

# Systems of living arrangements in the United States: 1850–2021

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**Background.** Over the past 170 years the United States (US) has undergone radical demographic, structural and cultural change. This change has been reflected in – and is in turn a reflection of – changes in the prevailing system of living arrangements (Ruggles, 1994). The 19<sup>th</sup> and early 20<sup>th</sup> century were characterised by a high prevalence of “extended” households with multiple generations, kin, and non-kin living together. The 20<sup>th</sup> century witnessed an era of “nuclearization”, during which the nuclear household – especially the dual-parent family with children – was by far the most prevalent living arrangement (Ruggles, 1988; 1994), while living alone at older ages increased rapidly (Kramarow, 1995). Since the 1980s, US households have increasingly diversified from the nuclear standard (Bengtson, 2001; Sironi & Furstenberg, 2012), in what can be viewed as a shift towards a “post-nuclear” household structure. Sociological and demographic research has documented the transition from extended to nuclear households, attributing it to varying degrees to changes in life expectancy, occupational structure, socio-demographic trends, and culture (Furstenberg, 2019; Ruggles, 1994; 2007). Relatively less well-documented is the shift towards a post-nuclear household structure, characterised by a revived importance of multigenerational bonds (Bengtson, 2001). Empirically, existing research has examined differences in living arrangements in cross-national comparison (Esteve & Reher, 2021; Furstenberg, 2019), but this approach does not allow for identifying and explaining historical trends (Zaidi & Morgan, 2017). In the US, longitudinal studies documenting household changes since the mid-19<sup>th</sup> century have focussed on specific demographic groups, such as older adults (Ruggles, 2007) and children (Pilkauskas et al., 2020). What is missing is a wholistic outlook on the shifting systems of living arrangements from a population perspective. In providing such outlook, it is important to account not only for changes in life expectancy, but also for the age composition of the population. For example, the increased prevalence of living alone may be heavily attributable to the increased share of older adults in the population. In this paper we conceptualise and document three systems of living arrangements from 1850 to 2021: an “extended”, a “nuclear”, and a “post-nuclear” system. Empirically, we provide the first wholistic picture of living arrangements from the perspective of individuals, classifying them broadly into alone, nuclear, and non-nuclear households, with more detailed sub-categories. We document the contribution of different age groups to changes in living arrangements. The long time span of available data allows us to describe trends historically, from both the period and the cohort perspective.

**Data and Methods.** We use data from the Integrated Public Use Microdata Series (IPUMS), a collection of census samples spanning the period 1850–2021. IPUMS provides comparable indicators of living arrangements at individual level for each census year in the US (Ruggles & Brower, 2003). We classify

living arrangements as shown in Table 1, with three broad categories (alone, nuclear, and non-nuclear) and nine sub-categories of interest. First, we calculate percentages of people in each living arrangement by age, sex, and census year. Applying the Sullivan (1971) method to life tables from historical sources (Bell & Miller, 2001; Haines, 1994) and the Human Mortality Database, we adjust for changes in mortality and obtain an indicator of life expectancy at birth by living arrangement over time, in years and percentage of total life expectancy. We use age decomposition to understand the contribution of different age groups to changes in each living arrangement. Second, we select cohorts born in the 1850s, 1880s, 1910s, and 1940s, and describe their living arrangements from age 0 to age 80.

**Findings.** Figure 1 shows changes in our indicator of life expectancy at birth and percentage of life expectancy at birth in each broad category of living arrangement, by sex. Figure 2 decomposes the changes in the percentage of life expectancy for the nuclear and non-nuclear categories. Both figures provide a period description of the evolution of living arrangements over time. Living alone was rare until the 1940s and rose fast between 1940 and 1980, then reaching a plateau. The age decomposition (not shown here) indicates the increase in living alone was concentrated among women aged 60 and above. Nuclear households, which were previously as common as non-nuclear households, experienced a dramatic rise between 1940 and 1970 for all age groups. They then began to decline, mainly as a result of the fall in dual-parent households among younger adults (20–29). Non-nuclear households were common in the 19<sup>th</sup> century and steadily declined with the decline of mixed (kin and non-kin) living arrangements. The rebound in the non-nuclear household since the 1980s is mainly attributable to kin-only non-nuclear households among children (0–19), in line with Pilkauskas et al. (2020). Figure 3 presents a cohort perspective for females. Among women born in the 1850s, early life was spent in either nuclear or extended families, and adult life was spent with children well into later life, shifting from nuclear to extended households as the children had partners and children of their own. Among women born in the 1910s, living with children ended for most by age 50, and living alone began with the death of the partner. Compared to the 1910s cohort, the 1940s cohort spent less time living alone in line with increased male survival.

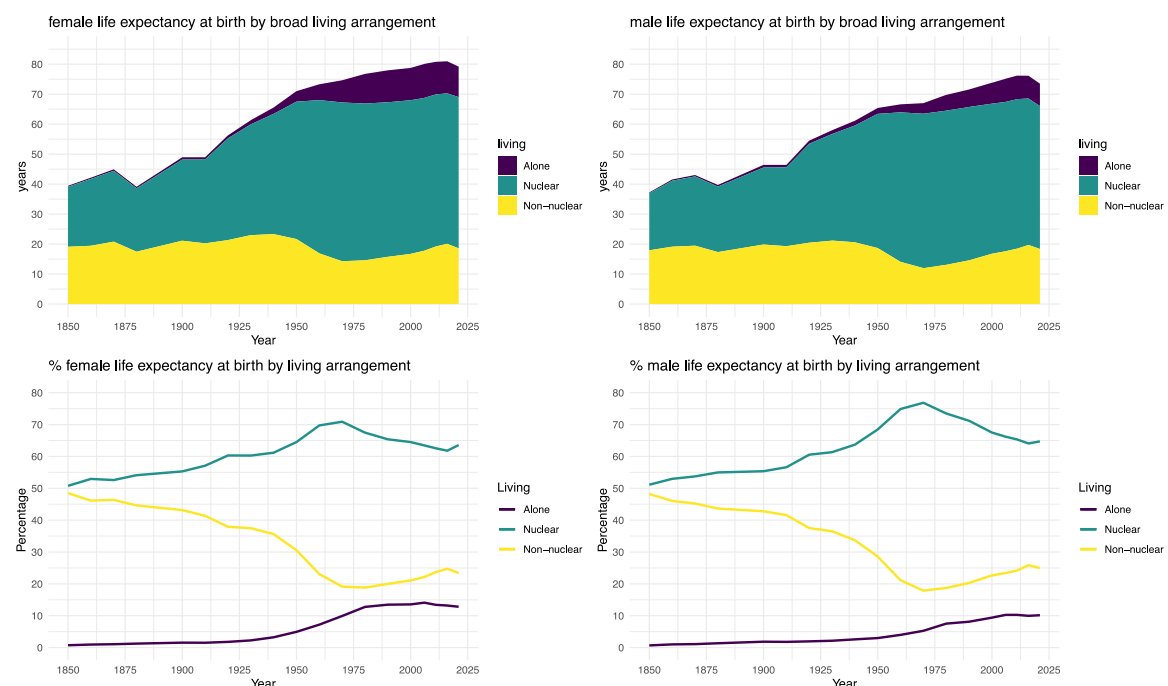
**Discussion.** We identify three eras characterised by different systems of living arrangements. In the “extended family” era (1850–1940), most life years at population level were spent living with parents and/or children, with or without other kin and non-kin (in kin-only or mixed households). This era saw the gradual decline in mixed households as lodgers and live-in maids became less common, and the slow rise of the couple in mid- and later life, as children increasingly moved out of the parental home. This is in line with urbanization and the shift from an agrarian to an industrial and service economy (Ruggles, 2007). The “nuclear” era (1940–1980) saw a rapid and large expansion in nuclear families, mainly through the dual-parent model, and a decline in extended kin-only households. Young couples increasingly formed their own families away from the parental household, leading to large increase in

the proportion of older people living alone after becoming widowed, especially noticeable among women born in the 1910s (Figure 3). Since 1980, a new “post-nuclear” era has witnessed the decline in the dual-parent nuclear household as children are more likely to live either with a single parent, or as part of an extended kin-only households (usually with grandparents) (Pilkauskas et al., 2020). A series of economic crises such as the Great Recession has contributed to the increased diversification of family forms, and increased survival to older ages (especially for men) has meant that it is very common to live with a co-resident partner well into later life, partially offsetting the previous expansion in living alone. As part of this project, we document these changes in a sociological and historical perspective with reference to period and cohort changes in structural, demographic and cultural factors. As such, our results will provide a much needed basis for theoretical development and empirical studies on households and families in the US.

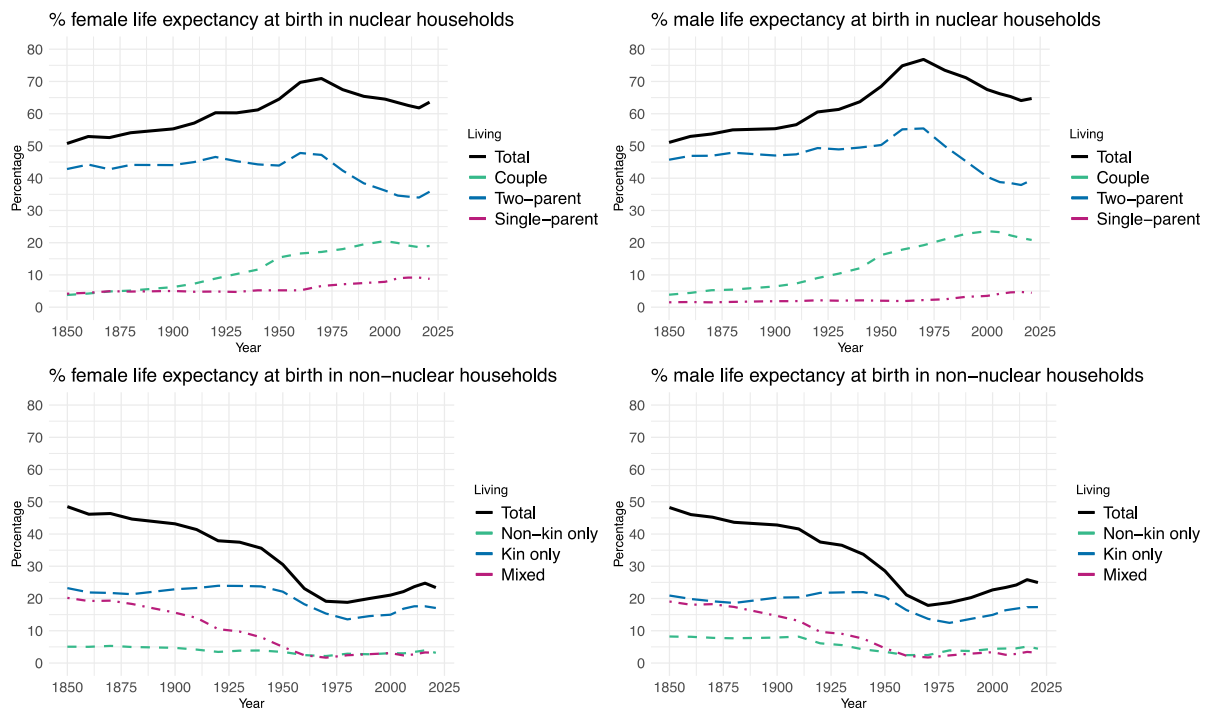
**Table 1.** Classification of living arrangements.

Category	Sub-category
I. Alone	a. alone
	b. couple
	c. dual-parent with children (as parent)
II. Nuclear	d. dual-parent with children (as child)
	e. single-parent with children (as parent)
	f. single-parent with children (as child)
III. Non-nuclear	g. extended family (kin-related only)
	h. mixed (kin and non-kin together)
	i. non-kin only

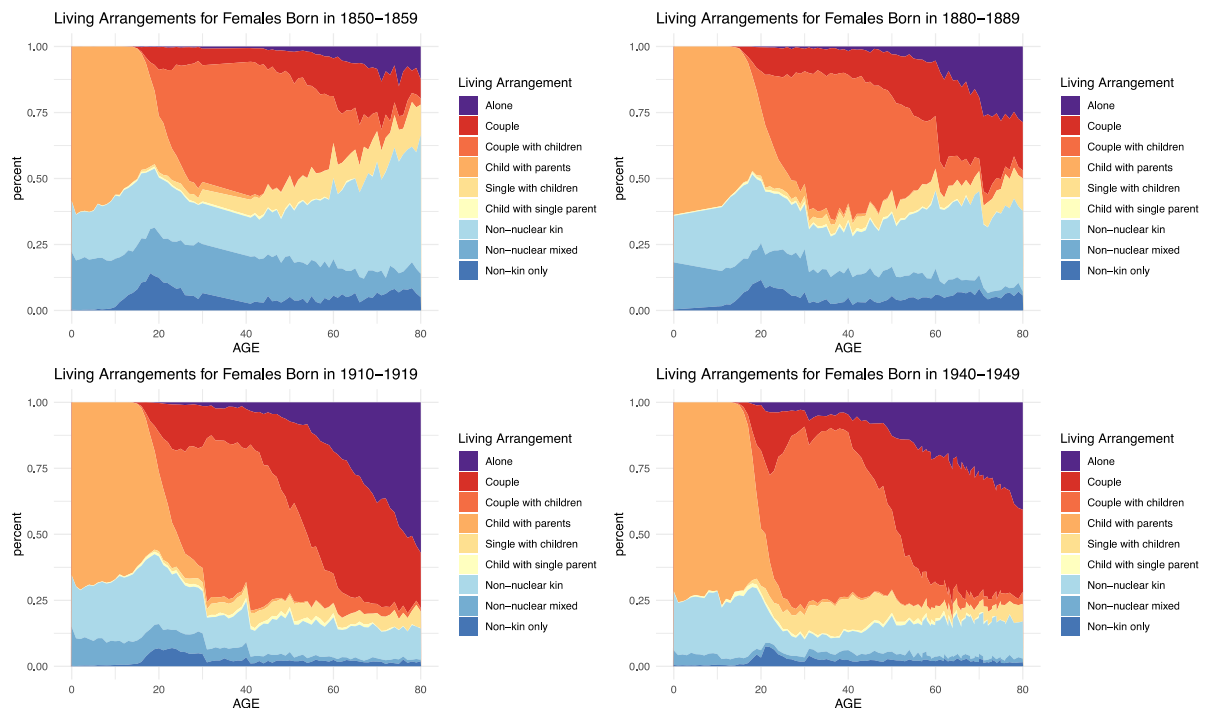
**Figure 1.** Female and male life expectancy at birth by broad living arrangement (in years and as % of total) 1850-2021.



**Figure 2.** Female and male life expectancy at birth in nuclear and non-nuclear households as % of total, 1850-2021.



**Figure 3.** Percentage of women in each living arrangement by age by birth cohort (1850s, 1890s, 1910s, 1940s).



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