffalo: University of Toronto Press, Scholarly Publishing Division, 1999). Pages 6, 39.

<sup>85</sup> *Ibid.* Pages 5-6.

In its 1993 revision, the authors of the *SNA* felt compelled to answer the critiques in Waring's book, which had received plaudits from the economist John Kenneth Galbraith and feminist Gloria Steinem.<sup>86</sup> The authors of the *SNA* rebuffed Waring's contention that unpaid domestic work should be included in national income estimates. But as a compromise, the authors suggested that household production of 'domestic and personal services for own final consumption' (e.g. 'cleaning,' 'preparation and serving of meals,' 'care, training and instruction of children,' 'care of sick, infirm, or old people') might be included in a 'satellite account.' The satellite account would have its own separate, expanded production boundary, which could include domestic work.<sup>87</sup> By bracketing off such production, the satellite account would not threaten the use of historical statistics of national income to determine growth over time.<sup>88</sup>

Many feminists sought to ensure that such satellite accounts became a regular feature of national income accounting. In 1995 the International Women Count Network (a group coordinated by the Wages for Housework Campaign), amassed the endorsements of 1,200 NGOs on a petition calling on governments to measure the value of the unpaid

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<sup>86</sup> Joann Vanek, former director of social statistics at the United Nations, believes Waring's influence stemmed from the detail of her critique: "She demystified the national accounts. Many feminists had taken pot shots at national accounts, but Marilyn went into the body of it and disaggregated the specific assumptions that were made and how that really shaped what ended up being a bias against women." See Langeland Terje, "Women Unaccounted for in Global Economy Proves Waring Influence," *Bloomberg*, June 18, 2013, <http://www.bloomberg.com/news/articles/2016-05-10/the-six-hour-workday-works-in-europe-what-about-america>.

<sup>87</sup> "System of National Accounts, 1993: Prepared under the Auspices of the Inter-Secretariat Working Group in National Accounts," 1993. Paragraphs 6.19, 6.20 and 21.46, 21.47.

<sup>88</sup> Luisella Goldschmidt-Clermont and Elisabetta Pagnossin-Aligisakis, 'Households' non-SNA production: labour time, value of labour and of product, and contribution to extended private consumption,' *Review of income and wealth* 45, 4 (1999), pp. 519-529.

work of women in satellite accounts.<sup>89</sup> “Only when women’s unwaged work is acknowledged and valued will women’s demands and needs be valued,” declared Ruth Todasco, a member of the network.<sup>90</sup>

But Waring wanted to do more than add an appendix to national income estimates. In the 1988 edition of *Counting for nothing*, she admitted that in arguing for imputing values to women’s productive and reproductive labor, she was not simply hoping to improve national income as a hegemonic measure. Instead, she hoped that by demonstrating women’s heretofore uncounted and overwhelming contribution to national income, she would render the existing system of accounting “totally dysfunctional.”<sup>91</sup> She wished not to tinker with the GDP, but rather to overthrow it.

By the late 1990s, Waring recanted her own recommendation to expand the production boundary. In the second edition of *Counting for Nothing*, published in 1999, Waring added an introduction in which she more articulated her concerns about the political implications of adding women’s unpaid work to national income, a measure that treated the production of armaments and the clearance of forests as contributions to human welfare:

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<sup>89</sup> Waring, *Counting for Nothing*.

<sup>90</sup> Ibid. Page xxvii. Today many of the feminists who advocated for ‘wages for housework’ in the 1970s are calling instead for a ‘basic citizens’ income’—an unconditional, non-means-tested payment from the state to every man, woman and child. This idea remains on the fringes of political debate in the rich world (though the UK’s Green party included it in their election policies during the 2015 election, and Swiss citizens will vote on whether to implement a basic income in a 2016 referendum) but has figured more prominently in political debates in South Africa and Namibia. See James Ferguson, *Give a Man a Fish: Reflections on the New Politics of Distribution* (Durham ; London: Duke University Press Books, 2015).

<sup>91</sup> Waring, *Counting for Nothing*., 233.

Do we mean that we are comfortable with the care of children and the elderly, and our community-service work, sitting in the national accounting framework alongside...the production and storage of military weapons? What happens if the visibility we crave for policy purposes is established in such a framework, where all transactions are 'goods,' where there is no deficit side to the accounts, where whether or not an exchange is 'good or worthy' is immaterial? Won't the great God of Growth still rule our lives?<sup>92</sup>

By advocating the inclusion of women's unpaid work in national income, she feared that she and other feminists risked advancing the idea that GDP maximization should remain the central focus of economic policy. Waring sought a new epistemology, one that did not convert every measure into monetary units. She sought instead to enthrone a new measure of welfare: time. Time was "the common denominator of exchange" and "the one investment we all have to make." It was, she argued, a far more useful piece of information than the single aggregate of GDP. Time-use surveys could demonstrate, among other things, "which sex gets the menial, boring, low-status, and unpaid invisible work," as well as "the interdependence of the activities of household members, and of how paid work, caring work, housework, community work, leisure, and time spent on personal care are interrelated."<sup>93</sup> Analysis of this data would show, for instance, how cuts in social spending increased women's burdens of work, or lessened their opportunities for education and leisure. The data would, in short, allow for a less ambiguous and contested evaluation of the benefit or harm wrought by policy than the imputation of values to unpaid labor.

Though she did not mention the history of social science research methods, Waring was calling for a return to some of the surveys used by Margaret Read during the Nyasaland

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<sup>92</sup> Ibid., xxxi.

<sup>93</sup> Ibid.

Nutrition Survey and the social anthropologists of the Rhodes-Livingstone Institute. Waring's favored measures recapitulated the multifactorial and intensive methods of the nutrition surveys that had served as the substrate for Phyllis Deane's calculations of colonial national income. Women's work figured prominently in both Deane's critique of the production boundary and Waring's more totalizing denunciation of the primacy of national income. Both Deane and Waring considered intensive field research crucial to rendering women's work legible to policymakers.

## **Conclusion**

The definition of 'economic production' may be buried in the explanatory notes of dry government accounts and UN reports, but the esoteric façade masks a heated and ongoing political debate. In the latest iteration of the *SNA*, written in 2008, the authors try to respond to feminist critics. In defending the continued exclusion of many forms of non-monetary production from the production boundary, the authors contended that such activities do not significantly impact inflation, deflation, or other 'disequilibria' within the economy. Therefore, they asserted, national income accounts that include large non-monetary flows were less useful for analyzing such phenomena. As a compromise, the production boundary in the 2008 *SNA* included all production of *goods* (whether sold or not) but excluded the production of *services* for own use within the household.<sup>94</sup> Because

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<sup>94</sup> "System of National Accounts, 2008, Prepared by European Communities, International Monetary Fund, Organization for Economic Co-Operation and Development, United Nations, World Bank" (New York, 2009), 6-7. The exceptions to the exclusion of services produced for household consumption are: 'services produced by employing paid domestic staff' and 'the own-account production of housing services by owner-occupiers.' Perhaps because of the controversy surrounding the 1968 *SNA* revisions, the 1993 and 2008 revisions were not attributed to a specific "Expert Group," but rather to an "Inter-Secretariat Working Group on National Accounts" that ostensibly coordinated the input of a number of international organizations, including the Statistical Office of the European Communities (Eurostat), the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD), the United

this definition continues to exclude most ‘personal and domestic services,’ it has not satisfied critics.<sup>95</sup>

Yet even today, the epistemology of national income stands in stark contrast to that of the interwar Nyasaland Nutrition Survey. Platt’s survey methodology demonstrated, in numerous tables, differences in food consumption according to age and sex and locality. Other tables demonstrated stark inter-temporal differences in food consumption, thereby drawing attention to what Berry called “seasonal semi-starvation”—and what Malawians still call “hungry season” (*nyengo njala*). National income, on the other hand, is a technology of aggregation. By summing production into a single annual index, it obscures unequal inter-personal and seasonal distributions of production and consumption. The use of Nutrition Survey data for Africa’s earliest national income calculation seems ironic once we recognize the vastly different ways of seeing the world that each permits.

Calls to include expand the production boundary to include “women’s work” have moved from feminist activism into the mainstream of economic commentary. This is nowhere clearer than in the April 30, 2016 edition of *The Economist* magazine, which called for “the inclusion of unpaid work in the home, such as caring for relatives,” in “a new

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Nations Statistical Division and regional commissions of the United Nations Secretariat, and the World Bank. Still, the ISWGNA did have “senior level representatives” from each organization. For the 2008 SNA, these were: Pieter Everaers and Laurs Norlund (Eurostat); Carol S. Carson and Robert Edwards (IMF); Enrico Giovannini (OECD), Willem de Vries and Paul Cheung (United Nations Statistical Division); and Shaida Badiie (World Bank). p 1.

<sup>95</sup> See, for instance, “International Labour Office: Statistics of Work, Unemployment and Labour Underutilization” (19th International Conference of Labour Statisticians, Geneva, October 2, 2013), 10.

metric” which they termed “GDP-plus.”<sup>96</sup> Other prominent voices in economics have long shared Waring’s more fundamental concerns about the conflation of aggregate production with human welfare. In 1990, in an effort “to shift the focus of development economics from national income accounting to people centered policies,” Mahbub ul Haq and Amartya Sen launched the United Nations Development Programme’s first Human Development Report. Their new measure of human welfare, the Human Development Index (HDI), was a composite of life expectancy, adult literacy, school enrollment and a logarithmic transformation of per-capita income.<sup>97</sup> The 1995 Human Development Report introduced the Gender Development Index (GDI), which used an “inequality aversion penalty” that decreased HDI scores for gender disparities in any of the categories of the HDI.<sup>98</sup>

Yet whether GDP is to be revised or surpassed, favored measures of human welfare today demand greater investments in the kinds of field surveys that arose in economic anthropology and nutrition research during the interwar era. Even when the *SNA* has allowed for the inclusion of more forms of household and domestic labor, the dearth of foreign assistance for data collection in poor countries keeps many from adding these activities to their national accounts. “There’s never the technical or logistical capacity to actually collect the data,” lamented Waring in a 2013 interview. “So it’s a fairly cynical

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<sup>96</sup> “How to Measure Prosperity: GDP Is a Bad Gauge of Material Well-Being. Time for a Fresh Approach,” *The Economist*, May 30, 2016.

<sup>97</sup> Sakiko Fukuda-Parr, “The Human Development Paradigm: Operationalizing Sen’s Ideas on Capabilities,” *Feminist Economics* 9, no. 2–3 (January 2003): 301–17.

<sup>98</sup> S Klasen, “UNDP’s Gender-Related Measures: Some Problems and Possible Solutions,” *Journal of Human Development* 7, no. 2 (July 2006): 243–74.

move.”<sup>99</sup> Feminist visions for the future of economic statistics demand a return to social statistics that predate the globalization of national income.

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<sup>99</sup> Terje, “Women Unaccounted for in Global Economy Proves Waring Influence.”