SOCIOLOGY

The Work Burden of Women

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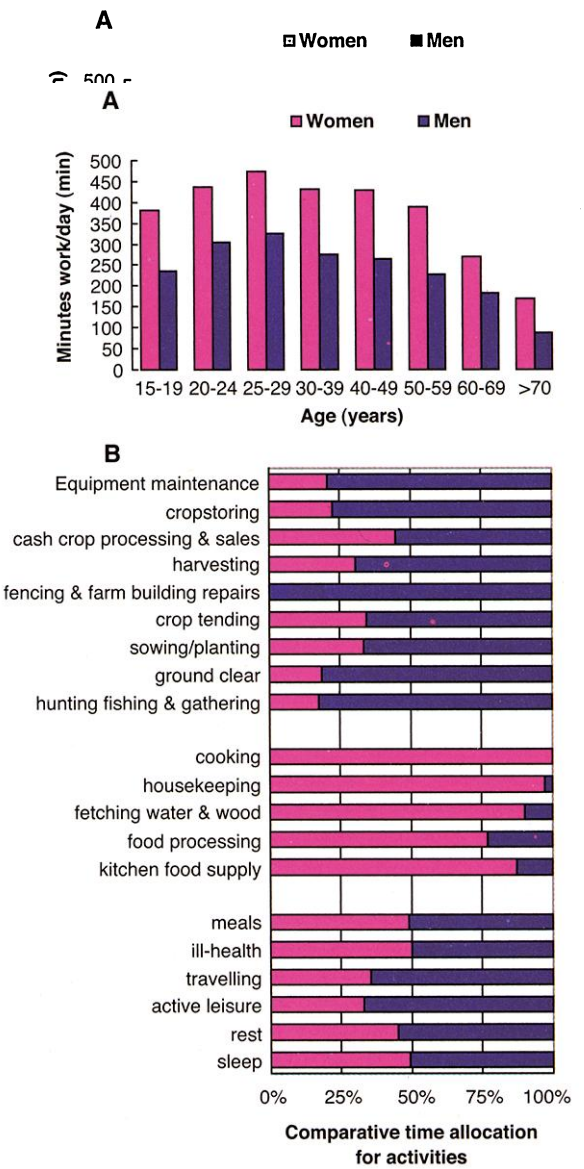
Societies abound where women work both in the home and out of the home, whereas male cohabitants work only out of the home (*1*). However, objective data have long been lacking to document the consequences of this phenomenon. This is of concern in starvation-threatened populations because social, economic, and nutritional planning does not account for the unequal distribution of work between the genders. We performed initial studies on the work practices of women in the Central African Republic and Nepal using recall diaries combined with direct observations. These data (*2*) suggested that women with dual working roles consistently spent 2 to 3 more hours per day engaged in work-related activities than men. With this preliminary information, we undertook to comprehensively address the hypothesis that women with dual working roles perform more work than male cohabitants by performing agricultural work above home-maintenance duties.

To objectively and precisely measure physical activity is monumental. Laboratory-based measures of physical activity are not representative of the free-living state, and questionnaires, personal recall, and intermittent observation are unreliable and nonspecific and may depend on subjects' literacy (*3*). The preferred method for objectively and accurately documenting free-living activity is to have trained investigators follow and directly record subjects' activities (*4*). This is highly labor-intensive and expensive. Nonetheless, this was our approach.

We studied 3352 individuals living in three rural areas of the Ivory Coast geographically separated by more than 400 km: the Northern Savane, West Forest. and East Forest regions. The study period encompassed the full spectrum of agricultural intensities and activities. Agricultural practices in Northern Savane included hunting, crop tending, and harvesting; in West Forest, food gathering, tree felling, sowing, and planting; and in East Forest, crop tending, harvesting, and land clearing. Data for 1787 women and 1565 men were recorded over 7 days. A trained enumerator would observe a subject for all waking hours and every 15 min assign one of 200 numeric codes to represent the subject's activity for that period. Activities for each individual were recorded separately and independently of cohabitants' activities. Data were compiled for the 22,397 person-days and 23 million data points.

The answer to our question was unequivocal. The total work burden of women exceeded that of men by 2.9 hours/day. These effects occurred for all age ranges (Fig. 1A). Women worked both in and out of the home, whereas men worked almost exclusively out of the home (Fig. 1B). Women spent less time at leisure and non–work-related traveling than men, but, interestingly, sleep duration was similar for the genders (Fig. 1B). The gender disparity in work practices was echoed by independent data we gathered on the domestic supply of firewood and water, which are manual, physically demanding activities that men might be expected to participate in. Women in Northern Savane, West Forest, and East Forest provided 96, 98, and 94% of firewood and 94, 95, and 92% of water, respectively. Thus, women who fulfill dual working roles in and out of the home, irrespective of the intensity of agricultural and/or domestic tasks, consistently work for more hours than men and spend less time in leisure.

The implications of this study are that the economic contributions, recreational needs, and energy requirements of women with dual working roles have remained unidentified. For example, we estimated that women in this study contributed 39% to labor force (out-of-the-home) economic activity and had energy needs that were 30% greater than World Health Organization/Food and Agriculture Organization standards suggest (*5*, *6*). An early step in providing adequate economic and nutritional support to eliminate the food insecurity and undernutrition that an estimated 800 million individuals experience (*7*) is to improve estimates of need. Where women perform dual working roles, the sociological, economic, and nutritional impact cannot be ignored.



time allocation for Ivory Coast women and men, for various activities. Each horizontal line represents the comparative contribution of women (red) and men (blue) for the stated activity.

References and Notes

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8. This research was in part supported by NIH grant DK 56650.

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