Adaptive responses in inheritance practices: sex ratio imbalance can drive higher investments in daughters and cultural changes to benefit women

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Families are the basic unit of human society. However, families are composed of individuals who do not have perfectly overlapping self interests. Marriage markets, differential mortality, differences in reproductive life spans, and different access to economic opportunity beyond the family unit result in strategic differences in investment and allocation of resources among family members. Increased access to economic opportunity for young women has repercussions in childhood investment in daughters by their parents, in the timing of family formation and in fertility decline. This paper uses heterochronic analyses of testamentary allocations of property to women in Massachusetts and California to argue that declines in sex ratio (male to female ratio) and in fertility can force families to change allocation preferences and thus drive cultural changes beneficial to the economic status of women. Extremely low sex ratios and lucrative economic prospects for women coalesced in early adoption of modern married women's property laws in mid 19<sup>th</sup> century California. Long periods of warfare (depleting sons) and lower numbers of surviving offspring in 18<sup>th</sup> century Massachusetts resulted in increasing proportions of families with only female heirs whose ability to both hold property and marry (and thus produce grandchildren) was severely constrained under contemporary law. Cultural changes facilitating property ownership by married women and the allocation of such property by parents may have been driven by impact of depletions of sons on family inheritance strategies. I use multivariate analyses of 412 probated testaments from 1690, 1790 and 1890 Suffolk County, Massachusetts and 1800 wills from Yolo and Sacramento Counties, California to suggest a model wherein family lineage and property considerations under impacts of low sex ratio confront cultural constraints on women's economic participation and result in popular pressure for cultural change.

In Massachusetts, between 1690 and 1890 the number of children surviving at a parent's death steadily declined from approximately 4.7 to less than 3. Sex ratio of surviving children declined to less than 90 (90 sons per 100 daughters) in the 1790s, but rose to 97 in the 1890s. Married men decreased their overall allocations to children to the benefit of surviving wives who then passed the vast majority of their property to children. Daughters' shares of estates increased most rapidly between 1690 and 1790 and then continued to increase at a slower rate through the 1890s at which point allocations to daughters as a group exceeded that of sons. In California, rural or more urban locale was irrelevant to the equitability of distributions among children; the wealthy and the married were more equitable among their children. In the 1890s, there were few differences in the behavior of testators from the two different states in the allocations to spouse versus children or among children. Over the following 9 decades, equitability among all children and between the sexes was the common pattern; however, periods of high female allocation appear to be coincident with war and maybe associated with either low sex ratios or perceptions of low sex ratios.

It has been recognized that economic opportunity for women has large impacts on demographic processes through delay of marriage, delay of first childbirth, and earlier stopping behavior. This historical research on the interface of intergenerational resource transmission within families suggests that short term demographic phenomena such as low sex ratios of adult males resulting from war or differential migration can pressure families to effect cultural changes that facilitate further economic opportunities for women and thus instigate longer term demographic change.