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WORK AND LEISURE IN AMERICA

GIUSEPPE RUGGERI

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INTRODUCTION

In early September 1964 a taxi drove me from the bus station in Schenectady, New York, to the building that housed the Phi Epsilon Pi fraternity located on the campus of Union College. I was the foreign exchange student in the Fulbright Scholarship Program selected by the fraternity.

“Hello? Hello?” I called out as I entered the white-painted building and stood in the middle of the large living room.

“Who are you?” a solitary voice replied. When I explained the reason for my presence, he asked, “What is your name?”

“In Italian it is Giuseppe, in English it would be Joseph.”

He smiled. “You are an American now, your name is Joe.” From that day on I have been known as Joe by everyone I met in the United States and in Canada where I now reside.

As the cool breeze of fall announced the advent of fluffy snow, I felt a refreshing sense of freedom that I had never experienced before. In the classroom, the kindness and guidance of professor Abbot, Chairman of the Economics Department, made me realize that in America the future was in my hands. On campus, competitiveness filled the air but it was tempered with a sense of solidarity, at least within the fraternity. As the only Catholic in a large fraternity of Jewish students, I never felt isolated or out of place. Not once was I denied help when I asked, and I will forever remember the friendship of my roommate Richard Anker, and of Bob Knobelman and Steven Abelove. I treasure the loving concern of Rose and her friend, the two African-American ladies who prepared the meals at the fraternity. They cooked fish for me every Friday to ensure I did not sin, although I would have preferred the steaks available to everyone else. I hold dear the first Thanksgiving dinner at the open house offered by the college president, the warmth of Richard’s mother when she invited me for an “Italian” meal, the kindness of Professor Fox’s family who invited me to their home during the March break when I was alone in the fraternity house, and the generosity of my soccer teammates’ wives who prepared sandwiches for our post-game snack. I was a foreigner, I was on a temporary student visa, but I never felt a stranger.

That was then.

I left the United States in 1968, going first to Mexico and then to Canada. Even from afar my experience of those four years cemented a strong emotional bond to a country that had welcomed me with open arms, and I have kept abreast of U.S. economic, political, and social developments ever since. I have watched America being transformed by internal and external forces and have often wondered how those forces combined to generate change. Now retired, I have had the time to reflect on those questions at leisure. My main interest is in the interaction between technological change and future economic and social trends in industrialized countries, exemplified by the United States. While economists generally focus on various elements of a country's economic performance, I believe technological change not only affects economic transformation but is inextricably intertwined with changes in institutions and value systems. I also believe that past developments are a useful guide for the understanding of future trends.

Guided by these principles, my research is directed at two questions. What may the future have in store for the United States with regard to technological advance, economic growth, and employment? Which insights may be gleaned from an examination of the economic and institutional developments of the past 70 years? The result is this book divided into three parts: first a statistical record comparing 1950 and 2019, second a review of the major institutional changes during that period, and finally an overview of future prospects.

Part I contains five chapters that present a summary of the statistical record of the United States from 1950 and 2019 with respect to changes in the major demographic components, labor force and employment, hours of work, wages and income distribution, and patterns of consumer spending. The statistical record shows that the United States population more than doubled from 1950-2019. In the first two decades population growth was driven by natural growth, but later on it relied to an increasing degree on immigration. Through this evolving demographic process, the United States population has become more diversified ethnically and with respect to religious affiliation, and has turned older and more educated. There was a geographic realignment as the South and the West gained population at the expense of the North and the Midwest, and a steady trend towards greater urbanization in response to a major exodus of young people from rural communities to cities and their suburbs. The love affair of Americans with marriage, prevalent in 1950, subsided over time. Families accounted for a

declining share of households, became smaller and more varied in structure as the share of couples-families declined, and shrank in size.

Demographic developments contributed to a re-structuring of the US labor market. The influx of women in the labor force re-balanced the gender composition of employment and re-arranged the industrial structure by promoting the expansion of certain sectors, in particular leisure and hospitality. At the same time the rising educational attainment of the labor force altered the occupational distribution of employment and promoted a revival of self-employment as human capital is transforming employees into worker-capitalists. Globalization, the changing industrial structure, and evolving attitudes toward organized labor have led to a rapid decline in the degree of unionization in the private sector.

Despite rapid technological change, increases in productivity, transformations in the gender composition of the labor force, smaller families, higher education, and structural shifts in the economy, the allocation of time has remained remarkably stable over close to three-quarters of a century. This stability is noted for both genders. The fundamental change occurred in the allocation of time between market (paid work and time for education) and non-market work (home production and volunteerism) activities by gender. As women flocked to the labor force, their time allocated to market work rose and that dedicated to non-market work declined. The opposite trend occurred among men, who spent more time on home production (goods and services produced for family consumption) as their participation rate declined.

With respect to wages, income, and wealth, we can distinguish the 1950s and 1960s from the last forty years. During the earlier period productivity gains were shared equally between labor and capital, real wages experienced broad gains and economic growth delivered lower income inequality and declining poverty rates. The opposite trends emerged in the past forty years. The paths of productivity growth and labor compensation diverged, the growth of real wages stalled, rising education premiums widened wage differentials, and all this has led to widening inequality of income and wealth. The trend towards greater economic equality that characterized the first three post-war decades has been replaced over the past forty years by increasing economic, social, and political polarization.

As families became smaller and increasingly more prosperous, the distribution of consumer spending among various categories was altered. The share of spending on necessities (food, clothing, housing, transportation and health care) remained

constant at 87 percent, but the ranking changed. Homes and cars became the main symbols of conspicuous consumption, they doubled in size, and included double garages to shelter the prized automobiles. As a result, spending on housing in 2019 held the first place, followed by transportation. Food, which in 1950 accounted for the lion's share of consumer spending, by 2019 moved to the third spot. Within food spending there was a large shift from food prepared at home to food consumed away from home. A major decline in spending on clothing was offset by a near doubling of the share of health care spending, which reached almost 10 percent in 2019.

These changes did not take place in a vacuum, but were associated with adjustments in institutions and values. My exploration of the major institutional and behavioral changes over the past 70 years is presented in the three chapters that make up Part II.

Perhaps the most significant aspect of life in 1950s America was the existence of a set of coordinated institutions that promoted the doctrine of America as a bastion against the Godlessness of communism, a beacon for all freedom-loving people, the defender of democracy, and a New Jerusalem for all Christians. This institutional structure which included the family, religious organizations, schools, and labor unions operated under the principle of solidarity, offered avenues of mutual support, strengthened social cohesion, and provided a common moral compass. The principle of solidarity, in turn, led to an economic structure where productivity gains were shared by labor and capital in a manner that generated a large and mobile middle class. Though the stability provided by these institutions came with a high price tag in terms of repression of individual freedom, intolerance, and racial injustice, the prosperity they helped create set in motion a process of transformation that over time would reshape America's value system.

The religious landscape has changed drastically over the past 70 years and this transformation has exerted a profound effect on American life. Personal morality has been increasingly interpreted in terms of sexual orientation practices and women's reproductive rights (the deviation from heterosexuality and abortion), and the social gospel has been replaced by the prosperity gospel. Christianity in America has increasingly taken the form of apologist for capitalism and self-interest cloaked in a Bible. At the same time the family has been fragmented into a variety of forms, an increasing share of which are transient and fluid, and no longer

can offer a stable moral compass to children. In the labor market the shift from solidarity to individualism was aided by the demise of the labor unions and the end of labor as a social movement. Finally, the dispersion of information has destroyed the objectivity in the reporting of news and has replaced it with a form of subjectivism that allows individuals to re-define factual evidence to coincide with their own preferences and personal interests.

The influx of women in the labor force not only stimulated economic growth by easing potential labor supply constraints and helping create new industries, but also produced significant social and political changes as women became financially independent and acquired more political clout. Women's greater economic and political power combined with technological developments and rising prosperity led to new family structures and the transformation of social leisure into individual free time activities. Productivity growth and rising wages allowed most American families to rise beyond the satisfaction of basic needs. An increasing share of current consumption was financed by borrowing from the future. The expansion of private and public debt together with industrial restructuring from a goods-producing to a services-producing economy was accompanied by the rise of the financial sector. The financialization of the economy has created an increasingly larger sector dedicated to the creation and manipulation of complex financial instruments backed by money created out of nothing. Finally, over the past half a century, economic growth has led to rising inequalities of income and wealth, associated in large part with differentials in educational achievement. Economic polarization has been translated into a degree of political polarization that may prevent timely and effective responses to national crises.

In the four chapters that make up Part III, the lessons learned from the economic, institutional, and value changes over the past seventy years are used as the foundations for exploring the path of potential future trends.

One of the defining features of American life over the past 70 years is the remarkable stability in the allocation of time. The number of weekly hours devoted to total work in 2019, including time spent on the acquisition of human capital, was virtually equal to those in 1950, and a small increase in the time spent on the satisfaction of physical needs was offset by a small decrease in leisure. This stability occurred during a period marked by productivity growth, rising living standards, and major social changes, and is at odds with Keynes' prediction (1932)

of a 15-hour work week within a couple of decades. This stability of working hours was caused by two factors. First, as productivity led to rising wages, American workers showed a preference for material goods over additional leisure, and this preference led to rising consumer spending, a trend that was reinforced by the masses of women entering the labor force and the new habit of financing current purchases with borrowed funds. Second, the prevailing technology involved a high degree of complementarity between machines and workers. As total spending increased, so did the demand for labor and the level employment.

Another defining feature is the transformation of the American economy from managed to unconstrained capitalism. The economic structure of the 1950s and 1960s involved the experiment of a free-market economy whose behavior was constrained by international agreements, strong government intervention in research and development and in the functioning of the financial sector. At the same time, the principle of solidarity was strengthened by the protection of workers' rights achieved through strong unions and collective bargaining, the support of a well-coordinated institutional framework, and the guidance of a stable moral compass. This experiment generated high growth rates of productivity and income and rising wages, promoted economic and social mobility, and led to declining poverty rates and lower concentration of income and wealth. During the second experiment, which covers the past fifty years, the constraints on the operation of the free-market were released, the institutions of solidarity marginalized, with solidarity replaced by individualism. The role of education was transformed from the great equalizer to a major driver of divergence, and the government has become the enabler of capital accumulation and economic polarization. The results of this experiment have been lower productivity growth, stagnant wages for most of the lower-wage workers, increased concentration of income and wealth, and political polarization.

The future path of the US economy—employment as well as output—depends on the factors that determine long-term trends of potential output (the supply side) and total spending (the demand side). There is a debate among economists about the trends of potential output between techno-pessimists and techno-optimists. The former see technological change proceeding at the slower rate recorded from 1970 to 2014, while the latter project an explosion of technological progress. Less disagreement is found on the demand side. Economists expect that a combination

of a variety of factors—lower population growth, lower rate of family formation, rising concentration of income and wealth, and the high level of debt by individuals and governments—will dampen the growth of total spending. This economic environment limits the power of monetary and fiscal policy as both have little room to maneuver, the former because interest rates are already at record lows and the latter because debt-to-GDP ratios are at record highs.

Future employment growth will face two major headwinds. On one side the autonomous machines of the new wave of technological advancement will replace human muscle and brain power at an increasing rate. On the other side a variety of demographic and economic factors—primarily lower growth of the population and family formation, high private and public indebtedness, and rising income inequality—will restrain the growth of total spending. These developments in combination with the transformation of economic and social structures, and of the value system, will present novel challenges to both policymakers and individuals. Over the past 50 years the focus of public policy has been on promoting the supply side of the economy. In the future, if the promise of the new technological age materializes, the growth of potential output will encounter fewer obstacles than in the past. Aggregate demand, however, will face the headwinds mentioned above. In this environment, maintaining sustainable growth requires a shift of emphasis from supply-side to demand-side policies. In the presence of an economic system with a built-in tendency to rising economic inequality, supporting the growth of aggregate demand would require re-distributional measures of rising magnitude over time. The implementation of these measures would be possible only through the expansion of the scope of government. This move would be inconsistent with the priorities of an electorate whose moral compass rests on individualism as the driver of human activity.

Without minimizing the economic challenges facing policy-makers, I suggest that the fundamental issues facing the United States are largely outside the economic sphere. They involve inequality, justice, human relations, functioning institutions, trust, and shared values. Unless these issues are addressed in a coordinated manner, the prosperity promised by technological change may end up being a distant mirage for most Americans.

Although writing this book was largely a solitary effort, I still hold a debt of gratitude. I am particularly thankful to Vaughan Dixon, Francesco Ruggeri, and

Andrew Secord for helpful comments, to Giulia De Gasperi and Petrina Ferris for editorial services, and to my wife Christine for unwavering support.

PART I THE STATISTICAL RECORD

CHAPTER 1. DEMOGRAPHIC CHANGES

This chapter traces the major demographic developments that took place between 1950 and 2019. It deals first with individuals and then with families. For individuals it starts with the changes in the most significant dimensions of the population and later discusses religion and race. For families it begins with households and then evaluates changes in family types and size.

Individuals

Population. In 1950 there were 150.7 million residents in the contiguous States and 151.3 million when the Territories of Alaska and Hawaii are included. Over the following 69 years, the US population more than doubled, increasing at an average annual rate of 1.13 percent and reaching 328.2 million in 2019.¹ This growth rate was not uniform throughout the entire period. A high growth period from 1950 to 1970 (1.48% per year), propelled by the post-war baby boom, was followed by more moderate growth (0.98% per year) during the subsequent half a century. The components of growth also differed drastically in the two sub-periods. From 1950 to 1970 population growth was entirely due to the increase in the domestic population as the level of the foreign-born population changed little from the 10 million level in 1950. The growth of the domestic population, in turn, was driven by the high total fertility rates of the 1950s and early 1960s which maintained a value in excess of 3% during that period and exceeded 3.5% in 1960.² Although the fertility rate declined rapidly from its 1960 peak, it still stood at 2.5% in 1970. As it continued to decline, the fertility rate fell below 2% and reached 1.8% in 1980 before rebounding to a range of 2.0-2.1% from 1990 to 2000. It then resumed a descending trend and in 2018 stood at 1.7%. The declining fertility rate led to a reduction in the population growth after 1970. At current fertility rates, in the absence of immigration, the US population would gradually stop growing and then would begin to decline.

As fertility rates started to decline, immigration began to fill the gap and contributed an increasing share of population growth. This share, which in 1950-1959 was about 11 percent, increased to 30 percent in 1980-1989, 35 percent in 2000-2009, and 40 percent in 2010-2014.³ During the period from 2015 to 2018, the contribution of net immigration to US population growth averaged 46.3 percent, the highest rate of any ten-year period since 1900.⁴ Table 1-1 shows that

the share of the foreign-born population more than doubled from 1950 to 2018. While the number of immigrants actually declined from 1950 to 1970, immigration still accounted for nearly 30 percent of US population growth from 1970 to 2018.

Table 1-1. Selected Statistics on the Foreign-Born Population, 1950 and 2018

Year	% of Foreign-Born Population	Period	% of Immigration in Population Change
1950	6.8	1950-1970	-1.4
1970	4.7	1970-2018	28.9
2000	9.4	1950-2018	19.9
2018	13.9		

Source: Campbell Gibson and Emily Lennon (1999), *Historical Census Statistics of the Foreign-Born Population of the United States: 1850 to 1990*, US Census Bureau, Working Paper No. 29, Table 4; US Census Bureau (2019), *Foreign-Born Data Facts*.

The fall in the fertility rate and the increase of immigration flows reshaped the age distribution of the US population. As shown in Table 1-2, in 1950 the age group under 16 years accounted for 28 percent of the population but this share fell to nearly 20 percent in 2019. By contrast the share of those 65+ doubled from 8 to over 16 percent. For the rest of the population a small decline in the share of the 16-24 age group was offset by a small increase in the share of those aged 25-64. The major changes in the age distribution of the US population from 1950 to 2019 occurred at the two ends of the age distribution: a decline of 8.6 percentage points in the share of young people under 16 was counterbalanced by a similar increase (8.4 percentage points) in the share of the elderly (65+).

Table 1-2. Age Distribution of the Population in 1950 and 2019

Age Range	Population Share (%)		Change
	1950	2019	
Under 16	28.3	19.7	- 8.6
16-24	13.2	11.7	- 1.5
25-64	50.4	52.1	1.7
65+	8.1	16.5	8.4

Source: Frank Hobbs and Nicole Stoops (2002), *Demographic Trends in the 20th Century*, Census 2000 Special Reports, CENSR-4, Table 5; US Census Bureau (2020), *National Population by Characteristics: 2010-2019*, Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin: April 1, 2-10 to July 1, 2019, Excel Table A5.

While international migration raised the growth rate of the total population and mitigated the fertility-driven trends towards population aging, internal migration reshaped the regional distribution of the population. As shown in Table 1-3, in 1950, 87 percent of the US population resided in three regions: Northeast, Midwest, and South, and each region accounted for similar shares of the total. During the following 68 years, Americans migrated to the South and the West. The population share of the West almost doubled, rising from 13 to nearly 24 percent, and the share of the South increased by nearly 7 percentage points. In 2018 sixty-two percent of Americans resided either in the South or in the West. In the same year the South was home to as many people as the combination of Northeast and Midwest. Population growth from 1950 to 2018 was largely concentrated in a handful of States. Three states—California, Texas, and Florida—accounted for 39 percent of the total population increase, and five States—Georgia, Arizona, North Carolina, Virginia, and Washington—added almost 14 percent. More than half of the population increase between 1950 and 2018 took place in the above eight States.

Table 1-3. Population Shares by Region, 1950 and 2018

Region	Share (%)		Change
	1950	2018	
Northeast	26.2	17.2	-9.0
Midwest	29.5	20.9	-8.6
South	31.3	38.1	6.8
West	13.0	23.8	10.8

Source: Frank Hobbs and Nicole Stoops (2002), *Demographic Trends in the 20th Century*, Census 2000 Special Reports, CENSR-4, Table 1; US Census Bureau (2019), *National and State Population Estimates*, Tables and Datasets, Table 1.

Internal migration also stimulated a trend towards greater urbanization. As large productivity gains, first in agriculture and then in manufacturing, reduced the labor requirements in the production of goods, and as the associated increase in income generated an ever-rising demand for services, Americans chased the jobs and migrated from the rural areas to the cities and their suburbs.

In 1950 the US had only 5 cities with a population exceeding 1 million: Chicago, Detroit, Los Angeles, New York, and Philadelphia. Their combined population amounted to only 11.5 percent of the total. Only 18 cities had a population in

excess of 500,000 and as a group they accounted for only 17.6 percent of the total population. There were 217 cities with a population between 50,000 and 500,000 and their combined population accounted for 17.8 percent of the total. The urban population, defined to include cities and towns with at least 50,000 residents, amounted to 35.4 percent of the total. By this measure, in 1950 the US population was roughly one-third urban and two-thirds rural.⁵ If we focus on standard metropolitan areas (cities with a population over 50,000 plus the surrounding counties integrated with them), the number of population centers with over 1 million residents has more than doubled from 5 to 12: Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis and San Francisco. However, the population residing in these metropolitan areas (56%) now exceeds the population of the “rural” areas.⁶ Because the villages and towns surrounding these cities were partly urban and partly rural, one can safely state that on the whole the US population in 1950 was evenly split along the rural/urban divide.

In 2018 ten cities had a population over 1 million: New York, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, and San José. Their combined population accounted for 8.0 percent of the total. Twenty-five cities had a population between 500,000 and 1 million and they made up 13.4 percent of the total. Nearly 40 percent of the US population lived in cities with a population over 50,000.⁷ More significant from an urbanization perspective is the population living in metropolitan areas (cities and surrounding areas). In 2018 metropolitan areas contained 82.3 percent of the population and the 41 metropolitan areas with more than one million residents accounted for 42.8 percent of the total population.⁸ Increasing urbanization did not lead to a movement of people from the country to the city as the share of the city population increased only by a few percentage points. The big change from 1950 to 2018 was a move from the rural areas, which lost two-thirds of its share, to the suburbs. In some cases, rural areas became suburbs because of the expansion of cities. In other cases, individuals and families sought careers and higher living standards in urban areas but chose to maintain some of the rural amenities, such as a detached house with a lot.

Table 1-4. Population Shares by Cities, Suburbs, and Rural Communities, 1950 and 2018

Category	Population Share (%)		
	1950	2019	Change
Cities, 500,000+	35.4	38.8	3.4
Suburbs	20.6	43.5	22.9
Rural Communities	44.0	17.7	-26.3

Source: Frank Hobbs and Nicole Stoops (2002), *Demographic Trends in the Twentieth Century*, Census 2000 Special Reports, US Census Bureau, CENSR-4, Table 1-3, p. 37; US Census Bureau (2020), *Metropolitan and Micropolitan Statistical Areas Totals: 2010-2019*.

Religion. The US population in 1950 was overwhelmingly Christian and predominantly Protestant. When the Pilgrims—Puritan “separatists” who were critical of the Church of England—set foot on Plymouth Harbor on the 16th of December 1620 to build a new home, they gave birth to a movement that led to the dominance of Protestantism in America. As pointed out by Selcer (2006), shared Protestant faith was one of the bonds that held America together. The United States was the first western nation founded by Protestants after the protestant reformation in the 16th century, and Americans never stopped believing that they should be “a shining example to the world,” as expressed by Puritan John Winthrop.⁹ In 1860, 37 percent of the population was registered as a member of a religious denomination. There was one church per 608 persons, served by 36,000 members of the clergy. Three-quarters of the members were Protestant and over 90 percent of them were Caucasian people of Anglo-Saxon descent. Roman Catholics comprised 21.4 percent of the total, Eastern Orthodox 1.3 percent and those of the Jewish faith 1.3 percent.¹⁰ The first Catholics reached America on the 25th of March 1634 when the *Dove* and the *Ark* brought to Maryland a selected group of colonists which included 128 Catholics.¹¹ The 6th of August 1727, the French Ursuline nuns arrived at New Orleans and established the first Catholic charitable institution in America which included an orphanage, a hospital, and a school for girls.¹²

Three major developments in religious affiliation took place in the period from 1860 to 1950. First, there was a substantial increase in church membership which in 1950 reached almost 60 percent of the population. Second, there was a decline in the share of Protestants and a corresponding increase in the share of Roman Catholics. Third, there was a re-alignment within Protestant churches, reflecting a decline in the share of the main traditional denominations. Still, in 1950 the United

States was a Christian and largely Protestant country: 98 percent believed in God, and 91 percent of church members identified themselves either as Protestants (66% of members or 60% of the population) or Catholics (25% of members or 23% of the population)¹³. Although Americans remain a religious people, their religious identity has weakened over the past 68 years. In 2018 only 87 percent believed in God and 20 percent had no religious affiliation. Among those with religious affiliation, the dominant faith is still Christianity but its share has declined to 67 percent. Forty-five percent of those with religious affiliation are Protestants and 22 percent are Catholics.

Table 1-5. Self-Described Religious Identity, Adult Population Shares, 1950 and 2018

Affiliation	Share (%)		
	1950	2018	Change
Protestant	66	45	- 21
Catholic	25	22	- 3
Other	9	13	4
No Affiliation	0	20	20

Source: Erin Duffin (2019), *Self-Described Religious Identification of Americans from 1948 to 2018*, Statista.

In 2018 there was also a geographic divide in religious affiliation. In the Northeast and the West only 60 percent of adults identified themselves as Christian. Among Christians, Protestants accounted for about 55 percent and Catholics for 40 percent. The percentage of the self-identified Christians was substantially higher in the South (70%) and in the Midwest (68%). In these two regions, Christian affiliation was dominated by Protestants with a share of 69 percent in the Midwest and 76 percent in the South. The Northeast and West also have larger shares of the unaffiliated (28% and 32%, respectively) compared to 25 percent for the Midwest and 21 percent for the South.¹⁴

In 2018 there are also significant differences in religious affiliation along racial lines. The highest rates of religious affiliation among adults were found with African-Americans and Hispanics. Seventy-two percent of adults in both groups were affiliated with Christian bodies, compared to 65 percent for non-Hispanic whites. African-Americans had the largest concentration of Protestants (65% of

adults and 90% of Christians). By contrast, among Hispanics 47 percent of adults and 65 percent of Christians were Catholics. Among non-Hispanic Whites, Protestants were 2.7 times the number of Catholics, but represented only 46 percent of adults. Also, the share of unaffiliated adults was highest among non-Hispanic Whites (27%) and lowest among African-Americans (21%).¹⁵

Ethnicity. The ethnic diversification of the United States population began in the early part of the 1600s when in 1619, twenty Africans were brought as indentured workers to the English settlement of Jamestown in what later became the colony of Virginia. Six years later, the Dutch West India Company brought the first group of enslaved Africans to the Dutch colony of New Amsterdam (later New York).¹⁶ The number of Africans in the American colonies increased at a fast rate over the next 240 years: it reached nearly 28,000 in 1700, 236,000 in 1750, 757,000 in 1790 (92% of which were slaves), and 4.4 million in 1860 (89% slaves).¹⁷ The population of African Americans, now free, continued to grow, doubling from 1860 to 1900, and reached the 15 million mark in 1950.¹⁸ The share of the population of African origin increased rapidly in colonial times and then declined after the War of Independence and the Civil War. Starting at about 1 percent in 1630, this share rose to 11 percent in 1700 and nearly 20 percent in 1790. It then fell to 14 percent in 1860, nearly 12 percent in 1900, and 10 percent in 1950. In both 1790 and 1860, about 90 percent of the African-origin population was made up of slaves.

The Hispanic population began its contribution to the US ethnic diversity at a later stage and its impact remained relatively small up to 1950. According to Gregory (2017), in 1850 there were 101,000 Hispanics in New Mexico, Texas, California, and Arizona, most of them of Mexican origin. By 1930 that number had expanded to 1.6 million: 97 percent from Mexico and the rest from Puerto Rico and Cuba. In 1950, 2.3 million Americans self-reported Hispanic surnames.¹⁹ Still, by 1950 the share of the Hispanic population was less than 2 percent. Other ethnic groups contributed less than 1 percent.

The ethnic composition of the US population did not change much from 1950 to 1970. A reduction of 5 percentage points in the share of whites was offset by a small increase in the share of African-Americans and a larger increase in the share of Hispanics. The big changes occurred over the past 50 years. During that period, the decline in the share of whites was significant, as it dropped by 20 percentage

points (minus 28%). The biggest increase was recorded by Hispanics whose share almost quadrupled, rising from 4.7 percent in 1970 to 18.1 percent in 2018. The share of African-Americans edged up 2 percentage points, and the contribution of Asians and other ethnic groups became noticeable with shares of nearly 6 and 3 percent, respectively.

Table 1-6. Ethnic Composition of the US Population in 1950, 1970, 2018:
Population Share by Ethnic Group

Ethnic Group	1950 (%)	1970 (%)	2019
White*	88.1	83.2	60.1
African-American*	9.9	11.0	12.5
Hispanic	1.5	4.7	18.5
Asian*	**	**	5.8
Other*	**	**	3.1

*Non-Hispanic; **Less than 1%.

Source: Campbell Gibson and Kay Jung (2002), *Historical Census Statistics on Population Totals by Race, 1790 to 1990, and by Hispanic Origin, 1790 to 1990, for the United States, Regions, Divisions, and States*, US Census Bureau, Population Division, Working Paper No. 56; US Census Bureau (2019), *National Population by Characteristics: 2010-2019*, Annual Estimates of the Resident Population by Sex, Race and Hispanic Origin for the United States: April 1 2010 to July 1, 2019, Excel Table.

As shown in Table 1-7, the degree of ethnicity in 2018 varied widely by State. In 13 States the White population had at least an 80 percent share, but in 4 States it was in a minority position. African-Americans accounted for at least 25 percent of the population in 7 States and Hispanics in 6 States. Hispanics are poised to become the majority in New Mexico, and African-Americans in the District of Columbia.

Table 1-7. Population Shares by Ethnicity and Selected States, 2018

Ethnicity	States
Whites Have at least 80% Share	Maine (93), Vermont (93), West Virginia (92), New Hampshire (90), Montana (86), Iowa (85), Kentucky (85), North Dakota (84), Wyoming (84), Idaho (82), South Dakota (82), Wisconsin (81)

Whites Are Minorities	Maryland (39.9), Nevada (48), Texas (41), District of Columbia (37), New Mexico (37), California (36), Hawaii (20)
African-Americans' Share at Least 25%	District of Columbia (45), Mississippi (38), Louisiana (32), Georgia (31), Maryland (30), S. Carolina (26)
Hispanics' Share at Least 25%	New Mexico (46), California (40), Texas (40), Arizona (32), Nevada (29), Florida (27)

Note: Numbers in Brackets Are Percentages of the Population.

Source: Henry J. Kaiser Foundation (2019), *Population Distribution by Race-Ethnicity, 2019*.

Education. The economy of the colonies in the 1600s did not require educated workers. Slaves had no rights, women's housework and child rearing did not require the ability to read and write, and the overwhelming majority of men made a living from natural resources, primarily farming, fishing, and forestry. There was also little need for education among the tradesmen—apothecaries (pharmacists), blacksmiths, carpenters, candle makers, shoemakers, coopers (makers of barrels and containers), gunsmiths, milliners, tailors, wig-makers and wheelwrights. Only a small portion of the male population—doctors, lawyers, ministers of the church, merchants, and the gentry—needed to be educated. Still, when the Pilgrims crossed the Atlantic in search of religious freedom and set foot in the New World they brought with them a strong desire to develop communities of literate people. To that end, they initially relied upon two fundamental institutions: the family and the church.

In the families, where the father left home at sunrise and returned exhausted after sunset, mothers were the main human contact for children and the primary source of their physical safety, emotional nourishment, and moral development. The faith that helped these pioneers endure sometimes unbearable suffering was fed daily by their prayers and their meditations on the Bible. They felt obliged to pass on their faith to their children by teaching them literacy skills so that they also could find their moral compass through reading the Holy Scriptures. Thus, mothers became also the first teachers. Later on, when communities built schools and hired teachers, children could already read before they attended school.

Churches were the first cultural centers of the colonial communities. They provided three cultural services: Sunday school, sermons and libraries. Although

Sunday school served the primary purpose of teaching the foundations of faith, it also helped children practice their reading and writing skills. Similarly, sermons went beyond explaining the Holy Scriptures and offering spiritual guidance. These sermons were lectures, carefully crafted through hours of study, and opened windows into history and literature to church members. Finally, churches created the first libraries and made the books they possessed freely available. Having acquired the capacity to read and write, the colonists felt a strong desire to exchange their knowledge and engage in debates and discussions that stimulated their thirst for learning. To that end, they formed a variety of “philosophical societies” where “artisans, tradesmen, and common laborers met to discuss logic, religion, science, and moral philosophy (economics).”²⁰

North and South followed different education paths. The South maintained its tradition of limited government involvement in education while the North moved fairly quickly in favor of public support, and Massachusetts was a leader in this endeavor. The first public school in the colonies was the Boston Latin School established in 1635 for the purpose of preparing the children of wealthy colonists for careers in the Church, the State, and the Courts. The 1700s saw the expansion of “common schools,” one-room schools where children of all ages were taught at the same time. In 1647 this State passed the first law requiring the hiring of a teacher by towns with at least 50 families and the construction of a school by towns with at least 100 families. The first publicly-supported library was established in 1698 in Charles Town (South Carolina) and the Young Ladies’ Academy was founded in 1787 in Philadelphia. When the 10th Amendment to the Constitution was ratified in 1791, education became the responsibility of individual States. Not long after (1827), Massachusetts required towns with at least 500 families to have a public high school open to all residents, and 10 years later the African Institute (now Cheney University) was established in Cheney, Pennsylvania. In 1852, Massachusetts introduced compulsory school attendance and 6 other States passed similar laws within 3 years. By 1918 compulsory education was mandated in all States. The first Department of Education was established in 1867. The expansion of education in the colonies was not confined to the elementary and secondary levels, but was extended to higher education. The first private college (Harvard College) was established in 1635, Oberlin College became the first US institution of higher learning to open its doors to both male and female students in 1833, and in 1855 the University of Iowa was the first state

university to admit both men and women.²¹ All these educational developments led to a very high literacy rate. According to Engerman and Sokoloff (2000), in 1850, the population 10 years of age and older had a literacy rate of 97 percent in the North and 92 percent in the South.

School enrollment rates near 100 percent had already been reached by 1890. Over the following 60 years, the next phase was the expansion of high school education. Over this period the high school enrollment rate (ratio of enrollment in grades 9 to 12 relative to the population 14-17) increased from 4.5 percent to 76.1 percent. Only small increases were recorded for the enrollment rate in higher education institutions (bachelor's plus over the population 18-34). By 1970 the high school enrollment rate had almost caught up to that of elementary education, and the rate for higher education almost tripled to 15 percent. Since 1970 the major developments in education have taken place in the post-secondary sector where the enrollment rate among those 18-34 has risen to 23 percent.

By 2018 the improvement in the educational attainment of the US population resulted in one-third of the working-age population 25-64 holding at least a bachelor's degree. This improvement was not spread evenly across the country. Thirty-five States had an achievement rate between 26 and 40 percent (plus or minus 21% of the average), 8 States (Colorado, Connecticut, Maryland, Massachusetts, Vermont, Virginia, New Jersey, and New York) plus the District of Columbia had rates over 40 percent, and 7 States (Alabama, Arkansas, Kentucky, Mississippi, Nevada, Oklahoma, and West Virginia) had rates below 26 percent. There were also large variations in the rate of educational achievement among cities. While in general cities tend to be magnets for highly educated workers, the pattern is not uniform across the country. While two cities (Seattle and San Francisco) have attainment rates roughly double the average, and seven other cities have attainment rates at least 60 percent above the average, (Atlanta, Austin, Boston, Denver, Minneapolis, Portland, and Raleigh), a number of other cities (Cleveland, Detroit, Las Vegas, Phoenix, San Antonio), have rates below the average.²²

The expansion of post-secondary education affected the gender composition of university graduates and the mix of degrees. In 1949-50 males earned more than three-quarters of the college degrees and more than 90 percent of PhDs. Undergraduate education was dominant and bachelor's degrees made up 87 percent of total degrees granted.²³ At the bachelor's level the most popular degrees

were in economics and commerce (20% of the total), engineering and architecture (12.6%) and education (10.8%). Together, these three disciplines accounted for 43.4 percent of the total. The Master's category was dominated by education which comprised nearly one third of the degrees. In the case of PhD degrees, three disciplines led the field with a combined share of 46.5 percent: sciences (23.4%), education (13.0%) and humanities (10.1%).²⁴ In 2017 American colleges and universities granted nearly 3 million degrees. Two-thirds were bachelor's degrees, slightly more than a quarter were Master's degrees, and 6 percent PhDs. Women outperformed men at each degree level, accounting for 58 percent of the degrees earned. The difference was highest for Master's (nearly 19 percentage points) and smallest for PhDs. (6 percentage points).²⁵

There was also a change in the distribution of degrees by field of study. In 2017 eleven disciplines account for 80 percent of all bachelor's degrees granted, 84 percent of Master's and 88 percent of PhDs. "Business, marketing, personal and culinary services" was by far the leading discipline in terms of degrees with an overall share of nearly 20 percent. This discipline was dominant in bachelor's degrees (20%) and Master's degrees (23%). Next was "health and related programs" with a share of 15 percent. This discipline dominated the doctoral degrees with a share of 43 percent. Education accounted for about 8 percent of total degrees, but it had the second largest share of master's degrees (18%). These three disciplines plus "social sciences and history" and "psychology" accounted for 54 percent of total degrees. By contrast, the combination of "mathematics, statistics and physical sciences" received a share of 2.9 percent, slightly more than half the degrees in psychology. Females earned a share of degrees exceeding 50 percent in all fields except "business and related programs," "engineering and architecture," "computer and information services," and "mathematics, statistics, and physical sciences." They were particularly dominant in "health and related programs," "education," and "psychology."²⁶

Families

In 1950 Americans loved marriage: 68 percent of males over 14 years of age and 66 percent of females were married. Moreover, Americans tended to marry at a young age. In the 20-24 age range, 44 percent of males and 66 percent of females were already married. By the age of 34, 80 percent of men and 85 percent of women had tied the knot.²⁷ Marriage was still a viable institution in 2018 as half of

Americans 15+ had been married at least once. The marriage rate for men (51.7%) was higher than that for women (48.7%). However, nearly one-third of adult Americans had never married and the divorced or separated accounted for an additional 12 percent. Marriage took place at a later time than in earlier years. In 2018 only about 11 percent of Americans 18-24 and 40 percent of those 25-34 had ever been married.²⁸

In the early post-war period marriages tended to be stable. In 1950 the divorce rate among the population 14+ was only 1.2 percent for males and 1.6 percent for females. Even among the core age group 25-54 the divorce rate was very low: 1.6 percent for males and 2.3 percent for females.²⁹ Four major factors contributed to the low divorce rate in 1950. First, there were restrictive laws that allowed marriage dissolution only for cause. Second, most married women were homemakers, had little or no experience in the labor market, and were financially dependent on the marriage to avoid economic hardships. Third, the stable jobs created by the combination of family farming, manufacturing, and the public sector, which in 1950 accounted for more than half of all jobs in the United States, and the prospects of sustained economic growth provided a suitable economic environment for family formation and stability. Finally, the prevailing value system, supported by families and churches, saw the family as the foundation of society and divorce as a corrosion of the moral fabric of society.

By 2018 the divorce rate had increased to 18.3 percent of the population 15+. Moreover, the number of divorced and separated people represented 23.6 percent of the married.³⁰

In 1950 there were 42.3 million households in the United States. Eighty-nine percent of them (37.8 million) were families; the rest were largely made up of singles. The overwhelming majority of families (87.4%) was composed of couples. Families with only female heads accounted for 9.1 percent and families with only male heads added 3.5 percent. Slightly more than half of all families had children under the age of 18, but this share varied among family type. Within each type the highest share of families with children under 18 was held by couples (55.1%), followed by families with only female heads (34.0%) and by families with male heads only (19.3%). Less than 4 percent of all families were represented by families with either sole female or sole male heads with children under 18. Nearly half (48.3%) of families had no children under 18, over one-third (37.6%) had one

or two children, and 14.1 percent had 3 or more children. As a result, the average family size was 3.6 members (average household size: 3.38).³¹

In 2018 there were 127.6 million households in the United States. Almost two-thirds (83.1 millions) were families. Nearly three-quarters of families (73.7%) were married couples. Families with only female heads accounted for 18.6 percent and families with only male heads added 7.7 percent. Less than half of all families (41.5%) had children under the age of 18, but this share varied among family type. Within each type, the highest share of families with children under 18 was held by female householders (52.9%), followed by married couples (38.9%) and by male householders (38.7%). More than one-third of all families were represented by families with either sole female or sole male heads with children under 18. In 2018 44 percent of families had no children and an additional 38 percent had no more than two children. As a result, the average family size was 3.21. Since the average number of people in non-family households was much lower (1.26), the average household size was only 2.53.³²

Table 1-8. Household and Families: Selected Ratios, 1950 and 2018

Category	1950	2018	Change
Families as % of Households	89.4	65.1	-24.3
Couples as % of Families	87.4	73.7	-13.7
Percent of Families with Children under 18	51.9	41.5	-10.4

Source: Frank Hobbs and Nicole Stoops (2002), *Demographic Trends in the Twentieth Century*, US Census Bureau, CNSR-4, Families, Tables 13 and 15; US Census Bureau (2019), *American Families and Living Arrangements*, Tables AVG1, F1, and T1.

The main changes in the structure of households are summarized in Table 1-8. The most striking change is the drop in the share of family households which declined by 27 percent from 1950 to 2018 (24 percentage points). Within the family category there was also a substantial decline in the share of couples which fell by 16 percent (13.7 percentage points). By contrast, the share of single-parent families more than doubled and in 2018 accounted for more than one-quarter of family units. There was also a 20 percent (10.4 percentage point) increase in the number of families without children under 18.

Summary

From 1950 to 2019 the US population increased at an average annual rate of 1.1 percent. In the first three post-war decades population growth was driven entirely by natural increase (the excess of births over deaths of the domestic population). After that, population growth relied to an increasing degree on immigration. During the past 69 years there has also been a large exodus from rural communities to the suburbs and a greater geographical concentration in the South and West. In the process, the US population has become older, more educated, and more diversified ethnically and with respect to religious affiliation. The popularity of marriage has waned, the share of family households has declined, and families have become smaller and more varied in structure as the share of couples-families has fallen.

CHAPTER 2. LABOR FORCE AND EMPLOYMENT

This chapter presents the main developments in the labor force and employment from 1950 to 2019. It looks at changes in the age and gender composition of the labor force, and explores regional and occupational dimensions of employment.

The Labor Force

The fundamental block upon which rest all labor force statistics is the *Civilian Non-Institutional Population*, which includes all residents over the age of 15 who are not in mental or penal institutions or in homes for the aged and are not on active duty in the Armed Forces. In 1950 this subset of the resident population included 105 million people. The *Civilian Labor Force* comprises the members of the above population subset who are either employed or unemployed and actively seeking employment. In 1950 the civilian labor force included 62 million workers. This means that 59 percent of the civilian non-institutional population either held a job or was actively looking for one. This ratio is called the *Participation Rate*. From 1950 to 2019 the labor force grew by 2.6 times, reaching a level of 163.5 million. Labor force growth from 1950 to 2019 was stimulated by two factors: changes in the age distribution of the population and changes in the participation rate. As the large cohorts of baby boom children over time became cohorts of young adults, the demographic base of the labor force expanded. Thus, the civilian non-institutional population 16 years and older grew at an average annual rate (1.32%) higher than that of the total population (1.13%). During the 1950-2019 period the labor force participation rate also increased, rising by 3.9 percentage points from 59.2 percent to 63.1 percent. The combination of these two factors led to an average annual growth rate of the labor force of 1.41 percent, a quarter of a percentage point higher than the population growth.

As shown in Table 2-1, there was a convergence in the labor force experience of males and females. In 1950 the participation rate of males (86.4%) was two and a half times that of females (33.9%), a difference of 52.5 percentage points. From 1950 to 2019 the participation rate of men fell by 17.2 percentage points while the rate for women rose by 23.5 percentage points. As a result, the difference in participation rates between males and females fell to 11.8 percentage points. The remaining difference is largely due to the greater child-rearing responsibilities of women. This convergence of participation rates affected the gender composition of

the labor force. In 1950 males accounted for 70 percent of the labor force and females for 30 percent. By 2019, this gap has been reduced from 40 to 6 percentage points.

Table 2-1. Participation Rates and Labor Force Shares by Sex and Selected Age Groups, 1950 and 2019

Category	Participation Rate			Labor Force Share		
	1950	2018	Change	1950	2018	Change
Male	86.4	69.2	-17.2	70.4	53.0	-17.4
Female	33.9	57.4	23.5	29.6	47.0	17.4
Total	59.2	63.1	3.9			
16-24	59.9	55.9	-4.0	18.5	12.9	-5.6
25-64	64.0	78.2	14.2	76.6	80.6	4.0
65+	26.7	20.2	-6.5	4.9	6.5	1.6

Source: US Census Bureau (1952), *Decennial Census 1950*, Volume 2, Tables 130-131; US Bureau of Labor Statistics (2019), *Labor Force Statistics*, Tables 14-15.

Table 2-1 also shows that there were moderate changes in the age structure of the labor force. The trend towards population aging as baby boomers completed their work cycle was associated with the decline in the participation rate of both the youth group (16-24) and the older group (65+), the former because of increased time spent on education and the latter because of improvements in the financial situation of retirees. Offsetting these declines was the inflow of women in the labor market which led to a 14.2 percentage point increase in the participation rate of the core age group (25-64). For the youth group a lower share of the civilian non-institutional population 16+ combined with a lower participation rate to yield a substantial decline in its share of the labor force (minus 5.6 percentage points). For the older group the increase in its population share more than offset the decline in its participation rate, leading to a small increase in its share of the labor force (1.6 percentage points). In the case of the core age group, a moderate reduction in its population share together with a larger increase in its participation rate resulted in an increase of 4 percentage points in its share of the labor force. Overall, from 1950 to 2019 the biggest change in the labor force was the influx of women, single and married. Contrary to the pattern in 1950, women in 2019 sought a career and pursued it even after marriage and motherhood.

In 1950 the labor force was dominated by married members with a spouse present who accounted for nearly two-thirds of the total. Table 2-2 shows that there were major differences by gender. Married men accounted for nearly three-quarters of the male labor force (A) in 1950. This large share resulted from the combination ($A = B \times C$) of a high participation rate ($B = 90\%$) and a high ratio of the married male population to the male labor force ($C = 81\%$). Married females accounted for a much smaller share of the female labor force (46%). In their case a very low participation rate (22%) was counterbalanced by a high level of the married population relative to the female labor force (more than double). Basically in 1950 there were a large number of married women, but roughly one out of five was in the labor force. It seems that in 1950 women looked for a job if they were single, but dropped out of the labor force once they found a husband. The above conclusion is supported by the distribution by type of activity of those who were not in labor force. “Keeping house” was listed by 62 percent of those not participating in the labor market. Women accounted for 99 percent of this group. Viewing this from a different perspective, among men “keeping house” was listed by 2.3 percent while for women it was recorded by 79 percent of those not in the labor force.¹

By 2019 the share of the married members of the labor force had declined to slightly more than half of the total. This decline was due entirely to the male side, whose share fell by 26 percent (19 percentage points). The main determining factor in the decline was the drop of 22 percentage points in the participation rate of married males. The labor force share of married females changed very little, rising by just 2 percentage points. A large reduction in the ratio of the married female population to the female labor force was more than offset by a more than doubling of the married female participation rate.

Table 2-2. Share of the Labor Force by Sex and Selected Marital Status, 1950 and 2019

Category	1950	2019	Change
Males			
Married Men in the Labor Force as Percent of the Male Labor Force	73.0	53.9	-19.1
Participation Rate of Married Men	89.9	68.0	-21.9

Number of Married Men as Percent of the Male Labor Force	81.2	79.3	-1.9
Females			
Married Women in the Labor Force as Percent of the Female Labor Force	46.4	48.3	1.9
Participation rate of Married Women	21.6	53.3	31.7
Number of Married Women as Percent of the Female Labor Force	214.9	90.6	-124.3

Note: 14+ for 1950 and 16+ for 2019.

Source: USUS Census Bureau (1952), *Decennial Census 1950*, Volume 2, Table 121; USUS Bureau of Labor Statistics (2019), *Labor Force Statistics*, Table E-6.

Employment

From 1950 to 2019 civilian employment increased at an average annual rate of 1.44 percent (slightly higher than the growth rate of the labor force), reaching almost 2.7 times its level in 1950. The influx of women in the labor force is reflected also in the employment data. During the same period female employment increased at more than double the average annual rate of male employment (2.1 versus 1.0 percent). As a result, the share of female employment increased by 18 percentage points. The difference between the male and female share of employment, which in 1950 stood at 42 percentage points, shrank to 6 points in 2019.²

The expansion of employment was not uniform across the country and by 2018 it resulted in a substantially different employment map of the United States. Specifically, the center of economic activity shifted from the Northeast and Midwest to the South and West. In 1950 Northeast and Midwest accounted for 58 percent of total employment while the West contributed 13 percent. By 2018 the employment share of Northeast and Midwest had dropped by 19 percentage points while the West had gained 11 percentage points. As a result of these shifts, in 2018 South and West accounted for 61 percent of employment.³

In 1950 over 50 percent of Americans lived in town with less than 10,000 people. Thus, roughly half of the employed lived in rural communities. This was the period before the expansion of the suburbs and the introduction of shopping malls (the first indoor shopping mall was opened in 1956 in the Southdale Shopping Center in Edina, Minnesota).⁴ These towns were too small to make large department stores

viable enterprises. The hallmark of these small towns was Main Street where one could find not only the main public edifices—post office, schools, the local bank, the justice building—but a whole range of shops: butchers, bakers, grocery stores, candy stores, shoe stores, clothing stores, barbershops, drug stores. These were “mom and pop” stores, family-owned and operated businesses that employed more than one generation of family members and were passed on from parents to children. These small towns were usually surrounded by farms, also family-owned and passed on to children as inheritance. The “mom and pop” stores were not just places where goods and services were exchanged for cash. Owner and customer were more than seller and buyer: they were neighbors, sometimes friends, members of the same church or social organization. These stores were integral components of the community and shopping was a social event, an opportunity to exchange news and reinforce social connections. As the population moved to the cities and the suburbs, “mom and pop” stores were replaced by large malls and a variety of large department stores. The small stores survived, but largely within malls as boutiques, occupying a niche places in the market. More recently the large brick and mortar stores occupying the malls are being replaced by online shopping. Although consumer spending has increased at a faster rate than gross domestic product, fueled in part by increasing amounts of personal debt, the evolution of shopping has led to a decline in the employment share of wholesale and retail trade. Through this evolution, the personal shopping experience has been replaced by the anonymous contact between two electronic devices.

From 1950 to 2019 there were also major changes in the industrial distribution of employment, specifically, a shift from the production of goods to the production of services. As shown in Table 2-3, in 1950 the share of employment was very similar for goods-producing (46.1%) and services-producing industries (49.5%, excluding public administration). By 2019 the employment share of the goods-producing sector had fallen to less than half (19.2%), a share nearly 7 percentage points lower than the share of manufacturing alone in 1950. During the same period the share of the service producing sector increased by more than 50 percent, and in 2019 accounted for over three-quarter of total employment. As a result, a 3 percentage point advantage for the services-producing sector in 1950 exploded to 57 percentage points in 2019. The share of employment in Public Administration edged up by a mere 0.2 percentage points over a 69-year period.

Table 2-3. Percentage Distribution of Employment by Major Industry, 1950 and 2019

Category	1950	2019	Change
Agriculture	12.2	1.4	-10.8
Manufacturing	25.9	10.0	-15.9
Goods-Producing Industries	46.1	19.2	-26.9
Health Care and Education	7.3	22.8	15.5
Other services	42.1	53.4	11.3
Services-Producing Industries	49.5	76.2	26.7
Public Administration	4.4	4.6	0.2

Source: USUS Census Bureau (1952), *Decennial Census 1950*, Tables 130-131; USUS Bureau of Labor Statistics (2019), *Labor Force Statistics*, Characteristics of the Employed, Table 17.

The dramatic decline in the employment share of the goods-producing sector is particularly noticeable in agriculture and manufacturing. In 1950 there were over 5 million farms in the United States, the average farm covered 216 acres and farming accounted for 12.2 percent of employment (12.4% if we include fishing, hunting, trapping and forestry). By 2018 the number of farms had fallen by almost two-thirds to 2 million, the size of the average farm had doubled to 444 acres, and the employment share of farming had fallen to 1.4 percent (1.5% with the related activities).⁵ The decline in farm employment was caused by technological change and the associated decline in the price of all other inputs relative to the price of labor. From 1948 to 2015 farm output in the United States rose by 170 percent (an average annual growth rate of nearly 1.5 percent). Since total inputs increased by only 7 percent over the same period, nearly 96 percent of the increase in farm production resulted from productivity gains. The low growth of farm inputs was also associated with a change in their composition. While labor and land inputs declined by 75 and 24 percent, respectively, from 1948 to 2015, intermediate (chemical fertilizers and pesticides) and capital (except land) inputs grew by 134 and 78 percent, respectively. This shift in the composition of farm inputs was largely driven by a 60 percent decline in the relative price of intermediate and capital goods.⁶

The decline in the employment share of manufacturing was even larger: 15.9 percentage points, equivalent to a 61 percent reduction. Employment trends in manufacturing followed the same pattern as in agriculture. From 1950 to 2018 real output increased at an average annual rate of nearly 1.8 percent, driven by technological change and high rates of productivity growth. In 2018 one hour of work in manufacturing produced nearly five times as much as in 1950. As earlier, when surplus labor in agriculture found employment in the manufacturing sector responding to higher demands from population growth and rising incomes, now the surplus labor in manufacturing moved to the service sector as consumer demand shifted from goods to services.⁷

The concept of a service-based economy conjures notions of a substantial and uniform expansion of all service-providing industries. That's not the case for the US from 1950 to 2019. In this period the increase in the employment share of the services-producing industries was dominated by the combination of two industries, education and health care, both of which are the recipients of substantial government support, and professional services. This sub-sector, which includes also social assistance, nearly tripled its share of employment, raising it by 15 percentage points and reaching 22.8 percent in 2019. This sub-sector accounted for nearly one-third of the total increase in employment from 1950 to 2019. The employment share of the larger and more traditional service industries (transportation, utilities, communications, wholesale and retail trade, and financial activities) actually declined by 3 percentage points (10%). The large increase in the employment share of other services was driven primarily by the expansion of employment in professional and business services and leisure and hospitality.⁸

The increase in the employment share of the "education and health care" sub-sector was dominated by health care. Within this sub-sector, the employment share of health care increased by nearly 13 percentage points to 50.9 percent in 2019 while the shares of education and social assistance declined by 8.9 percentage points (to 39.5% in 2019) and 4 percentage points, respectively. In 1950 education accounted for nearly half of employment in the "education and health care" subsector. In 2019 education and health care switched positions, with the latter now contributing slightly more than half of employment. Health care accounted for 17 percent of the increase in total employment from 1950 to 2019. Thus, a good

portion of the expansion of the service sector in the United States over the past 69 years was driven by population aging, unhealthy lifestyles, and increasing pollution of body and soul (air and water pollution, junk food, various addictions, and the persistence of high levels of poverty).

The changes in the industrial structure of the United States from 1950 to 2018 were reflected in a parallel shift in the occupational distribution of the labor force. In 1950 white collar workers accounted for 38 percent of all jobs. By 2018 this share rose to 64 percent. As a result, the share of blue collar jobs fell from two-thirds to about one-third. This shift is a reflection of the increased education level of the work force. Women made major inroads into both occupational categories. From 1950 to 2018 their share of employment rose by 14 percentage points (34%) in white collar jobs and by 11 percentage points (52%) in blue collar jobs.⁹

With respect to specific professions, in 1950 the general category “laborers” held the largest share at over 6 percent of the total. There were more mechanics (3.3%) than health care professionals (2.1%) and more private household workers (3.0%) than teachers (2.2%). Also there were more stenographers, typists and secretaries (3.2% for the whole group), truck and tractor drivers (2.9%), carpenters (2.0%), bookkeepers and cashiers (1.9%), and waiters and waitresses (1.6%) than chemists and engineers combined (1.2%).¹⁰ In 2018 three major categories had shares of employment in excess of 10 percent: management (11.7%), office and administrative support (11.3), and sales and related (10.2). Together these three categories accounted for one-third of total employment. Two other categories had employment shares between 6 and 10 percent: health care practitioners, technicians and support (8.4%), and education, training and library (6.0%). Production workers had a share (5.5%) similar to food preparation and services (5.3%), and business and financial operations (5.0%). Laborers accounted for less than 3 percent of total employment (14.1% of employment in the goods-producing sector). A new major job category was created: computer and information research scientists. Non-existent in 1950, in 2018 this new category included more than 5 million jobs, accounting for 3.1 percent of all jobs.¹¹

Table 2-4 summarizes the changes in selected indicators of labor force performance. The first indicator (employment as percent of the population) is a rough measure of the dependency rate. For 1950 it indicates that about 60 percent

of the population was supported by the work of 40 percent. In 2019 the split was almost equal: 48 percent supporting 52 percent. However, there is a difference between 1950 and 2019 in the composition of the “dependent” population. From a fiscal perspective, the 2019 composition is more favorable because it contains a larger share of seniors, who have higher financial capacity than their young counterparts and make a substantial contribution to the government coffers. From an economic perspective, it is less favorable because it has a smaller share of younger people, which represents the demographic base for future labor force growth. We notice that in 1950, 56 percent of the civilian non-institutional population (CNIP) over 16 was employed. This rate increased by nearly 5 percentage points in the following 69 years. In both years the number of employed people was less than half of the population. Because employment grew at a slightly higher rate than the labor force, the unemployment rate declined by more than 1.6 percentage points.

Table 2-4. Summary Indicators of Labor Market Performance, 1950 and 2019

Category	1950	2019	Change
Employment as Percent of the Population	39.1	48.0	8.9
Employment as Percent of the Civilian Non-Institutional Population	56.1	60.8	4.7
Unemployment Rate	5.3	3.7	-1.6

Source: USUS Bureau of Labor Statistics (2019), *Labor Force Statistics: Employment Status of the Civilian Non-Institutional Population*, Table 1.

One of the major labor market developments over the past 70 years has been the rise and decline in labor union membership. During the first three decades of the 20th century, union membership increased but union intensity (the ratio of members to non-agricultural employment) fluctuated around the 10 percent mark. Following the introduction of the National Labor Relations Act (NLRA) in 1935, the legislation governing relations between labor unions and private employers, union membership grew rapidly. In 1950, 209 unions operated in the United States: 107 were affiliated with the AFL, 33 with the CIO, and 69 were independent. These unions had a combined membership of 14.3 million workers, which represented 31.5 percent of non-agricultural workers, 30.4 percent of wage and salary workers, and 24.2 of all employed workers.¹²

A combination of factors—shifts in the industrial composition of employment away from the goods-producing sector, globalization of trade, declining popularity among the public, expanded political power of corporations, and a less favorable political and legislative environment—led to a steady decline in the rate of union membership, which accelerated after the 1980s. By 2019 only 10.3 percent of American workers were members of a labor union. This figure conceals major differences between the public and private sectors. In the former, 33.6 percent of employees were union members compared to 6.2 percent in the private sector. There was also great variation in the degree of unionization among industries. Only in three major industries the rate of unionization exceeded 10 percent: transportation and utilities (17.3%), education services (12.3%), and construction (12.6%). In manufacturing, the traditional bedrock of unionism, only 8.6 percent of workers belonged to a labor union. The lowest rates of unionization were found in trade (4.1%), leisure and hospitality (2.9%), professional and business services (2.2), and financial activities (1.9%).¹³

A large portion of the employed population is made of the self-employed. In 1950 there were an estimated 10.2 million self-employed workers in the United States—about 4.7 million in farming and 5.5 million in the non-farming sector—representing approximately 17 percent of total employment.¹⁴ Over the following 69 years this number increased by 60 percent reaching 16 million in 2019—6.2 million incorporated and 9.8 million unincorporated—equivalent to 10 percent of employment.¹⁵ This number is 6.2 million less than the number of personal income tax returns filled by the self-employed, representing 14.1 percent of employment.¹⁶ Three industrial sectors—professional services, repair and personal services, and construction—have self-employment shares in excess of 10 percent and together they account for 37 percent of the total. An additional four sectors—administrative services, retail trade, transportation, and health care and social assistance—have shares between 8 and 10 percent. Together they account for nearly 37 percent of the total.

A different view of self-employment is presented in a recent survey conducted by Gallup for Quickbooks.¹⁷ This survey was carried out between February and April 2019 and covered workers 18+ throughout the country. Its measure of self-employment is based on self-identification as self-employed the week previous to the survey. The results indicate that 44 million workers reported being self-

employed during a given week. This represents nearly 28 percent of total employment, close to three times the estimate by the Bureau of Statistics. Self-employment is an increasing component of a labor market that is evolving into a more decentralized structure which offers new opportunities to the modern worker-capitalist but also created risks with respect to job and income instability and lack of coverage of health care and other benefits.

Summary

Over the past 69 years the US labor market has been re-structured through a variety of important changes. First, the influx of women in the labor market led to a labor force growth substantially in excess of the growth of the population and re-balanced the gender composition of employment. It also re-arranged the industrial structure by promoting the expansion of certain sectors, particularly leisure and hospitality, as home production became market activity. Second, there was a geographic shift of economic activity and a shift of employment from the Northeast and Midwest to the South and West. Third, economic activity shifted from the goods-producing, particularly manufacturing, to the services-producing sector. Fourth, the rising educational attainment of the labor force altered the occupational distribution of employment. Fifth, globalization, the changing industrial structure, and evolving attitudes toward organized labor led to a rapid decline in the degree of unionization in the private sector. Finally, in the recent past there has been a revival of self-employment. This development may be a sign of what's in store for the labor market in the future.

CHAPTER 3. HOURS OF WORK

This chapter focuses on the allocation of time by the civilian population 15+ in 1950 and 2019. Before presenting my estimates, it may be useful to review briefly a few earlier studies.

Brief Review of the Literature

The best known of the earliest studies on leisure is the work of Sebastian De Grazia (1962). In the quantitative portion of his book, De Grazia included a summary of the unpublished results of a time use survey of men and women age 20-59 conducted by J. Ward, Inc., which shows that men spent 9.2 of the 17 hours between 6 a.m. and 11 p.m. working (home and away) and 4.5 hours engaged in leisure activities. The corresponding values for women were 8.1 and 5.1 hours. De Grazia explored in details the concept of leisure and separated it from free time. For De Grazia, leisure is not “a calculation of hours, but a state of being, a condition of man, which few desire and fewer achieve” (p. 8). He explains how technological change has increased human commitment to other forms of work at the same time as it has reduced the role of humans in the production process, an effect that may prevent leisure, as he defines it, from ever increasing.

Another important contribution to the study of time allocation is that of Robinson and Godbey (1999) who compared data from three diary-based surveys of active adults 18 to 65 years of age—1965, 1975, and 1985. Their results do not support De Grazia’s expectations that leisure time would not increase over time. They found that, while time spent on paid work increased by almost 3 hours per week for women from 1965 to 1985, it fell by more than 9 hours a week for men. They also found that free time increased by nearly 5 hours per week for the sample population, and more for women (almost six and a half hours per week) than for men (slightly over 3 hours). Most of the increase in leisure was allocated to watching TV.

Aguiar and Hurst (2006) extended the comparison of time allocation to the five decades from 1965 to 2003, also using data from diaries. Their results are consistent with those of Robinson and Godbey (1999). According to their estimates, the number of weekly hours spent working (market plus non-market work) fell by nearly 7 hours. Most of the decline was in non-market work. The time dedicated to market work fell only by 1 hour and 14 minutes per week. For

men a larger reduction in market work was partly offset by an increase in non-market work. For women a large decline in the hours dedicated to non-market work was partly offset by a substantial increase in market work. During the same period there was an increase of nearly 5 hours per week in leisure, defined to include socializing, passive and active leisure, volunteering, pet care, gardening, and recreational child care. The increase in leisure was double for men (about 6 hours per week) than for women.

Ramey and Francis (2009) combined in a consistent manner a variety of data sources to develop a time series on work and leisure by decade from 1900 to 2005 for the population 14+. They measured leisure as a residual, specifically, the difference between the total number of hours available in a week and the sum of market work, non-market work, the associated commuting time, and necessary time. For the period from 1960 to 1980 they obtained results similar to those of Robinson and Godbey (1999). The time dedicated by each person on average to market work (paid work plus education) remained almost constant at close to 24 hours per week, but non-market work declined by 4.1 hours per week from 24.9 hours in 1960 to 20.8 hours in 1980. As a result, leisure time increased by 4.5 hours per week from 39.8 to 44.3 hours.

The longer time span covered by their analysis offers a broader perspective on long-term changes in the allocation of time in America. From 1900 to 1980 there was a steady but not precipitous decline in the number of hours of paid work, which fell by 7.3 hours per week over the entire period. At the same time there was a substantial increase in the hours dedicated to education which rose from 48 minutes per week in 1900 to 3 hours and 6 minutes in 1980. Thus, the decline in market work was limited to 5 hours per week. There were also small changes in the hours allocated to non-market work which fell by only 2 hours per week from 1900 to 1980. The overall decline in work amounted to 7 hours per week. The decline in work time was associated with an increase of 7 hours and 24 minutes in leisure defined to include purchases, care of household and non-household members, care of house and grounds, preparing and cooking food, and taking care of apparel. A reversal of those trends occurred from 1980 to 2005. The time allocated to market work increased by 2 hours per week and that allocated to non-market work by 1 hour and 24 minutes. As a result, leisure time declined by 3 hours and 42 minutes per week.

For studies covering periods prior to the availability of detailed surveys of time use at the beginning of the 2000s decade, some of the variation in results among published studies was due to methodological differences. Before presenting the comparison of time use between 1950 and 2019, I want to clarify some of the major conceptual issues and explain the methodology that I employed.

Concepts

The constant element in all human activities is time. It has two fundamental characteristics that set it apart from all other factors that influence human behavior. First, time is fixed in supply, in the sense that we cannot add to it. We can perform more than one task in a given span of time, but we cannot make a day longer or shorter than 24 hours. Second, it cannot be stored, which means that, in a given period of time, the time we don't use on activity A must necessarily be spent on other activities. Thus, willingly or unwillingly, we are required every day of our lives to choose how to spend the next 24 hours. If we do not make that choice explicitly, it will be made for us.

Because time is entirely filled by what we do, we can analyze its use by identifying the major categories of activities we undertake. Because of our physical nature and our requirements and responsibilities as individuals, members of private institutions, and members of society at large, our choices in the allocation of time involve different degrees of freedom. One way of organizing human activities is to separate them in accordance with the degree of freedom associated with our choices. An example of this type of classification of human activities is presented in Table 3-1. In this classification, at the more general level, time use is separated into two main categories: *necessary time* and *discretionary time*.

The activities associated with *necessary time* offer the least amount of freedom of choice. The first set involves activities undertaken for the purpose of satisfying physical needs, namely sleeping, eating, and personal care. One could also add exercise to this list on the assumption that it helps promote overall health. While we share physical requirements with other members of the animal kingdom, we have additional needs, some of which are shared with other animals and others may be unique to the human race. Studies of humans and non-humans have proven the existential need to connect with other beings at the emotional level and to

establish close and stable relationships with them. These emotional needs are genetically driven and serve in part to facilitate the reproduction process. We also share with many other members of the animal kingdom an innate sense of curiosity and a desire to explore. This need, combined with our greater intellectual capacity, has allowed us to explore further than our close surroundings and has taken us beyond the borders of our planet. The journey of exploration has also taken us deep inside our own being and has unleashed creative powers that have led to the creation of masterpieces in literature, music, and art. Finally, archaeology and anthropology have proven that from prehistoric times humans have shown a belief in a connection with forces that transcend our powers of comprehension. Whether expressed through formal organizations or simply kept as a personal belief, this need has perhaps been the most powerful force driving human behavior through the millennia. For the above reasons, I suggest that necessary time should include the activities that serve intellectual (except for formal education), emotional, and spiritual needs of human beings. Accordingly, in the classification contained in Table 3-1, necessary time refers to the activities that satisfy the needs of body, mind, soul, and spirit.

Table 3-1. Elements of Time Allocation

Necessary Time	Discretionary Time	
Activities Aimed at the Satisfaction of Physical, Emotional, Intellectual, and Spiritual Needs	Production of Goods and services <i>Work</i> Market (Labor, Human Capital) Non-Market (Home Production, Volunteerism)	Activities Aimed at the Satisfaction of Elective Human Wants <i>Free Time (Leisure)</i> Creative Activity Recreational Activity

Discretionary time can be divided into two major components depending on the degree of choice: work and free time.

Work. The Oxford English Dictionary defines work as an “activity involving mental or physical effort done in order to achieve a purpose or a result.” According to the Merriam-Webster Dictionary, to work is “to exert oneself physically or mentally... for a purpose...” In the Free Dictionary, work is defined as “physical or mental effort or activity towards the production or accomplishment of something.” According to these dictionaries, the definition of work contains three elements: (1) a physical or mental effort, (2) an activity in which the effort is exercised, and (3) a final outcome to which the activity is directed.

Work can be paid or unpaid. In Table 3-1, unpaid work is called non-market work because it does not involve the offer of labor services for monetary remuneration. Of the two major non-market work activities, volunteerism is the activity with the greatest degree of choice. Home production, on the other hand, has characteristics very similar to necessary time. Humans need shelter to survive. Whether they own or rent the dwelling in which they live, they are obligated to dedicate some time to its maintenance. Similarly, the food we eat must be prepared by someone. However, unlike eating which represents necessary time whether the food is consumed at home or away, only food prepared at home is part of home production. Also, the decision to have children or pets carries the obligation to take care of them.

Paid work is the concept of labor used in economic analysis and includes both hired labor services and self-employment. Education and training are a special category. These activities are unpaid. Unlike non-market work, they are not directed at production for own use or use by others, but they serve to prepare individuals for paid work in the future. The time used by those providing the education services is already included in paid work. The time allocated to these activities by the students may be called pre-work and it should be allocated to the paid work category, as is done in Table 3-1.

Free time. Free time includes activities which afford the greatest degree of choice and is generally called leisure. When measured as the difference between total time available and the combination of necessary time (broadly defined to include needs other than physical ones), non-market work and market work, it yields a measure of leisure, narrowly defined. When necessary time is confined to physical needs, we have a measure of leisure broadly defined.

Human activities can also be analyzed with respect to their main purpose. Using economic terminology, we can distinguish activities directed at the production of goods and services (for sale, own consumption, and free consumption by others), investment in a person's capacity to produce in the future, or consumption. In this classification, both non-market and paid work are inputs into the production of goods and services. The latter represents the concept of work used in economic analysis and is known as labor. The acquisition of human capital (education and training) involves a complex production function which incorporates external inputs (the providers of educational programs) and the beneficiaries of the outcome, i.e., the individuals whose effort leads to the acquisition of skills and the improvement in the quality of the labor input. The time spent by educators is treated as labor input into the production of educational services. The time spent by students and trainees is a form of pre-work (preparation for work or for improved labor services) and should be included in the paid work category. However, it involves neither consumption nor an input into the production process. It is an investment in human capital.

Non-market work is composed of home production (including hobbies) and volunteer activities. Home production is similar to paid work as labor services are used in the production process in both cases. The main difference is that, in the case of home production, the goods and services produced are not sold in the market but are consumed by the producers and their families. Volunteer activities have four main properties. First, they generally involve the production and delivery of personal services. Second, the production of these services uses time as its primary, and sometimes exclusive, input. Third, these services are consumed by others. Finally, the benefits of volunteer activities are a net benefit to society. Since these activities are undertaken by free choice, for the service provider the implicit costs of production are offset by the intrinsic non-pecuniary gains. Thus, there is no offsetting cost to the gains enjoyed by the beneficiaries.

While necessary time involves only consumption activities, work is almost entirely directed at productive activities. Only the time allocated to home production is associated with joint production/consumption as the goods and services produced are consumed by the producer. Free time is a hybrid of the two and may be used for either productive activities or consumption. Because these two components of leisure have special properties, I call them creative and recreational

activities. A fundamental property common to both is their aim at satisfying elective human wants. Necessary time is directed at the satisfaction of human needs, leisure is aimed at satisfying elective human wants, and work produces goods and services that can satisfy both.

The recreational component of leisure is generally associated with consumption which can produce satisfaction directly, as in the case of someone watching a sunset, or with the help of other services, such as watching a film in a movie theater. The creative component, commonly referred to as hobbies, follows the same process as paid or unpaid work in the sense that it requires the combination of time and effort leading to a certain “creation.” This process differs from work in a fundamental aspect: while it may sometime lead to the creation of tangible goods whose consumption can yield pleasure, the main source of satisfaction is the creative process itself.

An important aspect of human activity is its capacity to impact other people, intentionally or unintentionally, an effect economists call externalities. An example of a positive externality from leisure (an activity undertaken by an individual to maximize his own pleasure which indirectly improves the well-being of others) is a musician performing for pleasure in a public park. An example of a potentially negative externality is the case of someone going for a pleasure ride under the influence of alcohol.

The following example summarizes the interactions between work and leisure. A young woman likes to compose songs and to sing them with her own guitar accompaniment. She has a job as a music therapist at a local nursing home where she sometimes performs her songs. This is work for gain. On weekends she sings for free at another nursing home. This is unpaid work (volunteering). Often in the evenings and weekends she composes songs and sings them for her own enjoyment. This is a hobby with both production and own consumption. Occasionally she records one of her songs, makes a video, and uploads it to her public *YouTube* channel for free public use. This is a hobby that involves a creative activity, own consumption, and consumption by others. Sometimes she watches the video herself. This is recreational leisure.

It is important to recognize that the separation between work and leisure is not as clear-cut as the foregoing discussion might indicate because there are a variety of interactions among different activities and certain activities may serve more than one function. For example, attending meetings of formal worship on the prescribed day is aimed at fulfilling a person's spiritual needs, therefore, this activity should be recorded as necessary time. When such a meeting includes elaborate musical performances, part of the service is entertainment and should be assigned to leisure. Going for a stroll may be treated as leisure, but if it turns into a brisk walk, it is an activity that improves the cardiovascular system and may be treated as necessary time. Taking care of a pet involves activities similar to taking care of children, therefore, is part of non-market work. To the extent that it also serves to fulfill a person's emotional needs, it is part of necessary time broadly defined. Taking a pet for a walk may also be part of leisure to the extent that it provides the opportunity to enjoy fresh air and relaxation. The interactions are even more complex in the case of intellectual needs. Reading a mystery novel just for pleasure is a leisure activity. Reading a how-to-do book for a hobby project is an activity ancillary to work. For the general public reading a poetry book is a leisure activity. For a poet it may be an input to future work. Watching a sunset is a recreational leisure activity. For a painter it may serve as an inspiration for a new painting.

Modern technology is increasingly allowing people to *stretch* time by providing the capacity to perform more than one activity in a given time span. For example, a person can perform various tasks while listening to music and one can work while traveling on a plane to attend a conference in another city. This stretching of time blurs the lines between work and leisure when they overlap. We do not have detailed measurements of time stretching as time-use studies divide a specific time span, usually a day, into separable activities. As technology expands our capabilities to stretch time through overlapping activities and through more pervasive connections with machines and artificial intelligence, we may need to revise our understanding of time as a fixed resource that can be used in competing activities.

Methodology

This chapter provides estimates only of the time allocated to work. Necessary time and leisure are discussed in a later chapter. In the context of time use two additional sets of activities ought to be included in paid labor, although they do not directly involve work: (1) commuting and coffee breaks, and (2) job search and work in the hidden economy. Commuting to work is time necessary for the performance of a job. Except when an employment contract allows work from home, to be productive a worker must be at the place of employment. Therefore, the time spent on commuting is an essential component of paid work. A coffee break is an optional interruption of a working activity. One may argue that it is closely related to work as the rest may be beneficial to a worker's overall performance. If the break improves a worker's productivity over the entire work shift, then the "time wasted" during the break may be more than compensated by the improved performance after the break. For the above reasons I have included in paid work both commuting time and coffee breaks. Time spent on job search is a legitimate component of labor. Within a time-use framework any time allocated to activities in the hidden economy, including illegal activities, should in theory be included in labor, but practical constraints limit the estimates to legal activities.

My comparison of the hours of work per person (civilian population 15+) for 1950 and 2019 is not based on totally consistent data because of differences in the sources of information. For 2019 I could rely on detailed data from the American Time Use Survey (ATUS). No such source of information was available for 1950. For that year I had to combine the data that I could find from a variety of sources.¹ For that reason the differences in weekly hours presented in this chapter should not be treated as precise estimates. Rather, they should be interpreted as indicators of broad trends. For example, if the time allocated to work increased or decreased by less than two hours per week over a period of 69 years (less than 2 minutes a week per year), I would interpret that result as an indication of broad stability over the long-term.

Hours of Paid Work per Worker, 1950 and 2019

Estimates of the average weekly hours spent on paid work per worker (which exclude time spent on human capital acquisition but include work-related activities, specifically, commuting time, coffee breaks, job search, and hidden economy activities) in 1950 and 2019 are shown in Table 3-2. We notice that, in

the case of males, the sharp decline in their participation rate was associated with a small reduction in the average weekly hours of paid work per worker (48 minutes or about 7 minutes per week per decade). However, as women joined the labor force in increasing numbers and occupied a greater variety of jobs, their workweek declined by over 4 hours (36 minutes per week per decade). As a result, the average workweek for paid labor fell by over 3 hours from 1950 to 2019. This decline does not represent a steady and uninterrupted downward trend. All of the decline occurred from 1950 to 2003. From 2003 to 2019 the weekly hours dedicated to paid work remained virtually constant for men and women.

Table 3-2. Average Weekly Hours of Paid Work per Worker, 1950, 2003 and 2019

Year	Average Weekly Hours per Worker		
	Male	Female	Total
1950	47.7	42.2	46.1
2003	47.2	37.6	42.5
2019	46.9	38.0	42.8
Change: 1950-2019	-0.8	-4.2	-3.3
1950-2003	-0.5	-4.6	-3.6
2003-2019	-0.3	0.4	0.3

Source: Endnote¹.

Hours of Work per Person, 1950 and 2019

Changes in the major components of time dedicated to total work from 1950 to 2019 are shown in Table 3-3. We notice that the average number of weekly hours allocated per person (civilian non-institutional population 16+) to paid work remained virtually constant between 1950 and 2019 at about 26 hours per week. All that changed was a rearrangement in the paid work time of males and females: the former fell by nearly 8 hours per week and the latter increased by a similar amount. As a result, the male-female gap in weekly hours of paid work per person was reduced from nearly 26 hours in 1950 to about 10 hours in 2019. Because of the expanded enrollment in secondary and post-secondary education, the average weekly hours per person dedicated to the acquisition of human capital more than doubled from 1950 to 2019, resulting in an increase of 2 hours per week for total market work.

Despite all the technological advances in home equipment, the time dedicated to non-market work, 92 percent of which is in the form of home production, did not change much, declining by 1.8 hours per week over a 69-year period. The major change in non-market work was in the share of time by gender. In 1950 women on average allocated to non-market work 30 hours per week more than men. In 2019 this difference was reduced to about 11 hours per week. While the decrease of nearly 12 hours per week for non-market work by women from 1950 to 2019 resulted largely from the greater sharing of household duties between partners, the increase of 8 hours for men was due to both their rising share of household duties and the high share of singles, who acquired full responsibility for their household requirements.

Table 3-3. Average Weekly Hours of Market and Non-Market Work per Person by Sex, 1950 and 2019

Category	1950			2019		
	M	F	T	M	F	T
Paid Work	39.1	13.4	25.8	31.2	21.1	26.0
Market Work	40.8	14.7	27.3	34.2	24.5	29.2
Home Production	8.9	39.4	24.4	18.2	28.3	23.5
Non-Market Work	11.9	42.4	27.4	19.9	30.8	25.6
Total Work	52.7	57.1	54.7	54.1	55.3	54.8

Note: Paid work includes commuting, coffee breaks, job search, and the hidden economy; the difference between market work and paid work is education; the difference between home production and non-market work is volunteerism.

Source: Note²

The combination of the changes in the time allocated to market and non-market work resulted in a nearly equal amount of time per person dedicated to total work in 1950 and 2019, specifically, close to 55 hours per week. This remarkable stability of time allocation over such a long period of time is noticeable for both males and females. For the former, weekly hours of work per person increased by 1.4 hours over 69 years (about 12 minutes per week per decade) and for the latter they declined by 1.8 hours (about 15 minutes per week per decade). In 1950 the time women allocated to total work exceeded men's allocation by about 4 hours per week. In 2019 this difference had been reduced to slightly more than 1 hour.

This convergence resulted from developments in both market and non-market work. As women entered the labor force in increasing numbers, their hours of work per person increased at the expense of those of men. As the time allocated by women to market work increased, the time they spent on non-market work, predominantly home production, fell. This decline was counterbalanced by men who exchanged less time spent on market with more time spent on non-market work. Thus, the only noticeable change in the time allocation to work from 1950 to 2019 was a re-alignment in the roles of men and women with respect to paid work in the labor market and unpaid time for home production.

Table 3-4. Percentage Distribution of Average Weekly Hours of Home Production by Non-Employed Married Women, Average of 1920 and 1965 and Average of 2015-19

	Average Weekly Hours		
	1920 and 1965	2015-19	Change
Food Preparation	36.8	26.7	-10.1
Care and Cleaning of House and Grounds	18.3	21.0	2.7
Care of Clothing	17.7	3.9*	-13.8
Sum of Above Two Activities	36.0	24.9	-11.1
Care of Household Members	13.5	39.6	26.1
Purchases, Management, and Other	13.7	8.8	-4.9

*Time spent on laundry by all women.

Source: Ramey, Valerie A. (2009), *Time Spent in Home Production in the Twentieth-Century United States: New Estimates from Old Data*, Journal of Economic History, Vol. 69, No. 1, Table 3, p. 14; Bureau of Labor Statistics (2020), *American Time Use Survey (ATUS), 2019*, Tables 1 and A-6A.

There were also significant changes in the distribution of time for various home production activities by married women not employed. In 2019 on average these women spent 5 hours less on home production than their counterparts in an average of 1920 and 1965 estimates (an approximation of 1950). In 2019 married women allocated nearly 7 fewer hours per week on food preparation than their 1950

counterparts. A similar gap existed also in the care of clothing. The overwhelming share of this “freed” time was allocated to the care of household members (almost entirely children), which in 2019 accounted for nearly 40 percent of total home-production hours compared to 14 percent in 1950. In 1950, the primary responsibility of a married woman was to put food on the table. In 2019, her main responsibility was to tend to the well-being of her children.

Summary

If we classify the use of the available time with respect to the freedom of choice, we can separate human activities into three main categories: (a) necessary time, i.e. time spent on satisfying basic needs, (b) work which provides goods and services directly or the financial means to purchase them, and (c) free time which can be used for creative endeavors or passive entertainment. This chapter focused on work, both paid and unpaid. Given the rapid technological change, increases in productivity, changes in the gender composition of the labor force, smaller families, higher education, and changes in the structure of the economy that took place over the past 69 years, one would have expected a major reallocation of time use. Instead we notice that the average weekly hours per person dedicated to work remained remarkably constant from 1950 to 2019, and this constancy is noted for both men and women. As the participation rate of women increased steadily, that of men declined, and the gap in the weekly hours of paid work between men and women shrank substantially. The gap also shrank in the case of non-market work as a reduction in weekly hours dedicated by women on home production was offset by increase in the time spent by men on those activities.

CHAPTER 4. WAGES, INCOME DISTRIBUTION, AND POVERTY

The demographic, economic, and labor market changes described in the previous three chapters affected the level and distribution of wages, the degree of income inequality, and the dimensions of poverty. These issues are addressed in this chapter.

Wages

A major feature of the wage structure in 1950 is the relatively low degree of dispersion in hourly wages among the major non-agricultural industries. In 1950 the average hourly wage in the private non-agricultural sector (simple average of 8 major industries) was \$1.54, equivalent to \$16.38 in 2019 dollars.¹ With the exception of two industries—one (transportation) with a slow share of employment and the other (the combination of a variety of service industries) with a large share—hourly wages among the remaining industries were distributed within a range of 13 percent (8% above and 3% below the simple mean). Two features of the industrial wage structure in 1950 need to be emphasized. First, the jobs in the non-agricultural goods-producing sector, which accounted for over 40 percent of employment and were dominated by male workers, offered above-average wages. Second, the industries where most of the workers were females—trade (particularly retail trade) and services broadly defined—offered below-average wages. Thus, in 1950 wage inequality was determined to a large extent by traditionally defined roles of men and women even in the labor market.

In 2019 the average hourly wage in the private non-agricultural sector was \$28.24, and the simple mean of the hourly wages by industry was \$30.32. This means that the inflation-adjusted wage rate in the private non-agricultural sector increased at an average annual rate below 1 percent (0.90%) from 1950 to 2019 (comparison of simple means). The average hourly wage rate was very similar in the goods-producing and services-producing sector: \$29.26 in the former and \$28.0 in the latter.² There was greater variation in hourly wage rates among industries than in 1950. In the goods-producing sector, mining and construction maintained their position with above-average rates, but manufacturing offered only average wage rates. In the services-producing sector, the big winners in 2019 were the communications (information)-utilities sector, with wages 50 percent higher than the average, and financial activities, with wages more than one quarter higher than

the average. Below-average wages were offered in the transportation, trade, and service industries (except for professional and business services, and education and health care services). The hourly wage rate at the top (average of utilities and information) now was more than double that at the bottom (average of retail trade, food and hospitality, and other services). Moreover, when the above top and bottom industries are excluded, the rest are distributed within a range of 45 percent (19% above the overall simple means and 18% below).

At the base of the wage structure there is the minimum wage. Introduced federally in 1938 with the *Fair Labor Standard Act* at a rate of \$0.25 per hour, the minimum wage was raised three times over the following twelve years and in 1950 stood at \$0.75 per hour. Adjusted for inflation it would be equivalent to \$7.98 in 2019, 73 cents more than the current value in 2019.³ In 1950 the minimum wage was equal to 49 percent of the average hourly wage in the private non-agricultural sector (simple average of 8 industries), 47 percent of the average wage in manufacturing, and 71 percent of the average hourly wage rate in the services industries.

In 2019 the federal minimum wage of \$7.25 per hour was equivalent to 26 percent of the average hourly wage in the private non-agricultural sector, a share roughly half that in 1950. Had it kept up with inflation and followed the growth of the real wage rate in the private non-agricultural sector, thus maintaining constant its ratio to the average wage, the federal minimum wage would have been nearly \$14 an hour in 2019. It should be noted that a number of States have introduced higher minimum wage rates than the federal rate. By 2020 thirty-one States plus the District of Columbia will exceed the federal rate and forty-four counties and cities will have rates higher than their State's minimum wage. Finally, a number of large corporations voluntarily offer minimum wages ranging from \$13 to \$20 per hour.⁴

One of the rationales for a minimum wage is allowing people who work full time to earn a standard of living above poverty. The relationship between minimum wages and poverty lines for four household types in 1950 and 2019 is shown in Table 4-1. This table compares the hourly wage rate that would generate the poverty-line income, assuming full-time employment for 52 weeks of the year and working 40 hours a week. Table 4-1 shows that in 1950 an individual earning the federal minimum wage, working full time and full year would have received an annual income 27 percent higher than the poverty line. The same individual would live at near the poverty threshold if he supported another person. In 2019 a similar

individual would earn an annual income 16 percent higher than the poverty threshold, but would live 9 percent below the poverty line if he had a dependent. For a family of four to have income just above the poverty line would require two workers earning the federal minimum wage: a primary bread winner working full time and full year and a secondary worker working full year and nearly 30 hours per week.

Table 4-1. Poverty-Line Income and Associated Hourly Wage Rates in 1950 and 2019

Household Size	1950		2019	
	Poverty Line \$ Per Year	Associated Wage \$ Per Hour	Poverty Line \$ Per Year	Associated Wage \$ Per Hour
Unrelated Individual	1,227	0.59	13,011	6.25
Two-Person Household	1,594	0.77	16,521	7.94
Three-Person Household	1,898	0.91	20,335	9.78
Four-Person Household	2,428	1.17	26,172	12.58
Federal Minimum Wage		0.75		7.25

Source: The US Census Bureau began publishing poverty lines in 1959. I developed estimates of the poverty lines in 1950 by deflating the 1959 values by the Consumer Price Index according to endnote² above. US Census Bureau (2020), *Historical Poverty Rates: People and Families – 1950 to 2019*, Table 1.

In 1950 disparities of wage and salary income were larger among professions. The median annual wage and salary income for all workers amounted to \$2,043. The income of the top earners (managers and officials) was 90 percent higher than the median and 2.5 times the income of the lowest earners (service workers).

Specialized workers in the goods-producing sector (craftsmen and foremen) had the second highest wages and their labor earnings were 62 percent higher than the median. Third place was held by another group of specialized workers, those in professional and technical occupations. The bulk of workers operated in professions that offered earnings much closer to the median. Top among this group were *operatives* with earnings 15 percent above the median, while at the bottom we find those engaged in a variety of service occupations with wages 24 percent below the median. Sales and clerical workers earned slightly above-median wages,

while laborers had wage and salary income only 10 percent below the median.⁵ A notable feature of the earnings distribution in 1950 was the relatively low salaries of CEOs: on average a CEO received 20 times the earnings of the average worker.⁶

The gender gap in wage and salary earnings was quite large in 1950. The median labor earnings of female workers on average were less than half those of men.

There were also large variations in this gap among occupational categories.

Women earned two-thirds as much as men in clerical occupations, but half among managers and officials and one-third in sales and service occupations.⁷

The distribution of wage and salary income by occupation was more unequal in 2019 primarily because of the wider gap between the top and bottom occupational groups. In 2019 the top occupational group (health professional specialists) had wage and salary earnings 8.8 times the average of the 12 lowest-wage occupations (Table 4-2) and 4.2 times the mean earnings. The average of the above lowest-wage occupations amounted to about one-half of the mean.

The twelve professions with the highest and lowest earnings are listed in Table 4-2. The top two categories of professions are in the health care field. The first includes the specialists with net earnings in excess of \$200,000 per year. The next group includes similar health professional with net earnings between \$150,000 and \$200,000 per year. A close third is the category of airline pilots/flight engineers (\$175,000), followed by lawyers and judges (\$142,000). The remaining 8 categories of professions are clustered within a range of \$11,000 per year. Thus, there is wide variation of earnings even among the top 12 occupational groups as the range of annual earnings between the highest and the lowest (\$108,000) was double the average annual earnings in all occupations. By contrast, workers at the lower end of the wage scale are bunched within a very narrow range. In 2019 the difference between the earnings of the top occupation (anesthetist with \$261,700) and a child care worker (\$25,500) was a whopping 236,000. Put differently, it would take the anesthetist 5 weeks to earn what the child care worker earns working full time for an entire year.

Table 4-2. Professions with Highest and Lowest Wages in 2018

Professions	Earnings ^a	Professions	Earnings ^a
	\$1,000		\$1,000
Health Care Specialists (1)	227.0	Packers and Packagers	27.7

Health Care Specialists (2)	182.8	Manicurists and Pedicurists	27.4
Airline Pilots/Flight Engineers	174.9	Maids and Housekeeping Cleaners	26.8
Lawyers and Judges	141.2	Food Preparation and Service	26.7
Managers	130.2	Parking Attendants	26.5
Astronomers and Physicists	130.1	Home Health/Personal Care	26.4
Law Professors	130.0	Child Care	25.5
Computer, Information Research Engineers	127.5	Laundry and Dry Cleaning	25.4
Engineers	121.1	Recreation Protection Services	25.4
Health Specialist professors	121.0	Gambling Services	25.0
Air Traffic Controllers	120.4	Entertainment Attendants	24.5
Personal Financial Advisers	119.3	Shampooers	22.9

^aAnnual Wage and Salary Earnings.

Source: Bureau of Labor Statistics (2019), *Occupational Employment and Wages* – May 2019.

In terms of remuneration CEOs are a category apart. In 2018 the top CEO received \$103.2 million, equivalent to nearly 2,000 times the mean wage of all wage and salary workers. The top 25 CEOs received combined compensation of \$1.215 billion, equivalent to the combined earnings of 23,383 workers paid the mean wage.⁸ In 2018 the average annual earnings of the CEOs of the top 350 US companies was roughly 17 million, equivalent to 327 times the mean earnings of wage and salary workers.⁹

Two major factors affected the changes in the distribution of wages among individuals: the education premium and the gender gap. A measure of the education premium (the percentage deviation from the earnings of males 25+ with a high school diploma only) is shown in Table 4-3. We notice a shift over time in the education premium in favor of higher education. In 1949 the largest premiums were from the completion of high school education and earning a bachelor's degree. A male worker 25 years of age could earn on average 32 percent more by obtaining a high school degree. Attending college without graduating would add 24 percent to earnings and earning a bachelor's degree would provide a bonus of an additional 33 percent. Advanced degrees did not add much to take-home pay as the extra income gain above the B.A. was only 11 percent. In 2019 there was a clear separation between the earnings associated with higher education attainment or without it. Completing high school now gained only a 24 percent premium and adding a few years of college would gain an additional 14 percent. By contrast,

completing a bachelor’s degree instead of just attending college without graduation would generate a premium of 57 percent. In 2019 a male worker with a bachelor’s degree would earn on average two-thirds more than one with a high school diploma. The education premium is also high for advanced degrees, yielding a premium of 55 percent over a B.A. and more than double (122%) over a high school diploma. In 2019 there was also wide variation in the premium according to the level of advanced education: it was 100 percent over a high school diploma for a master’s degree, but 150 percent for the combination of a PhD. or a professional degree.¹⁰

Table 4-3. Percentage Deviation from the Weekly Earnings of High School Graduates by Education Level: Males 25+, 1961 and 2019

Education Level	Percent Deviation from High School Diploma	
	1961	2019
Less than High School	-32.4	-24.3
Some College	23.6	16.0
Bachelor’s Degree	57.1	67.0
Advanced Degree	68.0	121.6

Source: US Department of Education (1993), *120 Years of American Education: A Statistical Portrait*, Table 7, p. 22; US Bureau of Labor Statistics (2019), *Usual Weekly Earnings of Wage and salary Workers*, Second Quarter, Press Release, Table 5.

From 1950 to 2019 education affected the wage structure also through the increase in the share of the population with higher levels of education. In 1950 nearly two-thirds of persons 25+ had less than a high school diploma and only 14 percent had some college or post-secondary education degrees. By 2019 the table had been turned: 62 percent had more than a high school diploma and only 10 percent has less than a high school diploma.¹¹

The widening education premium was counterbalanced by a narrowing of the gender earning gap. As women entered the labor market in increasing numbers and acquired rising levels of education, the gender gap began to fall. In 1950 the median wage and salary earnings of women were less than half those of men. By 2019 this 52-percentage point gap had been reduced to 9 percentage points.¹²

Income and Wealth Distribution

Income. The distribution of income by household quintile is shown in Table 4-4. This table shows a higher concentration of income in 2019. While the income share of the bottom 20 percent of households remained practically constant at about 3 percent between 1950 and 2019, the top 20 percent gained nearly 7 percentage points, increasing its share to 52 percent, at the expense of the middle 60 percent. Thus, in 2019, the top 20 percent had a larger share of income than the remaining 80 percent. Moreover, the share of the top 5 percent increased by nearly 5 percentage points, reaching 23 percent in 2019. In that year, the top 5 percent of households received a share of income 7.4 times that of the bottom 20 percent, almost one-third more than in 1950. Also, in 2019 the top 5 percent had a share of income almost equal to that of the bottom 60 percent of households, substantially higher than the equivalent of less than 50 percent in 1950.

Table 4-4. Shares of Total Income by Quintile, 1950 and 2019

Quintiles	1950	2019	Change
Lowest	3.2	3.1	-0.1
Second	10.4	8.3	-2.1
Third	17.2	14.1	-3.1
Fourth	24.1	22.7	-1.4
Top	45.1	51.8	6.7
Top 5 Percent	18.2	23.0	4.8

Source: Herman Philip Miller (1966), *Income Distribution in the United States*, 1960 Census Monograph, Tables I-9 and I-10; US Census Bureau (2019), *Income and Poverty in the United States: 2019*, Table A-3.

In addition to the distribution of wage and salary income among individual workers, the degree of inequality of total income among households is affected by three major factors: the rising share of two-income families; the changing distribution of households among unrelated individuals, couples, and single-parent families; and the increasing share and unequal distribution of passive income.

In 1950 the pattern of income inequality was dominated by couples, which represented 71 percent of households. Only 22.8 percent of couples had both husband and wife employed. This percentage was lowest at the bottom and top of the income distribution (about 13% at income one-third of the median and at income above 3 times the median) and highest in the middle with a top value of

37.3 percent for income around 2 times the median. Because the median income of women was much lower than that of men (unattached females earned 55 percent of unattached males and 28 percent of the overall median), the median income of two-income families was only 21 percent higher than the income when the wife was not in the labor force. In addition to wide income disparities by gender there were also large income differences between families and unattached individuals: the median income of the latter represented 35 percent of the household median and 31 percent of the median income of couples. These wide income disparities by gender and family type had little effect on the overall degree of inequality because unattached individuals represented only 19 percent of households and single-parent families headed by a female were only 8 percent of households.¹³

In 2019 couples represented only 48 percent of households, two-thirds of their share in 1950.¹⁴ During the same period the proportion of couples with two-income earners doubled to 56 percent.¹⁵ Moreover, the higher level of education among women and the associated shrinking of the gender wage gap led to a higher concentration of affluent couples at the top of the income scale. Although in some cases two incomes are needed just to keep the family from falling into poverty, in other cases two incomes are desired to move up the social ladder. In 2019 two-earner families represented 42 percent of families, but this ratio was not uniform among different income groups. It was 32 percent among two-earner families with \$50-55,000 total income, 49 percent for \$100-105,000, 54 percent for \$150-155,000, and 59 percent for income over \$200,000.¹⁶ As the influx of women into the labor force and their rising education levels facilitated the coupling of high income earners, the combined income of couples rose at a faster rate than the average. In 2019 the median income of couples was nearly 50 percent higher than the median for all households, compared to an excess of only 12 percent in 1950. The distributional impact of this income concentration among couples was mitigated by two factors. First, as mentioned earlier, in 2019 couples accounted for less than half of households, a much lower percentage than in 1950. Second, the median income of unattached individuals, which accounted for 35.1 percent of households, compared to 18.8 percent in 1950, increased at a faster rate than the median for all households to a level equal to 60 percent of the overall median, almost double the ratio in 1950.¹⁷

In 1950 wages and salaries contributed the lion’s share of household income. According to the US Census Bureau, “in the great majority of cases, if a family had any wage or salary income, this income represented the major source of income.”¹⁸ In 1960 even in households with income above \$10,000, which represented the top 14 percent of households, over 70 percent of income was in the form of wages and salaries and an additional 18 percent as income from non-farm self-employment. Among these families “only five percent of the aggregate came from interest and dividends and only 2 percent from rents, royalties, and related sources.”¹⁹ In 2017 labor income accounted for 66 percent of household income and investment income (interest, dividends and capital gains) added 10 percent.²⁰

The shares of labor and capital income varied greatly among different income groups. As shown in Table 4-5, the share of labor income rises from 61.7 percent for the first quintile to 70 percent for most of the last quintile. Then it declines rapidly to 44 percent for the top 99 to 99.9 percent and 13 percent for the top 0.01 percent. The relative contribution of capital income (interest, dividends, and capital gains), is negligible for the bottom 80 percent of households and remains low (8 percent) even for households in the 81-99 percent range. However, for the top 0.01 percent, capital income accounts for two-thirds of household income. The share of capital income for the top 0.01 percent of households mirrors the share of labor income for the bottom 80 percent of households.

Table 4-5. Major Components of Household Income by Selected Percentiles in 2017

Income Component	Percentage Distribution			
	Bottom 20%	81-99%	99.99%	Top .001
Labor Income	61.7	70.0	44.4	13.3
Business Income	7.9	6.7	23.6	18.3
Capital Income and Gains	1.5	8.2	27.0	66.3
Other Market Income	4.0	9.9	3.7	1.9
Social Insurance Benefits	25.3	4.9	1.0	0

Source: Congressional Budget Office (2020), *The Distribution of Household Income in 2017*, Supplementary Table to Exhibit 2.

Income inequality in the US is projected to increase over the next few years. According to the Congressional Budget Office (2019), from 2016 to 2021 the share

of household income before taxes and transfers will remain unchanged for the bottom quintile, it will fall for the next three quintiles, but will increase by 0.7 percentage points for the top quintile and by 0.6 percentage points for the top 1 percent.²¹ When household income is adjusted for taxes and transfers, only the top quintile's share will increase (0.4 percentage points) while that of the bottom 80 percent of households will decline. The share of the top 1 percent is projected to increase by almost 1 percentage point.²¹ As a result, the projected increase in the Gini coefficient for income after taxes and transfers will be double that for income before taxes and transfers.²³

Wealth. Wealth results from the accumulation of income not spent and the receipt of gifts, bequests, and inheritances. Because high income individuals have considerable flexibility with respect to the amount of their income they can save and invest and greater likelihood of receiving large bequests while low income individuals have just enough to pay their bills, wealth tends to be more unequally distributed than income. Moreover, in the absence of redistributive policies, inequality in the distribution of wealth tends to increase in line with the growth of income.

Table 4-6. Wealth Distribution by Selected Percentiles, 1950 and 2016

Percentile	Share (%)		
	1950	2016	Change
Bottom 50%	3.0	1.2	-1.8
50% to 75%	9.8	7.2	-2.6
75% to 90%	14.8	14.3	-0.5
Top 10%	72.3	77.4	5.1
To 1%		39.6	

Source: Moritz Kuhn, Moritz Schularick, Ulrike Steins (2018), *Income and Wealth Inequality in America, 1949-2016*, Institute Working paper 9, Federal Reserve Bank of Minneapolis, Table 4; Edward N. Wolff (2017), *Household Wealth Trends in the United States, 1962 to 2016: Has Middle Class Wealth Recovered?*, NBER Research Paper 24085, Table 2.

The shares of wealth for selected percentiles in 1950 and 2016 are shown in Table 4-6. In 1950 the bottom half of households received only 3 percent of total wealth while the top 10 percent received 72 percent of the total. The top 10 percent

possessed more than 2.5 times the wealth of the bottom 90 percent. The concentration of wealth at the top increased from 1950 to 2016 as the top 10 percent of households gained 5 percentage points at the expense of the bottom 90 percent. By 2016 wealth at the top was concentrated in the top 1 percent which held 40 percent of the total. In the same year, the top 1 percent of households held nearly twice as much wealth as the bottom 90 percent. The high concentration of wealth is also evident from Federal Reserve data. In 2019 the net worth of American households amounted to \$107 trillion. The 1.286 million households in the top 1 percent held 31 percent of that amount for an average of \$26 million per household. The next 9 percent of households (11.572 million) held 39 percent of the total or \$3.5 million per household. The top 1 percent of households held more wealth than the bottom 90 percent and 19 times the wealth of the bottom half of households.²⁴

In 2019 the gross wealth of American households amounted to \$122 trillion. Of this total, 24 percent was in real estate, nearly 5 percent in consumer durables, 22 percent in equities and mutual funds, 22 percent in pension entitlements, 10 percent in personal businesses, and nearly 18 percent in other assets. Increased concentration of wealth is also associated with differences in the composition of wealth among various groups of households. As shown by Saez (2017), in 1950 more than half of the wealth of the bottom 90 percent of households was in the form of housing net of mortgages. Pension accounts added 21 percent, and the combination of business income and equity/fixed income claims accounted for the rest. By 2012 not only did the share of wealth owned by this group decline by 5 percentage points but its composition changed substantially. Pension accounts now contributed 70 percent of the total while the contribution of housing net of mortgages fell to 17 percent.²⁵ According to Saez (2017), “on the housing front it is well known that the explosion of debt refinancing has eaten into the equity of the bottom 90% of families.”²⁶

Table 4-7. Percentage Distribution of Wealth by Source and Selected Percentile, Second Quarter 2019

Source of Wealth	Share (%)				
	Bottom 50%	50-90%	90-99%	Top 1%	Total
Real Estate	50.7	33.9	20.4	12.6	24.0

Consumer Durables	19.4	6.4	2.7	2.3	4.6
Equities/Mutual Funds	3.0	8.0	21.7	41.6	22.0
Pension Entitlements	11.9	31.2	29.2	4.7	22.0
Personal Business	3.0	4.0	8.8	18.8	9.8
Other	12.0	16.5	17.1	20.0	17.6

Source: Governors of the Federal Reserve System (2020), *Distributional Financial Accounts: Distribution of Household Wealth in the United States since 1989*.

The variation in the components of wealth among selected percentiles in 2019 is shown in Table 4-7. This figure highlights the differences between those at the top and those at the bottom. The top 1 percent of wealth owners holds 61 percent of their gross wealth in the form of equities and mutual funds (42%) and personal business (19%). For this group real estate accounts for only 13 percent of the total and consumer durables for an additional 2 percent. For those at the bottom half, most of their wealth is in the form of real estate (51%) and consumer durables (19%). Pension entitlements represent a large share of wealth for those in the wealth share range from 50 percent to 99 percent. The top 10 percent holds 88 percent of equities and mutual funds and more than half of that total are held by the top 1 percent.

Personal debt is also distributed unevenly. In 2019 more than two-thirds of personal debt (\$15 trillion) was in the form of home mortgages and an additional 26 percent as consumer credit. The top 1 percent held 28 percent of gross wealth but less than 5 percent of debt. By contrast, the bottom 50 percent held 5 percent of gross wealth and 32 percent of debt. Moreover, for half of wealth owners about three-quarters of the debt was in the form of home mortgages, i.e. debt backed by a real asset. For those in the bottom half, 45 percent of debt was consumer debt, i.e. debt backed only by a household's earning capacity.²⁷

The concentration of income and wealth in the hands of the few has been associated with two diverging trends: the relationship between productivity growth and labor compensation, and the relationship between the "real" economy, measured by nominal GDP and the "financial" economy, measured by the Dow-Jones Industrial Average. As shown by the Economic Policy Institute (2019), productivity and labor income moved along parallel paths from 1948 to 1979, rising by 108 and 93 percent, respectively. However, from 1979 to 2018

productivity increased at more than double the rate of growth of labor compensation.²⁸

While labor compensation kept pace with productivity growth in the three post-war decades, nominal GDP increased at a faster rate than the Dow-Jones Average (average annual growth rates of 7.8 and 4.8 percent, respectively). These trends were reversed in the following 40 years. From 1979 to 2019 the Dow-Jones Average increased at an average annual rate of 8.1 percent compared to a rate of 5.4 percent a year for nominal GDP. These two trends over the past 40 years, if they continue unabated, will contribute to the continuing increase in the concentration of income and wealth. Because the level and distribution of net wealth result largely from a process of accumulation of income and inheritance, they are affected by the structure of taxation on both individuals and corporations.

Corporate Income Taxes. In 1950 there was a two-rate corporate income tax structure in the United States: 23 percent for taxable income up to \$25,000 and 43 percent for any excess over that amount. This rate structure was modified several times over the subsequent 68 years. The last reform was approved in 2017 with the introduction of a single rate of 21 percent. The reduction in corporate income tax rates has been associated with a decline in the share of corporate income tax revenues. In 2018 this revenue source accounted for only 6.5 percent of federal revenues, less than a quarter its share in 1950.²⁹

Personal Income Taxes. In 1950 the personal income tax structure included 24 statutory rates ranging from 20 to 91 percent. This rate structure led to a progressive pattern of effective tax rates (tax liability divided by total income).³⁰ Following a number of tax reforms, by 2017 the statutory rate structure had been compressed to 7 rates ranging from 10 to 39.6 percent. Further reductions were introduced for 2018 and the range of the 7 rates was reduced to 27 percentage points (rates ranging from 10 to 37 percent).³¹ These tax reforms altered the pattern of progressivity of the personal income tax. Because only a portion of the top income is subject to the high marginal rates, the effective tax rates are much lower. Still, compared to 1945, the effective rates in 2015 were almost one-third for the top 1 percent of the income distribution and less than half for the top .01 percent.³² Changes in the marginal tax rates at the lower end of the income scale have little

effect on saving behavior because these taxpayers have barely enough income to pay their bills. Lowering tax rates on the top income groups, however, did provide additional capacity to accumulate and further incentives to save by increasing the amount of after-tax income and raising the after-tax return on investments.

The connection between lower income tax progressivity and income and wealth inequality has been established through research. Analyzing the Reagan and Bush tax cuts, the Deutsche Bank (2018) concluded that “tax cuts have increased inequality.”³³ Hubmer (2016), using standard macroeconomic techniques to examine the drivers of rising wealth inequality in the United States, reached the conclusion that “by far the most important driver is the significant drop in tax progressivity that started in the late 1970s, intensified during the Reagan years and then subsequently flattened out.”³⁴

Poverty

Details on poverty in the US for 1959 based on standardized poverty lines were published in 1969 by the US Census Bureau.³⁵ For previous years estimates of poverty rates were provided by individual researchers. For example, Smolensky and Plotnick (1993), referring in part to Fisher (1986), present estimates of poverty rates for single years from 1900 to 1990. According to their estimates, in 1950 the poverty rate in the United States was 32.2 percent.³⁶ Economic growth in the 1950s and the expansion of financial support policies reduced this rate to 22.4 percent in 1959.³⁷

The main dimensions of poverty in the US in 1959 are presented in Table 4-8. We notice in this table that family status was a major factor in the probability of being poor as the poverty rate for unattached individuals was 2.2 times that of families. There were also major gender differences in the poverty rate. For persons living in families headed by a woman the poverty rate was 2.7 times that of persons in families headed by a man. Age was also a factor in the condition of poverty as people over 65+ had a poverty rate 70 percent higher than the overall average. Employment status was a major determinant of poverty. The poverty rate among those employed was 38 percent the rate for the unemployed. Still, employment did not guarantee freedom from poverty as nearly 13 percent of those employed were working poor. The strongest determining factor of poverty status was race as the poverty rate among non-whites was more than three times that of whites.

Economic growth and government policies in the 1960s led to a rapid decline in the poverty rate which by 1970 fell to 12.6 percent. Economic growth over the next 48 years had a more limited effect on the poverty rate and in 2019 slightly more than 10 percent of Americans still lived in poverty. This means that in the past 49 years the poverty rate fell at an average annual rate equal to 4 percent of the rate of decline over the previous 20 years.

Table 4-8. Dimensions of Poverty in 1959 and 2019

Categories	Poverty rates (%)	
	1959	2019
All Persons	22.4	10.5
Persons in Families	20.8	8.5
Unattached Individuals	46.1	18.8
Couples	18.2*	4.6
Single Parent: Male		11.3
Single Parent: Female	49.4	24.3
Persons 65+	38.1	8.9
Employed	12.8	2.0/12.0**
Unemployed	33.7	26.2
White	18.1	7.3
Non-White***	56.2	7.3/20.8
High School Diploma		11.5
Some College		7.8
Bachelor's Degree or Higher		3.9

*Includes also single-father families, which were a small share of total families. **Employed Full-Year and Full-Time/Full-Year and Part-Time. ***In 1959 almost entirely African-Americans; in 2019, African-Americans (20.8%), Hispanics (15.7%), Asians (7.3%)
Source: US Census Bureau (1969), *Poverty in the United States, 1959 to 1968*, Current Population Reports Series P-60, No 68, Tables 1, 4, 6; US Census Bureau (2019), *Income and Poverty in the United States: 2019*, Tables B-1 and B-2.

By 2019 the poverty rate had fallen by more than half its value in 1950. It fell by nearly 60 percent for persons in families and also per unattached individuals, and by 51 percent for female single-parent families. Improved pensions helped the poverty rate decline to 9 percent, from 70 percent above the average to 15 percent

below the average. The poverty rate in 2019 was not only substantially lower than in 1950, but its variation among demographic/social/economic groups was different. As shown in Table 4-8, in 2019 the poverty rate among unattached individuals was more than double the rate for persons living in families. Within families the poverty rate for families headed by a single male was 2.4 times that of couples, and nearly 6 times when the single parent was a female. Being employed was a major insurance against poverty but did not prevent poverty entirely. Even among workers who were employed full-time for the entire year, 2 percent lived in poverty, and this rate increased to 12 percent for those who worked for a full year but on a part-time base. Over one-quarter of those unemployed lived below the poverty line. One of the major factors contributing to poverty is the lack of adequate education. In 2019 the employment rate among people with a college degree or more (3.9%) was about one-third the overall rate, but the rate for people without a high school diploma was 2.5 times the overall rate. Starting with those with the least amount of education, adding a high school diploma reduced the poverty rate in half (12.2 percentage points). The poverty rate was further reduced by nearly 4 percentage points by adding a few years of college, but without earning a degree, and by an additional 4 points by earning a college or higher degree. The poverty rate for those with at least a bachelor's degree was only 16 percent the rate for those without a high school diploma. Finally, racial differences in poverty rates fell substantially from 1959 to 2019, but still remained significant. Compared to the poverty rate for non-Hispanic Whites (7.3%) and Asians (7.3%), the poverty rate was 2.2 times for Hispanics, and 2.6 for African-Americans.

From a human capital perspective, it is particularly concerning the persistence of high poverty rates among children. In 2019 over 10 million children under 18 lived in poverty, representing 14.4 percent of all children of that age. The poverty rate among children was more than one-third higher than the overall rate. As shown in Table 4-9, the poverty rate among children was affected greatly by the type of family in which they lived. In primary families, which included 99 percent of children, the poverty rate of children was 14.1 percent. Only 6.4 percent of children living in families with both parents experienced poverty (less than the average for all children). For children living with a single male parent the poverty rate was less than 2 percentage points higher than the average. The highest incidence of poverty is found in families with a single female parent where the poverty rate (36.5%) was 2.5 times the average and nearly 6 times higher than for

children living in two-parent families. Married-couple families contained more than two-thirds of children living in primary families, but they accounted for less than one-third of poor children. By contrast, less than one-quarter of children lived in a single-mother family, but they accounted for 60 percent of poor children. In 2019 there were 89 percent more poor children living in single-mother families than in married-couple families. In single-father families the share of poor children (8.3%) was only marginally higher than the share of children (7.2%).

Table 4-9. Dimensions of Child Poverty in 2019

Family Type	Poverty Rate	Percent of Children Under 18	
		All Children	Poor Children
All Families	14.1		
Couples	6.4	69.4	31.7
Male Single Parent	16.3	7.2	8.3
Female Single Parent	36.5	23.4	60.0

Source: US Census Bureau (2019), *Income and Poverty in the United States: 2019*, Tables B-1 and B-2.

This complex structure of poverty increases the difficulties of designing and implementing effective anti-poverty measures because it involves not only economic factors but also issues of social structures and individual choices. In addition, child poverty prevents financial benefits from being delivered directly to the person in need. Poverty rates among seniors have declined greatly since 1950 in part because it was possible to deliver financial assistance directly to those in need. That delivery mechanism is not available in the case of poor children because the choice of how to use financial assistance aimed at children is not made by the children but rests with the parents.

Summary

With respect to wages, income, and wealth, we can distinguish the 1950s and 1960s from the last 40 years. During the earlier period productivity gains were shared equally between labor and capital, real wages experienced broad gains, and economic growth delivered lower income inequality and declining poverty rates. The opposite trends emerged in the past 40 years. The paths of productivity growth and labor compensation diverged, the growth of real wages stalled, rising

education premiums widened wage differentials, and all this led to widening inequality of income and wealth. The trend towards greater economic equality that characterized the first three post-war decades has been replaced over the past 40 years by increasing economic and social polarization. The poverty rate declined rapidly from 1950 to 1970, but the pace of this decline decelerated greatly over the past half a century. In 2019 still over 10 percent of the population was poor and the poverty rate among children was higher than the average. In terms of high poverty rates, the seniors in 1950 have been replaced in 2019 by single-mother families.

CHAPTER 5. CONSUMER EXPENDITURES

This last chapter of Part I looks at changes in the pattern of consumer spending. First, it shows how families spent their income in 1950. Then, it repeats the exercise for 2019 to determine to which extent rising real income affected consumer behavior.

Consumer Spending in 1950

The pattern of consumer spending in 1950 was determined largely by the structure of the family and the availability of products. In 1950 the fundamental spending unit was the traditional family—husband, wife (generally full-time homemaker), and children. About two-thirds of males and females over the age of 14 were married, families accounted for 89 percent of households, and 91 percent of families were married couples.¹ Employment opportunities were expanding and wages were rising, but the transformation of the war economy into a market economy had not yet offered the variety of products that consumers would be able to enjoy a decade later. The television was not yet a common household item, and the modern form of advertising was still in its infancy. Consumer spending in 1950 took largely the form of purchases of necessities.

The percentage distribution of consumer spending among major categories of goods and services in 1950 is shown in Table 5-1. This table shows that 6 spending categories, normally identified as “necessities,” accounted for the lion’s share of consumer expenditures: food, housing, transportation, apparel and services, personal care and services, and health care. In 1950 the combined share of these expenditures accounted for 87 percent of total consumer spending (net of cash contributions, personal insurance and pension contributions). Among the remaining categories, the largest share went to entertainment with 4.4 percent. American consumers in 1950 spent on tobacco products and alcoholic beverages 59 percent more than on personal care and more than double what they spent on reading and education.

Food. Food preparation was the main activity of a typical homemaker in 1950 and food consumption by the family members was more than a way of providing the body with the needed nutrients. It was a fundamental component of the structure

that helped cement the family bond as sitting together at the meal table provided the opportunity to communicate personal news, discuss local and national events, and share a laugh.

Table 5-1. Percentage Distribution of Consumer Spending in 1950 and 2019

Item	Share (%)		
	1950	2019	Change
Food	29.7	15.2	-14.5
Housing	27.2	38.4	11.2
Transportation	13.4	19.9	6.5
Apparel and Services	11.5	3.5	-8.0
Health Care	5.2	9.6	4.4
<i>Sum: Necessities</i>	87.0	86.6	-0.4
Entertainment	4.4	5.7	1.3
Tobacco and Alcohol	3.5	1.7	-1.8
Personal Care	2.2	1.5	-0.7
Reading and Education	1.5	2.8	1.3
Other	1.4	1.7	0.3

Source: US Bureau of Labor Statistics (2006), *100 Years of Consumer Spending*, Report 991, Table 13, p. 21; US Bureau of Labor Statistics (2019), *Survey of Consumer Expenditures: 2019*, Table 1300.

Food was stored in mechanical refrigerators (powered by electricity, gas or liquid fuels), but at higher percentages in urban areas (86% of dwellings) than rural non-farm areas (72%). In urban households, meals were largely cooked on gas stoves (73% of dwellings) and in rural non-farm areas in wood or coal stoves (52%) or gas stoves (37%).² Kitchen equipment was expensive in the early 1950s. In 2019 dollars a twin-ton gas stove with grille cost \$1,790, a Hip Pop Automatic toaster \$203, a Coldspot refrigerator \$3,184, a coal/wood range \$475, and a Kenmore 12-speed mixer \$314.³ Generally meals were prepared from basic non-processed foods using what was in season and often consisted of some meat, vegetables, and home-made desserts.⁴ As shown in Table 5-2, compared to today, basic food prices were quite high.

Table 5-2. Prices of Selected Food Items in 1950 and 2019 (\$2019)

Item	Unit	Price (\$2019)	
		1950	2019
Flour	6lb	5.22	5.00
Bread	1lb	1.52	3.00
Butter	1lb	7.76	5.50
Margarine	1lb	3.22	2.00
Milk	½ gallon	4.38	4.00
Round Steak	1lb	9.96	6.00
Pork Chop	1lb	8.02	4.00
Eggs	dozen	6.43	2.30
Potatoes	10lb	4.90	6.00
Navy Beans	1lb	1.63	1.50
Coffee ^a	1lb	8.45	6.00
Sugar	5lb	5.18	2.20

^a There are large variations in price among brands.

Source: US Census Bureau (1975), *Bicentennial Edition: Historical Statistics of the United States, Colonial Times to 1979*, Table 187-202, p. 213.

Housing. In 1950, 55 percent of households owned their homes and two-thirds of these houses were single unit unattached dwellings.⁵ Less than half of houses built in 1950 had a garage, and the average house size was less than 1,000 square feet (983 square feet), equivalent to 292 square feet per household member. Mass-produced suburban Levitt houses offered only 750 square feet of interior space.⁶ Half of dwellings had central heating and 94 percent had electric lighting. However, 24 percent had no flush toilets inside and 27 percent had no bathing facilities inside. Heating fuels were diversified with the top share going to coal (35%), followed by gas (29%), liquid fuel (23%), and wood (10%).⁷ The median house price in 1950 was \$7,354 (\$78,239 in 2019 dollars), equivalent to \$7.48 per square foot (\$79.6 in 2019 dollars). Forty-four percent of home owners had mortgages. At the prevailing mortgage rate of 5 percent, the median monthly mortgage and interest payment amounted to \$37 per month (\$394 in 2019 dollars), which is lower than the median monthly rent of \$42.47 (\$452 in 2019 dollars).⁸

As shown in Table 5-3, in 1960 consumer spending on shelter (either owned or rented) accounted for 45 percent of total housing costs. The remaining spending was distributed in similar shares between household operations (19.7%), household furnishings and equipment (18.3%), and utilities (17.0%).

Table 5-3. Percentage Distribution of the Components of Housing Costs, 1960 and 2019

Components	Share (%)		
	1960	2019	Change
Shelter	45.0	58.9	13.9
Fuel, Light, Water, Refrigeration	17.0	19.6	2.6
Household Operations	19.7	11.3	-8.4
Furnishings and Equipment	18.3	10.2	-8.1

Source: US Bureau of Labor Statistics (1962), *Survey of Consumer Expenditures: 1960-61*, Table B-9; US Bureau of Labor Statistics (2020), *Survey of Consumer Expenditures: 2019*, Table 1300.

Transportation. With the move of young couples to the suburbs, the car became an integral part of the family. In the immediate post-war period, one could see in showrooms a proliferation of car models. In addition to an increasing variety of models offered by the big companies—General Motors, Ford and Chrysler—one could see on the road Hudson’s, Kayser’s, Packard’s, and Studebaker’s.

In 1950 there was roughly 1 car per family and the average price of a new car was \$1,500, equivalent to 45 percent of the median annual income.⁹ A five-year loan of this amount at 7 percent would have required a monthly payment of \$29.63 (\$315 in 2019 dollars), equivalent to 10.67 percent of median income. The price of gasoline was \$0.268 per gallon and fuel efficiency was 15 miles per gallon.¹⁰ If a family traveled 9,060 miles per year (the average for light, short-base vehicles),¹¹ it would use 603 gallons of gasoline and spend \$161.60 (\$1,719 in 2019 dollars). If it traveled 5,000 miles, the cost of fuel would be \$89.13 (\$948 in 2019 dollars). Thus, the annual cost of car transportation (loan payment plus gasoline) would amount to between \$444.69 (\$4,731 in 2019 dollars) and \$517.16 (\$5,502 in 2019 dollars), equivalent to 13.35% and 15.52% of median income.

Health Care. The private-insurance-based health care system in the United States began towards the end of the 1920s with initial local arrangements that offered guaranteed hospital care for a specified period of time in exchange for a monthly payment. By 1937 these plans had increased in number to 26 and were organized under the umbrella of the Blue Cross network. Afraid that this network might extend to medical care, thus undermining doctors' powers, physicians developed their own plan called Blue Shield. These health insurance plans benefited from favorable government treatment: they were treated as non-profit activities and they escaped the strict regulations applied to the insurance sector. Health benefits were legally accepted items in labor bargaining negotiations, contributions by employers were made deductible, and benefits received by employees were not taxable. These plans expanded quickly and by 1950 they had an enrollment of 142 million.¹²

Annual per capita spending on health services and supplies in 1950 amounted to \$78.20 (\$832 in 2019 dollars).¹³ As shown in Table 5-4, the largest share of spending on health services and supplies was for hospital care (32%), followed by physicians' services (23%). These two categories of services accounted for more than half of spending. Drugs (14%) and other professional services (12%) added 26 percent for a partial total of 81 percent. Only 1.2% of the total was spent on nursing homes.

Table 5-4. Percentage Distribution of Expenditures on Health Services by Category, 1950 and 2019

Service	Share (%)		
	1950	2019	Change
Hospital Care	32.3	33.3	1.0
Physicians' Services	23.1	19.3	-3.8
Other Professional Services ^a	11.5	9.5	-2.0
Drugs ^a	14.5	9.3	-5.2
Nursing Homes	1.2	10.0	8.8
Other	17.4	18.6	1.2

^a Not Exactly Comparable between 1950 and 2019.

Source: Louis S. Reed and Ruth Hanft, *National Health Expenditures, 1950-1964*, Social Security Administration, Table 5, p. 10; The National Health Expenditure Accounts (2020), *National Health Expenditure Data, Projected Spending 2019-2028*.

Governments were heavily involved only in hospital care and spending on this service was split almost equally between consumers (51%) and governments (45%). However, consumers paid close to 100 percent of the costs of drugs and the services provided by physicians and other professionals. On average consumers paid for 71 percent of health services and supplies, but 12 percent of that amount was paid by insurance companies.

Entertainment and Recreation. In the context of work and leisure, it may be of interest to know how Americans allocated their spending on various categories of entertainment and recreation. Some details on this matter are shown in Table 5-5. In 1956 two categories combined claimed more than half of the recreation and entertainment budget: audio and video equipment (30%) and sports equipment (25%). An additional 15 percent was spent on admissions to movie theaters. The combination of these 3 items accounted for 7 out of each 10 dollars spent. One major spending item not mentioned by De Grazia is playing with pinball machines perhaps because of its association with gambling. As referred by Shorto (2021, p. 20), from the late 1930s throughout the 1950s, “Americans spent more on pinball than on movies.”

Table 5-5. Percentage Distribution of Selected Expenditures on Recreation and Entertainment, 1956 and 2019

Category	Share (%)		
	1956	2019	Change
Movies	14.9	3.5	-11.4
Plays, Theatre, Concerts	2.0	1.9	-0.1
Social Recreation	5.2	6.7	1.5
Participatory Sports	7.7	12.8	5.1
Spectator Sports	2.4	3.5	1.1
Sports Equipment	24.9	12.6	-12.3
Audio/Video Equipment	29.9	24.8	-5.1
Video Games	0	7.5	7.5
Pets	n/a	22.0	22.0
Other	13.0	4.7	-8.3

Source: Sebastian De Grazia (1952), *Of Time, Work, and Leisure*, A Twentieth Century Fund Study, New York, Table 7, p. 451; US Bureau of Labor Statistics (2019), *Consumer Expenditure Survey: 2019*, Table R-1.

Consumer Spending in 2019

The economic and social structure changed radically from 1950 to 2019. The population more than doubled, the number of households tripled, and the material standard of living, measured by real GDP per person, nearly quadrupled. During the same period the number of families as a proportion of households declined by one-quarter (24 percentage points), the number of couples as percent of families fell by nearly 20 percent (17 percentage points), the average household size dropped by nearly 25 percent to 2.5 persons, and the average family size declined by 13 percent to slightly over 3 persons.

All these changes affected the pattern of consumer spending. As shown in Table 5-1, in 2019 by far the largest share of the household budget was claimed by housing with a 38 percent share, 41 percent (11 percentage points) higher than in 1950. The second place belonged to transportation which saw its share of consumer spending increase by nearly 50 percent from 13 to 20 percent. Spending on food dropped to third place with a share of 15 percent, about half its value in 1950. Among other important changes we notice a large reduction in the share of apparel and services (7.9 percentage points or 69%) partly offset by a nearly doubling of the share of health care expenditures which rose from 5 to nearly 10 percent. Despite these budget re-allocations, the share of spending on “necessities” remained virtually unchanged at 87 percent. As the following brief discussion of selected items will show, however, the concept of necessity in these data is not the same in 1950 and 2019.

Since the overwhelming share of consumer expenditures was allocated to the spending categories called “necessities,” only a small portion of the budget was available for other items (13 cents per dollar spent). In 1950 over one-quarter of other expenditures was dedicated to tobacco products and alcoholic beverages and an additional 34 percent to entertainment for a total of 61 percent. The combined share changed very little and a nearly 50 percent decline in the share of tobacco and alcoholic beverages was largely offset by the increase in the share of recreations and entertainment. As in the case of 1950, I provide some details on a number of the major changes in consumer spending, following the same order regardless of the changes in share of spending.

Food. Two main factors contributed to the decline in the share of the family budget dedicated to food. First, spending on food tends to grow at a slower rate of total

consumer spending because there is a physical limit to how much we can eat. Spending on food can rise only if we keep buying food items with higher prices. Second, food prices increased at a lower rate than overall prices. As shown in Table 5-2, a number of food items—especially butter, meat, eggs, and sugar—cost quite less in 2019 than in 1950 (in comparable 2019 dollars). From 1952 to 2019, the cost of the entire “food basket” rose at a rate 18 percent lower than the overall consumer price index.¹⁴

The decline in the share of food expenditures from 1950 to 2019 was associated with a shift in the place where food is prepared. In 1960, 79 percent of the expenditures on food were for meals prepared at home. Since the labor force participation rate of women increased by nearly 4 percentage points from 1950 to 1960, it is safe to assume that meals prepared at home accounted for more than four-fifths of total spending on food. By 2019 this share had fallen to 57 percent, roughly one-third less than 68 years earlier.

There was also a more fundamental change in the way food was prepared. In 1950 the meals at home were prepared using basic unprocessed ingredients—meat without growth hormones or antibiotics, fresh fruits and vegetables of the season produced with a minimum of pesticides—and often included home-baked bread and pastries. Moreover, meals were part of the family routine and followed a fairly regular schedule for all family members.¹⁵ By 2019 there was no longer a regular schedule for family meals, and even when meals were prepared at home nearly 40 percent were in the form of highly processed foods.¹⁶ This means that about one-third of consumer spending on food is in the form of ingredients to meals prepared and consumed at home. As reported in Science News, “about 80 percent of Americans’ total calories consumption comes from store-bought foods and beverages,” and these items are high in “energy, saturated fats, sugar, and salt.”¹⁷

Housing. Rising living standards allowed more American families to purchase a home. As a result, the home ownership rate increased to 64.1 percent in 2019.¹⁸ According to the most recent American Housing Survey, in 2019, 63.4 percent of housing was in the form of single detached units. Nearly two-thirds of houses had three or more bedrooms (40% had 3 and 24% had 4 or more) and on average each house had 3 bedrooms. Also, three-quarters of houses had at least 1,000 square feet of space (45% between 1,000 and 2,000 square feet and 30% more than 2,000) and the average was 2,000 square feet, more than double the size in 1950. Nearly 100

percent of houses had electricity, running cold and hot water, and complete kitchens, 77 percent had central air conditioning and an additional 24 had room air conditioning, and about 86 percent had washing machines and clothes dryers. According to the same survey, the median value of the stock of housing in 2019 was \$200,000 and the median monthly mortgage payment amounted to \$975. If we add monthly real property tax payments (\$198) and insurance (\$73), we end up with a monthly cost of housing of \$1,246. If we include the cost of utilities (\$200), trash collection (\$27), and water (\$50), the total monthly cost of home ownership rises to \$1,523, an amount higher than the median monthly rent (\$1,490).¹⁹

Both size and price were higher for new homes. According to the US Census Bureau, 683,000 new single-family houses were sold in 2019. Of this total, 89 percent were single detached houses and their median size was 2,322 square feet. Forty-six percent of these houses had 3 bedrooms and 43 percent had 4 or more bedrooms. Also, one-third had 3 or more baths and 96 percent had at least 2 baths. The median price of new single-family homes sold in 2019 was \$322,000.²⁰ Nearly two-thirds of new houses built in 2019 had two-car garages.²¹ A 30-year, \$300,000 mortgage at 4 percent interest would require a monthly payment of \$1,427. In 2019, the cost per square foot of the median single-family house was \$138.70, nearly 75 percent higher than the cost in 1950 (at 2019 prices). This higher cost was largely associated with housing improvements (including more bathrooms and larger garages). The large increase in the selling price of new homes between 1950 and 2019 was determined in roughly equal proportions by quality-driven higher costs per square foot and higher house size.

All these changes in prices, house size, and equipment altered the relative contribution of the various components of housing to its total cost. As shown in Table 5-3, the cost of shelter alone accounted for 58.9 percent of the total expenditures on housing in 2019, a share 13.9 percentage points (31%) higher than in 1960. Since the contribution of spending on public utilities (fuel, light, refrigeration, and water) increased only slightly to 20 percent, the shares of spending on household operations and on household furnishings and equipment followed the opposite pattern as that of shelter, falling by 8 percentage points each. In 1960 shelter and household operations, furnishings and equipment had similar shares. The substantial increase in the share of shelter costs reflects partly the expanded house size. As family size declined, American families purchased bigger and better equipped houses, providing more space and facilities for each family

member. In 2019 the median house provided on average 787 square feet of space per household member, 2.7 times the amount in 1950. More space was also provided for motor vehicles through larger garages. Although the cost of garages is included in housing, it is mostly related to transportation, a topic discussed next.

Transportation. In 2019 the motor vehicle market was more varied than in 1950. The big three American car manufacturers—General Motors, Ford and FCA—claimed a share of 44.0 percent, 7.1 percentage points more than Japanese manufacturers. European and Korean vehicles had relatively low shares at 9.2 percent and 7.8 percent, respectively. A total of 17.2 million vehicles were sold in 2019, 4.8 million cars and 12.2 million SUVs and light trucks.²² The heavy cars of the 1950s and 1960s were replaced in 2019 by lighter SUVs, still much heavier and more powerful vehicles than the post-oil-crises cars.

In 2018 American families owned on average 2.2 motor vehicles (cars, vans, SUVs, and light trucks,).²³ The average price of a new car in 2018 was \$35,250.²⁴ According to the US Department of Transportation, the average cost of owning a car for a year and driving 15,000 miles was \$8,849: \$5,960 for fixed costs and \$2,889 for variable costs (\$1,665 for fuel and \$1,224 for maintenance).²⁵

Health Care. The US health care system is still a mix of private and public funding based on insurance. In 2019 about two-thirds of health care spending was financed by private insurance and one-third by government. Because most of private insurance was employer-based, 8 percent of the population (26 million people) was not covered by any insurance. Total real spending on health care rose by a factor of 28, real per capita spending increased by a factor of 13, and the share of health care spending in GDP quadrupled from 4.3 percent in 1950 to 17.0 percent in 2019. As shown in Table 5-4, the most dramatic change in the distribution of health spending by type of service was the large increase in the share of nursing home that rose seven-fold to 10 percent in 2019.

Entertainment and Recreation. Although the share of consumer spending claimed by recreation and entertainment did not change much from 1950 to 2019, its composition did. Four major changes occurred from 1956 to 2019. First, the share of spending on movie theaters fell to less than 4 percent. Second, this decline was largely offset by the introduction of a new activity, video games. Third, a large decline in the share of spending on sports equipment was partly offset by an increase in the share of participatory sports. Finally, in 2019 the largest share of

consumer spending on recreation and entertainment went to the purchase and care of pets (22%). There is no mention of this spending item in the data for 1956, neither in the information about the categories of total consumer spending nor in the details about spending on recreations and entertainment. However, it is evident from Table 5-5 that the share of spending on pets in 1956 must have been quite low because the share of all unidentified items was only 13 percent.

Summary

As families became smaller and their spending power increased, the distribution of consumer spending among various categories was altered. Three major developments are worth noting. First, spending on housing in 2019 held the first place, followed by transportation. Food, which in 1950 accounted for the lion's share of consumer spending, by 2019, moved to the third spot. Second, within food spending, there was a large shift from food prepared at home to food consumed away from home. The third major change was a near doubling of the share of health care spending which reached almost 10 percent in 2019.

PART II INSTITUTIONS AND BEHAVIOR

CHAPTER 6. THE INSTITUTIONS OF STABILITY

Life in America in 1950 was governed by a variety of institutions that provided a stable social and economic environment in the context of a set of shared values. The main institutions of stability were the Church, the family, the school, and the labor unions. They were supported by a new approach to public policy that involved a more interventionist government and a stable pattern of international economic relations.

The Church

In 1950 the foundations of American life were Church and family. Reeling from the uncertainties of a world war, entered with reluctance and won with great sacrifice, Americans hungered for a comfortable life lived in peace and security. The jobs created by a growing economy provided a rising material standard of living, religion offered the moral foundations for a meaningful life, and the family gave the emotional support needed for a fulfilling life. Seventy years ago, religion, economy, and family were intertwined in a manner that defined the American way of life. God's precepts, as interpreted by the American clergy, formed a value system that reaffirmed the aspirations of Americans: national and personal prosperity through a democratic system that promoted social mobility, and an economic system designed to reward hard work and entrepreneurship. This value system imbued daily life and was promoted at home where children were taught its virtues by word and by deed. As the young men returning from the war began to fulfill their desires for a family of their own and automobiles became the favorite means of transportation, these masses of new couples moved to the suburbs. Filled with the need to "replenish (their) spiritual well," these new American families flocked to the countless new churches being built in the suburbs and filled the pews, eager to hear sermons that reaffirmed the righteousness of the American way of life. From 1950 to 1960 church membership rose from 57 percent to 63 percent of the American population.¹ This symbiosis between church and family was not limited to Sunday worship but was reinforced through weekly bible study sessions, Sunday school, picnics, and other social events. The common faith served also to strengthen social bonds while providing a moral compass.

The heightened religious fervor of post-war Americans was fueled in part by international developments, specifically the rise of Russia's military power and the Cold War. World War II had been cast as a fight between good and evil: the good of God-blessed American democracy against the evil of Godless German Nazism.² The Cold War taught Americans that evil had not been destroyed by the war, but had morphed into perhaps a more insidious force: communist Soviet Union. Moreover, this new evil was challenging America's hegemony in the world. The Soviet Union and the United States represented two diametrically opposed ideologies. Economically, the Soviet Union was structured as a command economy with centralized and bureaucratic decision-making structures while the United States relied on market mechanisms as the coordinating force. Politically, from a Western perspective, the Soviet Union was seen as a dictatorship while the United States was viewed as the champion of democracy and personal freedom.

In a Soviet society controlled by centralized decision-making structures, the Church was seen as a dangerous adversary. It was not possible for two centralized powers with different objectives to coexist peacefully. Although religion was not outlawed when the Soviet Union was formed in 1922, church properties were confiscated, its freedom curtailed, and individual worship severely discouraged. While the elimination of God from people's lives was a main objective of the Marxist power, in the United States God was at the center of America's identity. It did not take long for the Cold War to be transformed into a conflict of faiths: good versus evil, God-fearing Americans versus Godless Marxists. Even before they landed in the New World, the passengers in the Mayflower set the foundations for the new colony in Plymouth, Massachusetts, by drafting the Mayflower Contract. Signed by 41 of the men aboard the boat, most of them Puritans, the Contract served as the unofficial Constitution for the new colony. It was modeled after church covenants used when new congregations were established. Though signed by men, God was at its center as the colony was being formed "for the glory of God, and advancement of the Christian faith."³

The vision of the Christian God held by the special group of White Protestant men that landed at Plymouth Rock in December of 1620 shaped America's identity from the outset: "white protestant Christianity was the essence of their identity, what defined them from the time the Puritans set foot on Plymouth Rock, as a chosen people, and Americans as a new Israel."⁴ The dominance of Protestant Christianity continued for centuries and resided in the "Protestant Establishment

(the seven mainline denominations of Baptists, Congregationalists, Disciples, Episcopalians, Lutherans, Methodists, and Presbyterians).”⁵ Through time, the faith of the Pilgrims became “a religion of the nation, a religion that has its own sacred documents ... the US Constitution, the Declaration of Independence, the Bill of Rights, which become, in the words of some historians, America’s Scriptures.”⁶ When Americans flocked to fill the pews of the myriad of new churches being built in the suburbs, they paid homage to a Christian God wrapped in the American flag.

The Family

Young Americans also flocked to church to receive God’s blessings on their marriage. Forming a family was the primary objective of the young men returning from the war. As shown in Chapter 1, in 1950 two-thirds of men and women over 14 were married, and two-thirds of women were married by the age of 24. Nearly 90 percent of households were families and 87 percent of families were married couples.

The structure of the family in 1950 reflected the principles of the Christian faith as interpreted at that time: the family was a permanent union between a man and a woman, and divorce was rare among Protestants and not admissible among Catholics which allowed only annulments (even rarer than divorce). The family organization was also based on biblical principles. The husband was the breadwinner and head of the family. His wife had the main responsibility to take care of the house and the meals, and to tend to the needs of husband and children. The children were taught in school and in church to respect their parents and their elders. In many cases, especially in rural communities, grandparents either lived with one of their children or lived independently but nearby, arrangements that lent support to the family and helped maintain continuity of social traditions.

Even the daily routine helped strengthen family ties. Children in the morning ate a breakfast prepared by their mother and in the evening the whole family sat at the dinner table to enjoy the main meal. This was not a harried affair and offered the opportunity for everyone to share tidbits of their daily adventures and some gossip from work or school and to comment on public events. After dinner they often sat together in the living room to watch their favorite television shows on one of three available channels on the single black and white television. All these common activities strengthened the family bond and cemented the children’s identity. This

“togetherness” was extended to the families of neighbors and friends as they shared social events and sport activities. Important focal points for this extended togetherness were the newly-built suburban churches.⁷

The School

In the 1950s the American school system was focused on primary and secondary education. In 1950 less than 8 percent of students were enrolled in post-secondary education institutions.⁸ The structure of education and its programs supported the value system held by families and the community at large through formal classes in civics and the strict enforcement of “correct” behavior and respect for elders and superiors. Nearly 12 percent of kindergarden-to-grade12 students were enrolled in private schools, which were almost entirely in the form of parochial Catholic schools where religious values were not just taught during religion classes but served as the foundation of daily behavior.⁹ In the public schools, prayers and Bible readings were routine in the majority of States and half of school districts nationwide practiced some form of devotional exercises.¹⁰

*The Entertainment Industry*¹¹

Aside from participating in sports activities, either as participants or spectators, Americans enjoyed two other major forms of entertainment: watching television and going to the movies.

Television. Two major streams of programming were available on TV: western series and family shows. The first big show of the first category was *The Lone Ranger* which ran from 1949 to 1957. It was followed by *The Roy Rogers Show* (1951–1957), *Death Valley Days* (1952–1970), *The Life and Legend of Wyatt Earp* (1955–1962), *Gunsmoke* (1955–1975), and *Bonanza* (1959-1973). These shows had one major theme in common: they pitted good versus evil, and good always came out victorious. In so doing, they reinforced the widely-held view of America as the God-fearing and good fighting the evil lurking in other parts of the world. The other category was aimed at strengthening the family by portraying ideal families that could be used as templates for every married couple in America. These ideal families were represented by middle-class, suburban White couples, who faced only minor marital challenges and were able to solve them easily, thus quickly restoring family harmony. These programs also served as moral educators.

When a parent in the show was offering moral guidance, the message was delivered to the entire nation of viewers, not just to the fictional children in the show. *The Life of Riley and Mama*, which premiered in 1949, was followed by a slew of family comedies including *I Love Lucy* (1951–57), *Ozzie and Harriett* (1952-1966), *I Married Joan* (1952-1955), *Make Room for Daddy* (1953-1964), *Father Knows Best* (1954-1960), *The Honeymooners* (1955-71), and *Leave it to Beaver* (1957-1963). Television in the 1950s served three additional functions: it served as a non-human babysitter for children, a vehicle for non-participatory sports for fathers, and a companion for housewives. With the TV turned on for most of the day, especially on weekends, children could sit on the carpeted living-room floor watching their favorite shows such as *Captain Kangaroo*, *Mr. Wizard*, *Terrytoon Circus*, and *The Mickey Mouse Club*. To men television offered the opportunity to enjoy the extra free time gained by labor unions relaxing while watching their favorite sports sitting comfortably on the strategically-placed sofa chair. For women television was a lot more than an entertainment medium. In addition to providing entertainment, it offered company throughout the day as they performed their solitary housekeeping chores, and created fictional friends with whom they could share, in thoughts and imagination, daily adventures. Through the steady flow of commercials, these shows also opened the door to a whole world of new shopping possibilities, cooking and decorating ideas, and even travel dreams.

Movies. Despite the rise of television as a preferred mode of recreation, movie going remained strong and attracted a new generation of young people. Movies and movie theaters offered viewers a variety of experiences that could not be provided by small black and white screens at home: an evening out, posh seats, large screens, longer features, color images, special effects. The 1950s also saw the development of a special new venue for movie goers, the drive-in movie theater. This development provided families with a new way of watching movies in a cozy and private setting and also extended the use of one of their prized possessions, the car. To young people drive-in movie theaters offered the opportunity for romance in a safe place and with the privacy that would not be available at home.

By far the most popular movie genre was the Western and more movies of this genre were produced in the 1950s than any other. These movies attracted talented directors—John Houston prominent among them—and the most famous male lead

actors—John Wayne, Gregory Peck, Gary Cooper, James Stewart, Joel McCrea, Alan Ladd, Randolph Scott, Burt Lancaster, Glenn Ford—and led to the production of classics such as *Stage Coach* (1939), *The Gunfighter* (1950), *Rio Grande* (1950), *High Noon* (1952), *The Naked Spur* (1953), *Shane* (1953), *3:10 to Yuma* (1957), *The Big Country* (1958). The Western movies served a nation-building purpose by reinterpreting a special period of American history, and creating legends and myths: the rugged American individualist who could endure every adversity, defeat every adversary, and even conquer nature; the unrelenting march of progress; the victory of good over evil (the good represented by a White man or woman); and the final triumph of justice, always. Among other genres, war movies celebrated American valor and technical superiority, musicals showcased American music and dance, and family movies highlighted American progress and the benefits of the American way of life.

Labor Unions

Formal attempts at organizing workers in America began in the early part of the 19th century. One of the earliest efforts was the formation of the Mechanics' Union of Trade Associations in Philadelphia in 1827. Attempts were also made in Massachusetts in the 1830s and 1840s by women workers in the mills. These labor organizations began to grow into national entities in the second part of the 19th century, following the foundation of the Typographical Union in 1852. As labor unions acquired national dimensions, their focus shifted from wages and working conditions to issues of justice and human rights. The leading unions championing equal rights were the National Labor Union, founded in 1866, and the Knights of Labor, founded as a secret society three years later. Under the leadership of Terence Powderly, the Knights of Labor soon became the largest union in the United States. In 1866 a variety of craft unions were organized under the umbrella of the American Federation of Labor (AFL) with the leadership of Samuel Gompers. Each union affiliated with the AFL was autonomous and union activities were focused on wages and working conditions. Up to this point labor unions in the US were organized on the basis of crafts and there was little participation by industrial workers. This situation changed in 1935 when eight AFL-affiliated unions separated and formed a new association called Committee of Industrial Organizations (CIO) and based on industries rather than crafts. In 1955, to

counteract what they perceived as an anti-union environment fostered by the *Taft-Hartley Act*, the two labor organizations merged into the AFL-CIO.¹

The Government was very involved in the evolution of labor market institutions. As pointed out by Piore (2002), initially the government “created a set of procedural standards, but left the substantive terms and conditions of employment to be determined within the procedures it laid out” (p.1). Workers gained the right to join labor organizations and unions acquired the right to negotiate wages and employment conditions through collective bargaining. These rights to organize and bargain collectively were formalized in 1935 with the passage by Congress of the *Wagner Act*. This Act also established the National Labor Relations Board, an administrative agency with the mandate to certify bargaining representatives and support fair labor practices. Two years later, pursuant to a Supreme Court decision, state legislators were granted the power to set minimum wages. In 1947 the federal government became more directly involved in the regulation of employment relations when Congress passed a number of amendments to the Wagner Act known as the *Taft-Hartley Act*. This new legislation granted the federal government power to enforce collective bargaining agreements, thus curtailing the power of unions in the collective bargaining process.¹³

The labor union movement was very active in the first half of the 20th century. In 1950, 209 unions operated in the United States: 107 were affiliated with the AFL, 33 with the CIO, and 69 were independent. These unions had a combined membership of 14.3 million workers, which represented 31.5 percent of non-agricultural workers, 30.4 percent of wage and salary workers, and 24.2 of all employed workers.¹⁴

Labor unions were instrumental in securing major improvements in working conditions. Their pressures led to the elimination of child labor in 1938, when Congress passed the *Fair Labor Standards Act*, and the reduction in hours of work. The standard workweek, which exceeded 60 hours in the late 19th century, was reduced to 48 hours in 1938 and 40 hours in 1950.¹⁵ Through collective bargaining, workers also gained increased employee benefits. In 1950, 38.9 percent of wage and salary workers were covered by life insurance, 16.2 percent by accidental death insurance, 41.7 percent by hospitalization, 35.5 percent by surgical procedures, and 16.4 percent by regular medical requirements.¹⁶ Labor unions generated additional broad societal effects. Through collective bargaining they won higher wages and better working conditions for their members. As these gains

spread to non-members, the activity of labor unions ended up reducing wage gaps based on gender and race and securing for workers a fair share of productivity gains. They also secured safer workplaces for their members. Stable and well-paid jobs gave young men the financial capacity to start a family and contributed to stability of marriages by reducing potential financial stress. Unionized workers also helped improve business performance by reducing job turnover and strengthened political institutions through their active participation in the electoral process and high voting turnout.¹⁷

Political Institutions

The 1950s were Eisenhower's decade. First elected as 34th President in 1952, defeating Adlai Stevenson by a landslide, he was easily reelected four years later. Tired of wartime sacrifices, Americans were looking for peace, jobs, and prosperity. Experienced in the art of compromise gained during the war, Eisenhower was able to navigate between isolationists and internationalists in his Republican Party and to work cooperatively with a Democratic Congress. The most significant pieces of legislation passed during Eisenhower's presidency were the *Federal Highway Act* (1956), which led to a major expansion of the interstate highway system with the construction of more than 40,000 miles of highways, and the *Civil Rights Act* (1957), aimed at improving racial equality. Although its impact was limited by the strong opposition in Congress, it was still a milestone and served as a foundation for stronger civil rights legislation less than a decade later under President Lyndon Johnson. In this decade even the Supreme Court was influential in the civil rights field. In *Brown vs. Board of Education* (1954), it ruled that school segregation was unconstitutional, and two years later in *Bowder vs. Gayle* it ruled unconstitutional segregation on buses.

The 1950s also witnessed the penetration of religious symbolism in politics through the institutionalization of a special relationship between God and America, expressed both in the political discourse and the official use of symbolic signs. God had a welcome place in the White House under President Truman who believed that America was a "Christian nation" founded by men who believed in God, and he often made references to God in his speeches. President Eisenhower, who considered himself "the most intensely religious man I know," went even further. In 1954 he signed a bill where, in the Pledge of Allegiance, America

became a “nation under God.” At the 1954 Flag Day ceremony he proclaimed: “From this day forward, the millions of our school children will daily proclaim in every city and town, every village and every school house, the dedication of our nation and our people to the Almighty.”¹⁸ Two years later he signed another bill, supported by both parties, which emphasized the fundamental difference between God-fearing America and Godless Soviet Union and established a new national motto: “In God we trust.” Starting on the first of October 1957 this motto was printed on all American paper currency.¹⁹

Institutions of Government Policy

The US government also provided a framework for stable growth through a variety of important policy initiatives, in particular (a) the stabilization of international economic relations, and (b) direct involvement in research and technology.

Stabilization of International Trade. The experience of the 1930s had convinced many world leaders that securing peace and prosperity in each country required a high degree of cooperation. They acted on that conviction shortly after the end of the war when the delegates of 45 countries gathered at Bretton Woods in New Hampshire from July 1 to 22, 1944 to design the institutions of a new economic world order. The result, commonly known as the Bretton Woods Agreement, was a new international arrangement for cooperation and policy coordination that rested on three main pillars: (a) a new international monetary system based on a modified gold standard, (b) the foundations of two new financial institutions with the objective of stabilizing international financial transactions and promoting stable economic development, and (c) controls by each country on their financial sectors. For stability of international trade, The Bretton Woods Agreement set up a modified gold standard resting on two pillars: (1) fixed exchange rates of members’ currencies in terms of the US dollar, with a flexible band of 1 percent, and (2) the value of the US dollar pegged at 1/35 of an ounce of gold. For practical purposes, in international transactions gold was replaced by the US dollar. To ensure compliance with the rules of the Agreement and to offer financial assistance to countries facing short-term difficulties with their balance of payments, the Agreement provided for the establishment of a new international financial institution called International Monetary Fund. The Agreement gave birth to an

additional international institution, the World Bank, with the mandate to promote long-term economic development and help member countries make the necessary structural adjustments.

The Agreement also allowed member countries to impose severe restrictions on the financial sector. Together these restrictions imposed a form of “financial repression” which included “direct lending to governments by captive domestic audiences, explicit or indirect caps on interest rates, regulation of cross-border capital movements, and (generally) a tighter connection between governments and banks.”²⁰ For example, pensions funds were restricted to holding only government securities, banks could not pay interest on demand deposits and interest on savings accounts was capped, and banks were required to hold cash or bonds equivalent to a large portion of the funds they had lent (24% in the United States and 28% in the United Kingdom).²¹

Because the Bretton Woods Agreement allowed considerable flexibility on the rules of balanced trade and structural changes and some leeway on the pegged interest rates, it created an environment favorable to inflation. In the United States, for example, the Consumer Price Index increased at an average annual rate of 6 percent between 1945 and 1955. Combined with restrictions on nominal interest rates, high inflation led to negative real interest rates. Although inflation subsided to an average annual rate of 2.5 percent from 1950 to 1971, negative real interest rates were still common in that period. At the same time, the Bretton Woods Agreement created the economic foundation for “the greatest period of stability and full production ever known.”²² In the United States from 1950 to 1971 real GDP grew at an average annual rate of nearly 4 percent. The combination of negative interest rates for a good part of the 1950-71 period and strong economic growth led to a rapid decline in the ratio of public debt to GDP. In the United States this ratio fell from 116 in 1945 to 66 in 1955 and 34 in 1971.²³

Promotion of Research and Development. The government played a pivotal role even in the field of technology and innovation. The federal government took control of innovation and technology in June 1940 when President Roosevelt established the National Defense Research Committee (NDRC) with the mandate to “coordinate, supervise, and conduct scientific research on the problems underlying the development, production, and use of mechanisms and devices of warfare.”²⁴ Realizing that the NDRD did not have the funds or the authority to

transform research into development and production, President Roosevelt with Executive Order 8807 on the 28th of December 1941 established the Office of Scientific Research and Development (OSTD) and appointed Dr. Vannevar Bush as its director. Three main operational features helped the success of this new system of centralized control of research and development and its industrialization: (1) the recruitment of the best scientific minds working for a united purpose (winning the war), (2) close links between the government bureaucracy and the higher education system, and (3) the treatment of research as public property for the purpose of promoting its commercialization and facilitating cross-fertilization.²⁵

The wartime experience with government involvement in research and development through the operation of the OSRD changed drastically the relationship between government and universities and transformed permanently the function of research institutions. Prior to World War II more than two-thirds of research and development was funded by private industry, and only 20 and 9 percent by government and universities, respectively. By the end of the war the government was the major contributor to R&D spending. Moreover, before World War II universities were funded almost entirely by industry, foundations, and internal funds. By the end of the war the government was the main supporter of university research, and three-quarters of government spending on R&D was used inside universities.²⁶

The centralized control of research and development in the United States came to an end in 1947 when the OSRD ceased to exist. The government's involvement in this strategic sector, however, continued unabated. Only the structure of its involvement changed as the functions of the OSRD were delegated to a number of old and new agencies. In 1946 the responsibility for nuclear weapons was transferred to the Atomic Energy Commission (AEC), in 1947 research on basic weapons systems was given to the Department of Defense. In 1947 all biomedical and health research was assigned to National Institute of Health (NIH), and finally in 1950 government support for scientific research at American universities was transferred to the National Science Foundation (NSF).

The connection between the government and the universities continued after the war, although initially with reduced funding levels. It strengthened again in 1957 after the Soviet Union launched its first Sputnik, and the space race was added to the arms race during the Cold War. The American anxiety about losing its

technological supremacy led to immediate action. Within months of the Soviet Union's space exploit, the US government established the National Aeronautics and Space Administration (NASA) and the Advanced Research Projects Agency (ARPA). At the same time government funding for R&D and for mathematics and science education increased substantially.²⁷

This government-universities alliance made the United States the undisputed technological leader in the post-war period. Driven by technological advancements, productivity growth generated substantial gains in material living standards. From 1950 to 1971 real GDP per employed person increased on average at 2.5 percent per year, almost twice the rate of growth of employment.

It should be emphasized that the strong record of productivity gains and economic growth in the first two decades after World War II was not generated by the unbridled operation of the free market. Rather, it was created by an interventionist government that was directly involved in the activities of innovation and technological change and in the strict regulation of high finance. Moreover, this interventionist government that created a symbiosis with the institutions of higher education and facilitated the spread of technology and set the rules for stability in international economic relations, operated within a framework of stable and coordinated private institutions and within the context of international agreements and institutions that promoted stability and economic development.

The Price of Stability

Stability in the 1950s carried a heavy price tag with respect to individual choices, tolerance, and racial harmony.

Women's Choices. Although most women chose marriage and home management voluntarily—trained to such a life from childhood by family, church, and school—they faced additional pressures in the immediate post-war period. Men returning from the war needed to reestablish themselves as bread winners, financially capable of forming new families. Therefore, women were pressured not to seek employment. The government even promoted a campaign to convince those women who entered the labor force during the war to give up their jobs and return to their traditional roles. The pressure on women to stay out of the labor market was intensified by the Cold War. The country needed to remain strong and united

and families were the foundation of a strong nation, they were told. It was a woman's patriotic duty to stay home and keep the family united and safe. This theme was reinforced by popular culture and the representation of the ideal American family and the American way of life in the popular television shows of the day.²⁸ Rigid gender roles were also found in the labor market as certain professions were practically closed to women. In 1950 employed women clustered in clerical (27%), private household work (9%), other personal services (12%) and sales (9%) which accounted for 57 percent of female jobs. An additional 9 percent were either nurses or teachers and 8 percent worked in laundry services, textiles and apparel. Marriage was not always a blessing for women, and sometimes turned into a life of despair. Lacking training and marketable work experience, facing a legal structure unfavorable to divorce, and operating in a social environment inimical to women's freedom, some married women became vulnerable to systemic emotional and physical abuse with no way out.

Intolerance. The national stress created by the Cold War unleashed a powerful wave of intolerance which started at the political level and extended its reach throughout society. A number of immediate post-war events helped create an atmosphere of national paranoia: the news that the Soviet Union had developed nuclear weapons, the communist takeover of China, and the control by Stalin of large parts of Europe and the fear that it would spread to other countries. In response, the House Un-American Activities Committee (HUAC), formed in 1938 and transformed into a permanent committee in 1946, carried out investigations of the Hollywood movie industry in 1947 and in 1951. In the end a large number of actors and other personnel were blacklisted. As part of its investigations, in 1948 HUAC accused a State Department official named Alger Hiss of spying for the Soviet Union in the 1930s. Senator Joseph McCarthy of Wisconsin used Hiss' conviction in 1950—of perjury, not espionage—as a springboard for launching his own anti-communist campaign. In a speech delivered the 9th of February 1950 in Wheeling, West Virginia, McCarthy claimed to have the membership cards of 57 members of the communist party who were still involved in the formulation of foreign policy. Eleven days later, in a speech to the Senate, McCarthy's list of names increased to 81. When in 1953 he became Chairman of the Senate Committee on Government Operations, which included the Permanent Subcommittee on Investigations, McCarthy started his own ruthless investigations,

calling a large number of witnesses, and using intimidation. His campaign ended a year later as the Army fought back allegations of harboring communist sympathizers and he was personally censured by the Senate.²⁹

LGBTQ+ have faced discrimination throughout American history as “sodomy laws” were already introduced in colonial times. Although these laws imposed severe penalties, they were seldom enforced especially in the case of private activities. Stricter enforcement began in the first half of the 20th century, but the main focus was still on the more serious sex crimes, such as prostitution and rape. Still, in 1917 immigration laws were revised to ban “persons with abnormal sexual instincts.” Intolerance became more severe in the immediate post-war period. In 1947, under President Truman, the State Department started firing suspected gay employees, and in 1953 President Eisenhower signed an executive order banning people guilty of “sexual perversion” from holding positions in the Federal civil service. Senator McCarthy extended his witch hunt to LGBTQ+ Americans in part to co-opt them in his campaign against communists. The threat of being publicly exposed—leading to the loss of job, social standing, and possibly family—was enough for some of them to co-operate with his inquiry.³⁰

Racial Oppression. Despite three constitutional amendments (13th, 14th, and 15th), a series of Supreme Court decisions led to conditions where “blacks were separated from whites by law and by private action in transportation, public accommodation, recreational facilities, prisons, armed forces, and schools in both Northern and Southern States.”³¹ The most far-reaching of those decisions was *Plessy v. Ferguson*, which established the “separate but equal” doctrine on racial relations resulting in the marginalization of African-Americans. In the school system this new doctrine left African-Americans with substandard schools and limited human and other resources. These adverse educational conditions led to below-average levels of educational attainment. In 1950 the median number of years of education for African-Americans was roughly two-thirds that of Whites (nearly 3 fewer years). Lower educational attainment combined with discriminatory hiring practices resulted in an unemployment rate for African-Americans three-quarters higher than that for Whites. This, in turn, generated a poverty rate among African-Americans three times that of Whites—more than half of them lived with income below the poverty line. Poverty contributed to sub-standard health conditions. In

1950 the infant mortality rate—deaths of children under 1 year of age per 1,000 live births—was nearly one-third higher for African-American than White children. These conditions of poverty prevented African-Americans to even benefit from government programs helping young men and women returning from the war adjust to civilian life as the G.I. Bill of 1944 did not extend low-cost mortgages to the “high risk” areas where African-Americans lived. Relatively many more African-Americans than Whites populated the American prisons. African-American felons sent to Federal and State penitentiaries accounted for 30 percent of the total although African-Americans represented less than 10 percent of the population. Despite shedding their blood alongside White buddies, African-Americans remained in segregated Army units for part of the 1950s. Segregation was also part of everyday life. Intermarriage was forbidden, African-Americans had to sit at the back of public buses and trolleys, and African-Americans and Whites were not supposed to eat together.

Summary

Perhaps the most significant aspect of life in 1950s America was the existence of a set of coordinated institutions—the church, the family, schools, labor unions—that promoted the doctrine of America as the defender of democracy and a New Jerusalem. The stability provided by these institutions came with a high price tag in terms of repression of individual freedom, intolerance, and racial injustice.

CHAPTER 7. INSTITUTIONAL TRANSFORMATIONS

The institutional stability of the 1950s was not carved in stone. The demographic and economic changes of the post-war period created some stress on those institutions which intensified in the following decades under the pressure of economic shocks and technological change. In this chapter I will briefly discuss five institutional changes: the Americanization of religion, the fragmentation of the family, the secularization of education, the decline of labor unions, and the re-direction of government policy.

The Americanization of Religion

Although Christianity had become America's "civil religion" in the 1950s, it was by no means a monolithic bloc. The feud between Protestants and Catholics continued unabated and cracks within Protestantism became more visible. In order to solidify their leading position and present a united front against Catholicism, in 1908 the mainline Protestant denominations formed a nationwide organization named Federal Council of Churches. This Council emphasized two fundamental objectives of its activities: (1) promotion of democracy "as the expression of Christianity," and (2) support for the Social Gospel through a "social creed" which included: (a) equal rights for all men, (b) protection of working conditions for all workers, (c) lower working hours, (d) abolition of child labor, (e) a living minimum wage, (f) financial provisions for old age, and (g) abatement of poverty.¹

For some Protestants the strong emphasis on the "social Gospel" had made mainline churches too liberal. Unable to steer these churches along more fundamentalist interpretations of the Bible, conservative Protestants decided in the late 1920s to channel "their creative and innovative energies into building alternative institutions independent of the established denominations."² By the end of the 1930s some of the evangelical leaders recognized that they needed to coordinate their missions in order to become an effective Christian force. At their first Conference, held in St. Louis in April 1942, these leaders drafted a tentative constitution and a statement of faith. One year later, at their first constitutional conference held in Chicago, they gave to the newly formed organization the name

of National Association of Evangelicals. The “public policy” portion of its Mission Statement states,

The National Association of Evangelicals provides a forum where evangelicals can work together to protect religious liberty; safeguard the sanctity of human life; strengthen marriages, families, and children; seek justice and compassion for the poor; preserve human rights; pursue racial justice and reconciliation; promote just peace; and care for God’s creation.³

The differences between the mainline Protestants and the Evangelicals with respect to the “social Gospel” are evident from the mission statements of their two umbrella organizations. Seeking “justice and compassion for the poor” is a far cry from the detailed list of actions in support of workers’ rights, child labor, pensions, living wages, and anti-poverty programs promoted by the National Council of Churches. Buoyed by the new cooperation arrangements and the leadership of charismatic figures like Billy Graham, Evangelicals grew in numbers and strength. By 2019 they represented the most powerful religious force in America.

With Billy Graham the evangelical movement in the United States was consolidated and aimed at two main objectives: the generalization of the religious aspects of the Cold War, and the validation of the American style of living. At the political level, the Cold War was a non-military conflict between the two superpowers that emerged from World War II, the United States and the Soviet Union. This conflict was manifested primarily in the form of the arms race and the space race. Graham’s preaching transformed this conflict into a battle of faiths. First, he reaffirmed the position of the United States as a chosen nation and its people as the army of God. In the last sermon of the 1957 New York crusade, he urged the crowd to “tell the world that we Americans believe in God ... let us tell the world that we are united and ready to march under the banner of Almighty God.”⁴ Second, he shifted the focus from the Soviet Union to communism, elevating the latter to a religion which he considered to be “a Godless religion, a religion of the devil.”⁵ By doing so, Graham transformed the Cold War from a conflict with the Soviet Union, the enemy without, into a battle between Christians and communists, the enemy within. Thus Americans were separated into two armies: those on the side of God (particularly Evangelicals) and those against God (communists, but also those who refused to give their lives to Christ).

Being part of the spiritual army of God in God's chosen country was not enough. Americans, especially young ones, were experiencing unprecedented prosperity and mobility. The automobile era allowed them to move to the suburbs, purchase new-style houses, explore consumerism, and create a new lifestyle free of traditional constraints. This new and prosperous middle class, mostly White, needed a domestic religious identity that validated the new American lifestyle. Billy Graham served this validation on a silver plate. Tall, handsome and well-dressed, he portrayed the iconic image of a white middle-class man. He played the part in his life—he had a wholesome family, was never touched by a scandal, and even in leisure he chose examples of the American lifestyle, such as playing golf and watching baseball games—and often interspersed his sermons with examples of everyday life. To White middle-class families, he preached the Godliness of middle-class values and lifestyle, which he elevated to the status of Heaven, to be enjoyed on earth and for eternity. Responding to a question, Graham described Heaven as a place where “we are going to sit around the fireplace and have parties and the angels will wait on us and we’ll drive down the golden streets in a yellow Cadillac convertible.”⁶ All this could be had without unbearable sacrifices, but by simply accepting Jesus as one's personal Savior, refraining from drunkenness, fornication, gambling, and keeping the marital vows.

The American re-interpretation of Christianity over time developed a variety of special features. For the purpose of this book, I will focus on three main features: (1) the shift from social issues to personal morality, (2) the religious service as a form of entertainment, and (3) the replacement of the “social Gospel” with the “prosperity Gospel.”

Shift from Social Issues to Personal Morality. The past 70 years have witnessed a change in emphasis among Christians away from social issues and towards issues of personal morality, primarily divorce, abortion, and sexual relationships. Four major factors contributed to this shift: the expansion of social programs, the sexual revolution of the 1960s, constitutional and legal developments, and the tilt towards the right by Catholics.

Most of the social issues identified in the original “social creed” of the National Council of Churches were addressed by the government before 1950, some of them as early as the mid-1930s. For example, the Social Security Act of 1935 provided

workers 65+ steady income after retirement, the Fair Labor Act of 1938 reduced working hours to 44 per week (further reduced to 40 hours in 1940), introduced a minimum wage, and regulated child labor (no children under 18 were allowed to work in mining and manufacturing). At the same time labor unions gained a variety of fringe benefits for workers, including vacations, better working conditions, private pensions, and health care insurance.

The 1960s saw major social turmoil that shook the foundations of the existing value system. The civil rights movement and the Vietnam war created tensions between citizens and the government, some theologians started to talk about the “death of God,” young people began to experiment with drugs and to abandon religious practices, working women acquired new financial and personal freedom, the introduction of the contraceptive pill in 1960 shattered sexual norms, and less restrictive divorce laws (no-fault divorce, introduced first in California in 1969) freed women from oppressive and sometimes harmful marital relationships. The two developments that re-galvanized many Christians, especially the Evangelicals, were the legalization of abortion and the rise of the “gay community.” When, on January 22, 1973 the Supreme Court decided the *Roe versus Wade* case with a vote of 7 to 2, women gained the constitutional right to safe abortions. Since then, abortion and gay marriages have become the battle cry of Evangelicals. Since Evangelicals grew in numbers and gained dominance among Protestants, these two issues have become the foundations of the new Protestant credo. This new credo began also to attract a good portion of the Catholic population, which saw all these changes as an attack on the moral fabric of the nation in general and family in particular.

The focus on personal morality (greater focus of the republican candidates) and away from social justice issues (greater focus by the democratic candidates) is noticeable in the evolution of the voting pattern of Christians. In the presidential elections from 1952 to 1984, close to two-thirds of Protestants voted for the republican candidate, with a peak of 70 percent in 1970. Among Catholics, we notice a steady increase in the support for republican candidates, with the exception of the 1960 election when the democratic nominee, John Kennedy, was the first Catholic candidate. In other elections we saw an increase in the share of Catholics voting for republican candidates from 44 percent in 1952 to 52 percent in 1972 and 61 percent in 1984. In the 2016 presidential election are also noticeable strong racial differences. Among Protestants, 61 percent of white voters but only 3

percent of African-American voters supported the republican candidate. Moreover, among white Protestants, the republican candidate was supported by 77 percent of Evangelicals and 57 percent of the members of mainline churches. Among Catholics the republican candidate received the support of 64 percent of non-Hispanic voters but only 19 percent of Hispanic voters. In the current religious/political landscape of the United States, there is a greater divide among racial lines (Whites versus the rest) than on denominational lines (Protestants versus Catholics).

The Media and the Message. The use of the available media had been a traditional way of spreading the religious message in the United States and Revivals usually incorporated elements of the entertainment world. Billy Graham raised the use of media to a new level. Dedicated to selling “the greatest product in the world,” his message was inseparable from the instruments of delivery. In so doing he revolutionized the religious experience and transformed the religious message into a media event. Graham understood that in order to widen the reach of his Ministry he needed the help of the press and cultivated a close relationship with this communication medium. For example, he held several press conferences during the 1957 Crusade at New York City, which helped secure the coverage of the major networks. The television may have been his major media ally. TV not only allowed him to reach far beyond the crowded venue of his Crusades, but it transformed the religious experience of individuals. The experience of conversion no longer required a believer’s presence in a specific place, but could happen privately in the comfort of a person’s living room. The television also cemented the close connection between the message and the messenger. Graham did not need sophisticated theological arguments to lead his audience to conversion. His own presence—physical appearance, dress code, voice—combined with the intermingling of anecdotes of his life delivered the message: a White middle-class man communicating his interpretation of God’s words to a crowd of White middle class men and women, in the audience and at home, in a language that they could understand.⁷ In this atmosphere the preachers are transformed into the personification of Christ on earth and their interpretation of the Holy Scriptures becomes the word of God.

The dominant role of televangelists was facilitated by the changing policy of the Federal Communications Commission (FCC). Prior to 1960 the airwaves were treated exclusively as serving “the public interest” and religious programming by mainline churches was offered free of charge by the major radio and television networks, who in turn received “public interest credits.” When in 1960 the FCC relaxed its rules and allowed local stations to receive “public interest credits” even when they sold airtime for religious programming, evangelical organizations began to purchase radio and TV air time at a fast pace. Over the following 17 years paid religious programming skyrocketed from 53 percent to 92 percent of religious broadcasting. A more profound change occurred in 1980 when President Reagan deregulated the radio and television industry by replacing the “public interest” with the “private interest” principle and allowed licenses to be sold indiscriminately. Televangelists seized this opportunity and used the cash raised from contributions by their followers to purchase hundreds of radio and TV stations.⁸ Their religious, financial, and political power kept increasing. Together with the “re-born Catholics,” namely, Catholics who replaced their traditional social justice concerns with issues of private morality (abortion and gay rights), Evangelicals have acquired such political power that they currently dictate the course of America’s domestic and foreign policy.

Under the new evangelicalism the battle between good (God-fearing American Christians) and evil (communists) takes on cosmic dimensions. According to a particular interpretation of the Bible and a literal reading of the book of Revelations, the conflict between good and evil will lead to a final battle between Christ and the anti-Christ which will take place in the plains of Armageddon in modern day Israel. Christ will be victorious, his victory will ensue a period of 1,000 years of peace, and there will be a New Heaven and a New Earth. The faithful Christians who had been lifted to Heaven during the Rapture will populate the new Earth. Since America is viewed as the new Israel and the faithful American Christians are the chosen people, they need to prepare for the establishment of new institutions during this golden age of 1,000 years. The New Earth will have a theocratic form of government which, in the social area, will impose the Old Testament precepts and, in the economic sphere, will promote unbridled capitalism.

The connection between Protestantism and some form of capitalism is not new. It had already been established at the time of the Pilgrims, whose faith was rooted in

Calvinism, and who believed that material success, gained through hard work and frugality, was a sign of God's blessings. Later on, the connection between the work ethic, success, and faith at the personal level was extended to the institutional level when religious organizations lent their support to free enterprise as creator of wealth and prosperity. National prosperity, in turn, was a manifestation of God's love for the new country.

The link between Protestantism and capitalism was strengthened in the 1940s by the commonality of interests against the expanding role of government. The Great Depression had provided the opportunity for government to expand its scope in a manner that interfered with the interests of both business and religious organizations. Increased regulation and expanded power of labor unions curtailed the freedom of business enterprises while new social programs were perceived as an encroachment on the charitable activities of religious organization and an attack on the Protestant theology which predicated that salvation comes from God not from the government. In the name of freedom to pursue their interests without governmental interference, was consummated the marriage between Protestantism and capitalism. Over time the two members of this union became one, and Christianity was transformed into the theology of capitalism. The social Gospel was replaced by the prosperity Gospel and Jesus took the role of banker of the faithful, offering a hundredfold return to those who invested in his bank through tithing and other contributions.⁹ Although the prosperity Gospel was originally associated with Pentecostal congregations, it later became common belief among a variety of Protestant churches, and now 69 percent of churchgoers believe that God wants people to be financially prosperous. Among Evangelicals this belief is shared by 3 in 4 churchgoers. In America this controversial interpretation of the Gospel is so powerful that 2 of the 5 religious leaders who spoke at President Trump's inauguration (Reverend Paula White and Bishop Wayne T. Jackson) were leaders of the prosperity Gospel Movement.

Paradoxically, the prosperity Gospel may have provided young people a rationale for abandoning organized religion. If the ultimate purpose of life is to acquire riches, it may be cheaper and more reliable to rely on education, skills, and social networks to achieve that goal than praying, tithing, and other forms of bribing God.

In their promotion of social conservatism and the prosperity Gospel, Evangelicals were able to gain the support of an unusual ally: a new generation of Catholics. On the social conservatism side, they partnered with Catholics in the judicial area by supporting the appointment of conservative Supreme Court justices (Roberts, Thomas, Alito, Scalia, Kennedy, Kavanaugh, Gorsuch (who was raised Catholic but now attends a different denomination) and Coney Barret. On the economic side, they relied on the intellectual power of prominent pro-business Catholic intellectuals unleashed by Pope John-Paul II with his 1991 encyclical *Centesimus Annus*, which contained a re-interpretation of Pope Leo XIII encyclical *Rerum Novarum*.

Pope Leo wrote his encyclical during turbulent times rife with struggles, at times violent, between workers and business owners. While not condemning business, he sided with the rights of workers. He affirmed his opposition to any form of socialism as a viable option and supported private property, with the understanding that it should be used for the common good and not just for private profit. Pope John-Paul, in his “re-reading” of *Rerum Novarum*, starts by identifying the different economic context that existed at the end of the 20th century. He points out that, while in the past economic power rested in the ownership first of land and then of capital, which included both natural resources and “the total complex of the instruments of production,” now the most important resource is “know-how, technology, and skills.”¹⁰ Moreover, while in the past man was simply a supplier of physical labor, now man himself is the decisive economic force which operates through three channels: the acquisition and use of human capital, his organizational skills, and “his ability to perceive the needs of others and to satisfy them.”¹¹ According to the Pope, in this new economic structure, “the modern *business economy* has positive effects” because it is based on “human freedom exercised in the economic field, just as is exercised in many other fields.”¹² The Pope distinguishes between the needs that can be satisfied by the market—“needs which are ‘solvent’, insofar as they are empowered with purchasing power” and “resources which are ‘marketable’, insofar as they are capable of obtaining a satisfactory price”—and fundamental human needs that cannot be satisfied by the market. For the former the Pope reveals his preference for a free enterprise and a market economy: “It would appear that, on the level of individual nations and of international relations, the *free market* is the most efficient for utilizing resources and effectively responding to needs.”¹³ The Pope envisions “a society of free work,

of enterprise and participation” which “is not directed against the market, but demands that the market be appropriately controlled by the forces of society and by the state, so as to guarantee that the basic needs of society are satisfied.¹⁴

This statement could have been found in any standard first year economics text of the time. The government protects private property and enforces strict anti-trust laws to minimize the concentration of economic power. The “free market” ensures the efficient allocation of resources, the untainted distribution of the income generated by production, and the satisfaction of the demand expressed by consumers. Governmental and non-governmental institutions will deal with non-market needs, and religious organizations will provide the moral underpinning to economy and society. Standard economic theory, however, supports the market on efficiency grounds alone and refrains from making moral judgments. The Pope deals primarily with values and moral judgments. By explicitly revealing his preference for the “free market,” the Pope effectively provided a moral underpinning to the new capitalism. With this encyclical Pope John-Paul II provided the theological foundations that a new generation of Catholic intellectuals was seeking for promoting an economic system driven by a form of capitalism with a Christian conscience. In the United States the two leading figures in the movement were Michael Novak—journalist and philosopher—and Richard Neuhaus, a Lutheran minister turned Catholic priest.

In *The Spirit of Democratic Capitalism*, Novak re-interpreted Catholic social teaching in the context of economic growth. For millennia, economic growth was constrained by land and natural resources. Order and stability were the main priorities and the Church social teaching focused exclusively on issues of distribution and justice. The industrial revolution broke some of those constraints, but created a conflict between workers and the owners of the means of production. The Church took the side of workers and for a century the encyclical *Rerum Novarum* remained the standard teaching on social justice. Novak offered a re-interpretation of that encyclical that would be consistent with a new economic system free from the constraints of natural resources and internal conflicts, driven by the creativity and spirit of entrepreneurship of free individuals. The form of “democratic capitalism” proposed by Novak is an integrated economic-political-social system composed of three parts: (1) a free market economy— based on private property, economic freedom, and competitive markets— a pluralistic

political system with limited government reach and no concentration of power, and a social system where people chose freely cooperation and “virtuous” behavior.

In *Centesimus Annus*, Novak found the moral foundations for his democratic capitalism and a re-interpretation of Catholic social teaching that fit his views about capitalism as a creative force and social justice as personal virtues expressed in cooperative activities rather than on principles of social order. In *Centesimus Annus*, at the center of economic, social, and cultural systems are persons created in the image of God and endowed with absolute rights which allow them to express their full humanity through their creativity. For Novak, democratic capitalism becomes the practical expression of Christianity according to the reinterpretation of the Catholic social Gospel because it offers human beings the opportunity to realize their God-given potential through creative action. Novak’s tripartite system is founded on the belief of humans as moral beings who can express their full humanity only in the presence of freedom. Created in the image of God, and guided by tradition and Church teachings, they will naturally behave in accordance with the Judeo-Christian values and will build societies where the creation of wealth goes hand in hand with the promotion of economic and social justice.

Sandwiched between *Centesimus Annus* (1991) and Novak’s *Catholic Ethics and the Spirit of Capitalism* (1993), Richard Neuhaus’ *Doing Well and Doing Good* (1992) offers a novel argument in support of the “new capitalism,” i.e. the good intentions and good practices of those who accumulate wealth in an honest manner. For Neuhaus wanting to make money, and lots of it, is perfectly consistent with Christianity. In his view, God wants us to “take care of business conscientiously, fairly, honestly, lovingly, and, yes, prayerfully.” Neuhaus as well as Novak and Pope John-Paul II believe that the most efficient system for taking care of business is the free market. Neuhaus acknowledges that God is also interested in the common good. He believes that a Christian society is one where there is some sharing of this wealth so that everyone benefits from economic progress.

The foregoing discussion indicates that in the early 1990s there was a convergence on the views of Protestants, especially Evangelicals, and a new generation of Catholics with regard to the moral justification of capitalism as generator of wealth and prosperity, but for different reasons. For Evangelicals material wealth is the manifestation of God’s approbation of America as the New Jerusalem and its faithful people as the chosen ones. For Catholics the “new

capitalism” is the precondition for fulfilling God’s plan for humans as free and creative beings. In either’s case God’s blessings and God’s will are manifested in material progress.

This belief extends beyond religious faith and is not affected by changes in religious affiliation. Although a quarter of American adults, and a substantially higher proportion of millennials, have no religious affiliation, both affiliated and non-affiliated believe in an American dream that materializes only through economic well-being. The affiliated seek God’s help in reaching their dream, while the unaffiliated rely on their own capacity, but the goal is the same.

The Fragmentation of the Family

For most of human history, in the United States and in the rest of the world, the most prominent social institution was the extended family, a social unit that comprised a close-knit group of families related by kinship and usually composed of grandparents, parents, and children living under one roof plus relatives that lived nearby. This type of family arrangement was the most suitable for an economic structure based predominantly on agriculture—which involved a labor-intensive production process and benefited from free family labor—and small family enterprises—which required both trust and labor in order to prosper. In addition to supporting the economic system by providing the necessary workers, the extended family also offered a variety of special benefits: stability, resilience, identity, and emotional support.

In an environment where economic growth is constrained by the availability and quality of land, stability becomes a primary objective, and the extended family provided stability of employment and lifestyle. Children, growing up in close daily contact with grandparents, parents, and other relatives learned from them not only skills, but traditions, and the values that they needed to be successful in life as future parents and community members. This was not theoretical learning from a book. It was experiential. Children saw what grandparents and parents did. The wisdom that the elders passed on also through direct instruction or simply through the discussions that took place at the dinner table reinforced what children observed every day. Even potential influences from the outside, received through the media, were filtered by the opinions expressed by the elders. Young boys and girls from adolescence prepared themselves for marriage, family formation, and full membership in the community by following the example of their elders. The

values that supported the community were reinforced by the close partnership between Church and family.

Extended families were resilient because no member was isolated and at the mercy of unforeseen circumstances. Their members were together in good and bad times, they supported each other, and shared laughter and tears. They gathered for births and funerals, for weddings and birthdays, around the Christmas tree and at the Thanksgiving table. In the community they gathered together at the Sunday religious services, at fairs, picnics, and school performances. Their identity came from this togetherness. Extended families also offered their members special identities. Last name and place of birth or residence not only provided personal identification, they created a unique identity: they reminded individuals who they were and the rights and duties they upheld, and told the world what kind of persons they were. Finally, extended families provided all the emotional support that a person needed from cradle to casket. As they first opened their eyes, children saw a crowd of smiling people—men, women, other children, young adults, white-haired old folks. And that love that exuded from their joyful eyes accompanied those children throughout their lives. They knew from birth, maybe they even sensed it in their mother's womb, that they would never have to fear loneliness.

These benefits of the extended family did not come without a price. Members of extended families had little privacy as they were surrounded all day long by people, not necessarily all of their liking. They also had limited personal choices as the maintenance of traditions was considered vital to the well-being of the family. The survival of the family was paramount and the individual was not a separate entity, but an integral part of a group. The well-being of the family always trumped personal fulfillment. Extended families also thwarted creativity. Only creative endeavors that were approved by the family could be pursued. All these restrictions led to a low degree of mobility, a feature that was needed for the survival and stability of the family unit.

Starting in the late 19th century, economic changes began to undermine this family structure. The opening of factories in and around large cities offered young people new opportunities for a more independent and prosperous life. The more adventurous men and women left the security of their extended families and moved to the new centers of employment, forming a new type of social institution, the nuclear family consisting of parents and children. The new family arrangements did lack the full socializing power of the extended family, but offered many

benefits: it provided a higher material standard of living, greater freedom of expression, more varied learning opportunities, and higher upward mobility. The potential lack of socialization with family members was replaced by a different social arrangement where blood kin was replaced by community kin, namely, the families living in the neighborhood. The shift from extended to nuclear families did not change much the traditional family values. Children growing up in suburban families accompanied their parents to church on Sunday, shared meals with them, were taught about right and wrong by word and deed, were protected and guided by parents and the community, and socialized with the other children in the neighborhood. As in the case of the extended family, the focus of the members of the nuclear family was on the well-being of the “family” as a collective unit and not on the fulfillment of individual desires, but the concept of “collective unit” differed. The extended family was built around a family business, usually a farm or a store, and each family member played a part in building the success of the enterprise. The main focus of the nuclear family was having children and raising them to become successful members of society and, in their turn, establish their own families and provide their happy parents with healthy and loving grandchildren.

The nuclear family was a transient social form which depended on two special conditions: (1) an economic and social structure with disincentives for women to join the labor force, and (2) a wage structure that allowed a man to support a family. The wartime economy showed the value of women in the labor market. As the post-war economic expansion created more job opportunities for everyone, increasing numbers of women joined the labor force. The labor force participation rate of women, which in 1950 stood at 34 percent, rose steadily to 38 percent in 1960, 43 percent in 1970 and 60 percent in 2000 before declining slightly to 57 percent in 2018. As women gained financial independence, the economic security rationale for getting married or holding onto an unsatisfactory marriage disappeared. Moreover, the opportunity cost of having children and staying home to nurture them increased with the expanding job opportunities and rising wages. This new economic freedom undermined the nuclear family and led to rising divorce rates. The number of divorces was fairly stable in the 1950s and early 1960s at about 2.5 per 1,000 people, but rose to 3.5 in 1970 and 4.6 in 1990, before entering a declining trend leading to a rate of 2.9 in 2018. In the 1950s the American dream was quite modest compared to today’s expectations: a three-

bedroom bungalow with a single garage, a car, a kitchen with an electric stove and a refrigerator, and a “chicken in the pot.” Because housing costs were moderate and strong unions were able to secure living wages for most workers, a young man could afford to house and feed a family of four on a single salary.

The foundations of the nuclear family, already being shaken by the new-found economic freedom of married women, were further undermined by an economic system that created a widening divide between rich and poor. As education levels among the workforce increased, the education wage premium began to create widening income disparities based on skill levels. At the same time, more educated young people married at a later date and became more cautious about their sentimental relationships, seeking partners with similar education and earning potential. Over time these new conditions created a chasm between two major groups in society: (1) those with high education and high income, and (2) those with low education and low paying jobs. As shown in Table 7-1, the marital status differs drastically between the two groups. Women with earnings of at least \$100,000 per year have a marriage rate more than one-third higher (18 percentage points) than women with annual earnings between \$25,000 and \$40,000. They also have a lower divorce rate (17% or 2.3 percentage points less), and only 17 percent of them are single compared to 32 percent for women in the lower income groups. Similar conclusions, with wider divergence, apply to males. The marriage rate for the higher income group exceeds that for the lower income group by more than two-thirds (32 percentage points) while the divorce rate is lower by 22 percent (2 percentage points). Only 12 percent of high-earnings males are single, 30 percent of the rate for males in the lower income group. Similar differences are found among people 25+ differentiated by education. The marriage rate among those with at least a bachelor’s degree (66%) is 18 percent higher than people with some college education and 22 percent higher than those with high school or less.¹⁵

Table 7-1. Marital Status by Sex and Earnings of the Population 15+ in 2019

Marital Status	Percentage by Sex and Earnings Levels (\$000s)			
	25-40		100+	
	Male	Female	Male	Female

Married	47.1	49.9	79.4	68.4
Widowed	0.8	2.8	0.8	2.2
Divorced	9.0	13.3	7.0	11.0
Single	41.1	31.5	12.2	17.2

Source: US Census Bureau (2019), *American Families and Living Arrangements: 2019*, Table A1.

The families formed by highly-educated and prosperous partners are a hybrid form of the extended and nuclear families. Like the latter, a major focus of the spouses is the career and success of their children. To approximate the former, they buy all the services that the traditional extended family offered its members: nannies, tutors, coaches, therapists, after-school programs. This is a manufactured form of extended family which purchases the services that were offered freely in the traditional extended family. It differs also from the traditional extended family in a more fundamental way: the kindness and care of a nanny cannot replace the love of a grandmother, and the efficiency of the teachers in an elite private school cannot offer the warmth of a teacher in a small public school. Because of the large investment in their children and the disastrous financial effects of a family break-up for the two partners and for the future of their children, the families of the affluent tend to be more stable and longer-lasting. As referred by Brooks, “college-educated women ages 22 to 44 have a 78 percent chance of having their first marriage last at least 20 years compared to 40 percent for women with high-school education.”¹⁶

The family arrangements among working-class Americans are more fluid and more transient. Some young workers do not earn enough to support a family. Others settle for relationships based on cohabitation. Those who get married run high risks of family break-up. The children of rich and poor families live in drastically different worlds. The children of affluent families have all their needs met, are guided in achieving their dreams, and grow up in a stable environment with parents as role models. The children of working-class families live in precarious economic settings, often with a single parent either alone or with partners in unstable relationships. Children in both groups of families, however, have something in common. Children of affluent families live with the pressures of a competitive world from childhood. They learn at an early age that their neighbor is their competitor and that to succeed they have to focus on their needs and not on those of the community. Children of working-class families cannot rely on

transient and fluid families for full support. They also learn from an early age that they must rely on themselves if they want to improve their economic situation. Thus, for both groups of children, work is the driving force of their lives. For the affluent hard work is essential to maintain their privileged position in society; for the working-class hard work is the only way out of poverty.

The Marginalization of Labor Unions

We saw in an earlier chapter how union membership declined rapidly over the past 50 years and how their demise has affected the capacity of workers to keep wages growing in line with productivity gains. The loss of union power did not just affect the bargaining power of workers, it redefined the very meaning of worker. In addition to act as workers' advocates for wage settlements, benefits, and working conditions, labor unions provided the working-class with a special identity. Unionized workers were not separate individuals within an anonymous working crowd, there were members of a special community, a form of extended family which spread its roots through centuries and continents, linking living leaders with the heroes of past labor struggles against a form of capitalism that had the built-in tendency to create wide disparities of income and high concentration of wealth. The members of this family were not connected simply by common economic interests. They were united by a common ideology, which at its core had the principle of solidarity, not just among unionized workers, but among all workers and the poor and dispossessed. They were part of an international movement which fought not just for higher wages and better working conditions, but also for social justice and an economic system that offered any willing individual the opportunity to have a fulfilling life.

Like the nuclear family, labor unions were only a transient institution dependent on three fundamental factors: (1) an economic structure based on the production of goods, (2) the localization of industrial activity, and (3) a work force with a relatively low level of education. As we saw in an earlier chapter, even as late as the 1950s, the larger share of employment was in the goods-producing industries, with a dominant role by manufacturing, which required more muscle power than brain power. Even a portion of the service sector, particularly transportation, required the same kind of workers needed in the goods-producing industries. This economic structure was more suited to male labor. As a result, factories, mines,

woodlots, ports, were teaming with men earning a living wage even with less than high school education. And most of these men were members of labor unions. The goods-production base of the industrial economy was also associated with local economic activity. Wood-processing factories were located near forested areas, mines where the ore was found and manufacturing where the natural setting was most favorable. This environment fostered social cohesion because the two main sources of identity for workers—the nuclear family and the job family—were intertwined. In the environment solidarity was not just a set of shared values and an operational principle, but it had a human image: the faces of the co-workers and of their spouses and children.

The shift from the industrial economy, based on the production and distribution of goods, to the post-industrial economy—dominated by information, automation, and finances—has broken the cohesion of the labor movement separating workers into two groups: the worker-capitalists and the new proletariat. The requirements of technological change were met by an increasing number of workers with higher levels of education and specialized skills. Factory workers did operate machines, but they were separated from them. The machines had their own specific operating requirements and the workers operated them accordingly in a repetitious process. The highly skilled workers of today also use machines, but they create the processes and they control the machines. These workers do not just offer enhanced labor services. They own the most important type of capital in the modern economy: human capital. Therefore, they are a hybrid between labor and capital, they are effectively worker-capitalists. In the traditional struggle between labor and capital, the interests of these privileged workers are more closely aligned with those of capitalists, that is, the accumulation of wealth. Not only they do not need labor unions, but they have no interest in supporting them for the benefits of others. Among highly-skilled workers, only those employed in the public sector have strong union representation. The purpose of these labor organizations, however, is largely limited to defend attacks on wages and benefits. The rest of the labor force has become an amorphous aggregation of workers without representation and bargaining power. As union membership has almost disappeared in the private sector, the lions of yesterday have been tamed into the pussycats of today. Leaderless, the new proletariat lacks the degree of cohesion necessary to withstand the forces of globalization and structural change and the power of business, and it cannot count on the support of governments that are

focused on economic growth regardless of its effect on income inequality and the concentration of wealth.

A notable victim of the fragmentation of the workforce into worker-capitalists and new-proletariat is the principle of solidarity. The worker-capitalist operates in a very competitive environment. Success requires self-reliance and individualism. Professional connections are not elements of a workers' movement; they just serve self-interest and personal career progress. The new proletariat operates in a precarious environment devoid of institutional support. It also needs to focus on self-reliance and individualism, just to survive. Both worker-capitalists and the new proletariat are strongly committed to work, the former by choice and the latter by necessity.

The Dispersion of Information

In the 1950s Americans received their news from the air waves—radio and television—and the printing press, largely in the form of daily newspapers. The radio had served as a major source of information already in the 1930s when newscasts were part of its functions and represented 10 percent of programming. The importance of radio as a news media expanded during the war as 95 percent of American homes had radio sets and Americans had a growing interest in information about the war.¹⁷ On the 8th of December 1941 over 60 million Americans listened to the radio broadcast of President Roosevelt's "infamy speech," America's declaration of war with Japan. Four years later (6 August 1945) tens of millions of Americans tuned-in the radio to hear President Truman announcing that the Enola Gray had dropped the first atomic bomb on Hiroshima. Radio continued to offer a full slate of news programming through the 1950 even as television was making great inroads.

The immediate post-war period saw the explosive growth of television. From a total of 20,000 sets in 1946, TV ownership mushroomed to 350,000 in 1948, and 15.3 million in 1953. TV stations, which amounted to a mere 6 in 4 cities in 1944, rose to 108 in 65 cities by 1952.¹⁸ In its early days TV programming was focused largely on comedies for family entertainment. News broadcasting was considered part of the "public interest" mandate of the FCC and was not a prominent part of TV programming. Also, in the infancy of television news reporting encountered more technical challenges than radio because of its use of images and experienced

a variety of experiments during its early stages. A great boost to TV as a mainstream news media was given by the coverage of the 1952 political conventions in Chicago when more than 60 million Americans watched the TV network coverage. The popularity of TV news programming was enhanced by the presence of legendary “anchormen” such as NBC’s David Brinkley and Chet Huntley, ABC’s John Daly and Edward Murrow, and CBS’ Walter Cronkite.¹⁹

The leading source of news for Americans in the 1950s was the newspaper and nearly every household purchased a copy on a daily basis. Even by 1976 a circulation of 60 million copies represented a penetration rate of 80 percent.²⁰ Most of American newspapers were family-owned and the content was largely in the form of local news complemented by summaries of national and international news.

The most significant difference in mainstream media between the 1950s and today is the trust it received by Americans. According to Ladd (2012), “In the mid-twentieth century, the news media were one of America’s most trusted institutions.” In 1956, “66% of Americans thought that newspaper reporting was fair and this view did not differ greatly between Republicans and Democrats (78% versus 64%). Two polls conducted in 1964 show that roughly 70 percent of respondents considered network news reporting to be fair.²¹ The first Gallup poll of trust in the media conducted in 1972 indicated that more than two-thirds of respondents trusted the media: 18 percent had “a great deal” of trust and 50 percent had a “fair deal” of trust. A 1972 survey found that the most trusted man in America was not the President, a religious leader or a prominent businessman, but Walter Cronkite, CBS’s anchorman.²²

A variety of factors contributed to the public’s trust in mainstream media in the 1950s. First, there were only three main sources of information: radio, television, and newspapers, and they operated under similar rules. Second, all three media focused on providing a set of facts, leaving the interpretation largely to the listener/reader. The role of investigative and interpretative journalism was quite limited. Third, because of the focus on reporting facts, the journalistic profession developed a code of performance and ethics that stressed professionalism and objectivity, and that code applied to all types of media. Finally, there was limited political polarization. This was a time when Americans were united in their fight against communism and in defending a way of life that offered opportunities for

greater prosperity. Americans would have not tolerated a media system that attacked government and sowed the seeds of dissension.

These conditions have been reversed over the past 70 years. Among the traditional media, the radio continues to be an important source of information, the circulation of morning newspapers remains strong despite the overall decline in the circulation rate, and television news programming has expanded greatly and has led to networks dedicated exclusively to news broadcasts. The major change, however, was the development of the internet and the introduction of the iPhone. Now anyone, anywhere in the world has potential access to local, national and international information at their fingertips. This expansion of information sources has led to the dilution of reporting standards. In the internet world anyone is a journalist, analyst, commentator, and there are no norms that regulate the accuracy of information. Individuals are not only offered various interpretations of given facts and events, but different presentations of the same fact. If their value system finds unacceptable the presentation of an event by a media source, they can find comfort by turning to a source that offers acceptable “alternative facts.” When they disagree with the information presented by another news source, they can dismiss it as “fake news.” This “subjectivization” of information is time-saving and comforting because at the same time it eliminates the burden of thinking and validates one’s preconceptions and biases.

This shift from objectivity to subjectivity in the diffusion of information was aided by the growing political polarization and in turn it fed its power. The end result of this symbiotic relationship was a deep distrust of the mainstream media. According to a recent Gallup survey, in 2019 only 13 percent of respondents indicated a great deal of trust in mass media and an additional 28 percent had a fair deal of trust.²³ Nearly 60 percent of Americans have very low trust (30%) in the media or no trust at all (28%). The mistrust of the media is highest among Americans who vote for republican candidates. In 2019 only 4 percent of them had a great deal of trust in the media, 11 percent had a fair deal of trust, and 48 percent had no trust at all. By contrast, more than two-thirds of those voting for democratic candidates had a great deal (24%) or a fair deal (45%) of trust in the media, and only 10 percent had no trust at all.

Summary

The institutional transformation during the past 70 years has had a profound effect on American life. With its view of personal morality confined largely to sexual orientation and practices and to women's reproductive rights—deviation from heterosexuality and homosexuality—and its focus on economic prosperity, Christianity in America has increasingly taken the form of secularism cloaked in a Bible. The family has been fragmented into a variety of forms, an increasing share of which are transient and fluid, and no longer can offer a stable moral compass to children. In affluent families, children grow in a stable environment, but are guided to a competitive life aimed at financial success. Children growing in working-class families experience instability and must go outside the family to seek moral guidance. In either case, the pursuit of wealth or the need for survival have led to a gradual move towards individualism as the preferential mode of life. In the labor market, the shift from solidarity to individualism has been aided by the demise of the labor unions and the end of labor as a social movement. Finally, the dispersion of information has destroyed the objectivity in the reporting of news and replaced it with a form of subjectivity that allows individuals not only to personalize their own interpretation of the facts without regards for any analytical standards but also to re-create facts in accordance with their preferences.

CHAPTER 8. STRUCTURAL AND BEHAVIORAL CHANGES

The institutional adjustments in American society from 1950 to 2019 discussed in the previous chapter were associated with important structural and behavioral changes. In this chapter I will focus on six areas: the marketization of home production and the rise of women's power, the individualization of leisure, going beyond needs, the expansion of debt, the financialization of economic activity, and the polarization of the political system.

Marketization of Home Production and Rise of Women's Power

One of the main forces driving the structural changes in the American economy over the past 70 years has been the marketization of home production driven by the influx of women in the labor market. In 1950 one-third of women were members of the labor force. Twenty years later, that rate was approaching 50 percent (43.4%) and in 2019 reached 57.4 percent. Even more significant is the increase in the participation rate of married women. In 1950 less than one-quarter of married women with spouse present were either employed or seeking a job. In 2019 more than two-thirds of married women with spouse present and children under 18 were members of the labor force.

The movement of women from unpaid work at home to paid work away from home not only transformed the labor market and the structure of the American economy, but also impacted the family structure, public policy, and the value system.

Economic Effects. As women, and in particular married women, found gainful employment, they had less time for work at home. As we saw in Chapter 3, the number of weekly hours per person spent by females on non-market work declined by nearly 20 percent (7.5 hours) from 1950 to 2019. As the number of hours spent on home production by females declined, some of the services provided at home free of charge by females were transformed into market activities, thus creating new industries. Concurrently, as women earned income of their own, their spending power increased and their spending patterns were altered, and this change created additional industries.

In the 1950s nuclear families the spouses' roles were clearly defined: the husband took care of the financial needs of the family and the wife took care of everything else. One of the wife's primary responsibilities was to take care of food preparation, especially the evening meals consumed by the whole family sitting together at the dinner table. In 1920 farm housewives spent 24 hours per week (45% of the time spent on home production) on food preparation and their town counterparts spent 20 hours (20% percent of home production). Even with a declining trend that led to 17 hours a week spent on preparing meals (32% of home production) in 1965, housewives in 1950 still dedicated the lion's share of home production time to food preparation (about 18 hours per week or roughly one-third of the home production time).¹ Because eating at home together was an integral part of the family identity in the 1950s, a small portion of the family food budget was dedicated to eating out. In 1950 American families spent only 15.3 percent of the food budget on restaurant meals (including hotels and motels) and 26.3 percent on food consumed away from home. A good portion of the food consumed at home (16.5%) was self-produced.² In 1950 the food eaten at home was in the form of meals prepared at home in part because both the frozen meal and the frozen food industries were at the infancy stage at that time. Attempts at offering frozen meals to the public were made in 1949 by Frozen Dinners Inc. but the area served was confined to Pittsburgh. Only in 1954 with the introduction of TV dinners by Swanson frozen meals became widely available. The fast food market was also very limited in 1950. Although a hamburger chain called White Castle began operations in 1921 and A&W was already franchising in the 1920s, only with the opening of the McDonald chain in 1948 the fast-food industry took off.³ Because cooking at home was part of the family routine, those employed in "eating and drinking places" accounted for only 3 percent of total employment.⁴

In 2019 less than two-thirds of adult women were engaged in food preparation at home and on average they spent less than one hour per day on this activity. The time spent by all women on average on home cooking in 2019 (4.2 hours per week) was roughly one-quarter of the time used in 1950. In 2019 adult women spent almost twice as much time-consuming food at home than cooking it (63 minutes versus 36 minutes per day)⁵. The modern homes have large kitchens containing a variety of technologically advanced equipment which largely serves the same function as unread hardcover books locked in beautiful bookcases with glass doors. American families spent more than half of the food budget (54.8 %)

on food consumed away from home and almost as much on food purchased in restaurants (42.3%) as food consumed at home (45.2%). Moreover, food produced at home now amounted to one-fifth of 1 percent of food consumed at home.⁶ The past 70 years have witnessed a great expansion in the frozen food industry and supermarket freezers offer an endless variety of prepared meals, including desserts, for all occasions. There has also been expansion in the delivery of freshly prepared meals. Eating at home now includes in part fresh meals prepared by others, and cooking at home has largely taken the form of defrosting and warming frozen meals. As a result, employment in the food industry has increased substantially since 1950. The share of employment in “restaurants and other food services” doubled to 6 percent in 2019.⁷

In 1920 “care of clothing” was the second most time-consuming home production activity of women, taking up about 11 hours per week or 22 percent of home production time. Although the time allocated to this activity decline by 40 percent over the next 45 years, it still required an estimated 8 hours per week or 16 percent of home production time in 1950.⁸ In the ATUS detailed time allocation table for 2019, the “care of clothing” activity is not even mentioned. There was also a significant decline in the share of the family budget allocated to clothing from about 12 percent in 1950 to 2.4 percent in 2019. During the same period there was an increase in the share of clothing expenditures by “women and girls.” In 2019 this share of spending was almost double that for “men and boys,” compared to 1.5 percent in 1950.⁹

The exodus of young families to the suburbs and the increase in the number of nuclear families led to a decline in inter-generational cohabitation. Still in 1950 only 1.8 percent of the population 65+ lived in nursing homes,¹⁰ an estimated 47 percent lived with their children or with relatives, and less than 15 percent lived alone.¹¹ The restructuring of the American family since 1950 had little effect on the proportion of the elderly living in nursing homes which rose only to 2.4 in 2017.¹² However, there were major changes in the living arrangements of the non-institutionalized elderly population. In 2019, 28 percent of the elderly lived alone and only 11 percent lived with relatives. There was a reversal over the past 70 years. In 1950 the proportion of the elderly living with children or relatives was more than 3 times the proportion living alone. In 2019 the proportion of the elderly living alone was 2.5 times the proportion living with kin. This change supports

Ruggles' conclusion, based on trends from 1880 to 1980, that "every sphere of family life has been a loosening of bonds of obligation among kin."¹³

The increase in the number of young and older adults living alone and the transformation of the family unit has altered the relationship between people and domesticated animals. Although domesticated animals have been a part of human life for millennia, for most of human history they were not pets, and they were kept because they performed useful functions. For example, in the 1950s rural America cats and dogs helped in the operation of the family farm. The former controlled the spreading of the rodent population and the latter helped with family security, hunting, and livestock herding. Owning pets was a privilege of the wealthy. The acquisition of pets as human companions by the general population developed in the postwar period with the formation of the nuclear family, the move of young families to the suburbs, and the increasing influence of the television which portrayed the ideal family as two heterosexual parents, two children, and a dog. Still, throughout most of the 1950s the pet industry remained at the infancy stage because of the limited choice of processed pet food and the habit of feeding pets home-food scraps.

As the purchasing power of families increased and manufacturers perfected the production of dry pet food and expanded both its variety and advertising, pet ownership mushroomed. By 1987, 38.2 percent of American households owned dogs and 30.5 percent owned cats. The sum of dogs (52.4 million) and cats (54.6 million) owned exceeded the number of children under 18 by 20 percent.¹⁴ According to the American Pet Products Association (APPA), in 2019 two-thirds of American households owned pets, nearly one-third more than family households with children under the age of 18. Almost half owned dogs, 20 percent owned cats, 10 percent owned fish, 10 percent owned birds or small animals, 4 percent owned reptiles, and about 1 percent owned horses. The sum of dogs (89.7 million) and cats (94.2 million) outnumbered the number of children by a factor of 2.5. Two thirds of pet owners were either Millennials (35%) or Baby Boomers (32%).¹⁵ In 2019 American pet owners spent \$95.7 billions on pets, supplies, and services, equivalent to \$744 per household: \$36.9 billion on pet food, \$19.2 billion on supplies, live pets, and over the counter medicine, \$29.3 billion on vet care and products, and \$10.3 billion on other services.¹⁶ Average annual expenditures by pet owners are substantially higher than the above amount. For example, in 2019 dog owners spent an average of \$1,381 on their pets and cat owners spent \$908.¹⁷

Women spend a lot more on pets than men. In 2015 women's average annual expenditure on pets (\$1,384) was 42 percent higher than that of men.¹⁸

The increase in pet ownership and expenditures in the United States has been associated with a change in the status of pets. From non-human companions with humane treatment, but still personal property and with limited rights, pets slowly became integral components of the American family. In 2007, 88 percent of owners considered their pets as family members, 69 percent allowed pets to sleep on their beds, and 37 percent bought them birthday gifts. By 2015 these percentages increased to 95 percent, 71 percent, and 44 percent, respectively.¹⁹ According to a 2019 survey of pet owners conducted by Harris for Merrick Pet Care, 70 percent of pet owners considered dogs their favorite family members and this is true also for families with children under 18. Forty percent admitted that they spend more on their dogs than on themselves.²⁰

Among Millennials the process of humanization of pets has moved further, promoting pets from generic family members to children. Whatever the reason for Millennials' obsession with pets, particularly dogs—financial considerations, fear of long-term commitments to human relationships, desire for independence, practice for parenthood, or greater ease to connect emotionally with a helpless animal than with an independent human being—pet ownership affects every aspect of their lives in the same manner as a child would. More than two-thirds of Millennials plan their social life to fit the needs of their pets, a quarter make housing purchases to accommodate their pets, and nearly half take their pets on vacation.²¹ They give their pets human names, identify themselves to their pets as mommy and daddy, buy their pets health insurance, brand name clothes and fancy food, occasionally take them out on a stroller, and provide them with a variety of services usually associated with humans, such as social gathering places, parties, special grooming services, and even therapy.

The expansion of pet ownership in the United States has been associated with a decline in the number of children per household. The average household size in America declined from 3.01 in 1973 to 2.52 in 2019. During the same period the number of cats and dogs per household increased from 0.95 to 1.43. From a pet owner's perspective, the average size of the American household was the same at nearly 4 members in 1973 and 2019. The weakening of the bonds among human kin has been associated with a strengthening of the bonds between humans and

domesticated animals, particularly cats and dogs. This change is influencing consumer spending and the pattern of work and leisure.

The Economic Power of Women. Although gender gaps still exist in some areas of the labor market, such as earnings in certain sectors and senior management opportunities, women's economic clout has increased so much during the past 70 years that overall it exceeds that of men. On the production side women either own or run 40 percent of all businesses in America. On the financial side they hold 60 percent of wealth and 51 percent of all stocks. Among Millennials, 66 percent of women earn at least as much as men. Women dominate consumer spending, the main driver of the US economy. Not only have they gained spending power through their rising participation in the labor force and their higher levels of education, but they have become the main decision-makers in the household. Overall, 85 percent of spending decisions are made or influenced by women, and this includes spending on major purchases such as houses and cars. Women's decision-making power is highest in the case of purchases of food (93%), vacations (92%), and new homes (91%). Even in the case of products used by men, 50 percent of the purchases are made by women. In America, the notion that "it's a man's world" has become largely an illusion.²²

Political Participation. The fight for the rights of women to vote was originally carried at the State level and women gained the right to vote in some States during the latter part of the 19th century. By the time the 19th Amendment in August 1920 gave women the right to vote in all elections, 15 States had granted women full voting equality and an additional 24 States offered partial voting equality.²³ It took a while, however, for women to express their full voting power. Up to 1980 women's turnout tended to lag behind that of men and in the 1940s and early 1950s it was about 10 percentage points below their male counterparts. By 1964 this gap had been reduced to 3 percentage points but, because women account for more than half of the adult population, female voters in that year outnumbered male voters. Since 1980 women's percentage turnout has consistently exceeded men's turnout.²⁴

It took even longer for women to move from electors to elected. The first female Senator—Rebecca Latimer Felton—was appointed in 1922 by Thomas Hardwick, Governor of Georgia. She was followed by Hattie Caraway of Arkansas, who was appointed to the Senate in 1931 and the following year became the first elected

Senator when she won a special election. There was only one female Senator on the US Senate in 1952: Margaret Chase Smith of Maine, a Republican. The number of US female Senators increased over time and it stood at 25 in the 116th Congress (2019-2021): 17 Democrats and 8 Republicans. The first female member of Congress was Jannette Rankin of Montana who was elected in 1917. The 82nd Congress (1951-1953) included 10 women House Representatives, 6 Republicans and 4 Democrats. Currently (116th Congress) there are 101 female Representatives in the House, 88 Democrats and 13 Republicans. Nelly Ross of Wyoming and Miriam Ferguson of Texas, both elected in 1924, were the first female Governors. The next female Governor was Lurlee Wallace of Alabama, elected in 1967 to replace her husband. In 2020 there were 9 women Governors. Women's power expanded also in the judicial area. For most of US history, the Supreme Court was an exclusive male enclave. The first female Supreme Court Justice was Sandra Day O'Connor, appointed in 1981 by President Regan. Currently there are 3 female Supreme Court Justices: Sonia Sotomayor, Elena Kagan, and Amy Coney Barrett. Although women are grossly underrepresented in the Supreme Court, they have come a long way since 1950.

Human Rights. The expanding economic and political power of women reshaped the political landscape and altered the course of public policy with respect to human rights in general and women rights in particular. Four areas are of particular relevance: the sexual revolution, divorce, abortion, and civil rights.

The Sexual Revolution. At no time in human history did men and women adhere strictly to the commonly held sexual mores. In the United States—during a period like the 1950s when marriage was the norm and took place at an early age, and pre-marital sex carried high risks because of the limited availability of safe and effective contraceptives and the illegal status of abortion—40 percent of women had sex before marriage.²⁵ The risks of pre-marital sex were reduced with the introduction of the contraceptive pill. Developed during the 1950s, the first oral contraceptive (Enovid) was approved by the FDA in 1960. Two women were behind the drive for safe and effective contraception: Margaret Sanger and Katherine Dexter McCormick. Sanger had been involved all her life in promoting contraceptive rights. She opened the first American birth control clinic in 1916 and later founded the American Birth Control League. McCormick, a crusader for

women's rights and leader of the suffrage movement, was a biologist with a degree from MIT and heir to the International Harvester fortune. The two women joined forces in the 1950s and McCormick provided the financing for the research development of "the pill" and for the first clinical trials.²⁶

The use of the pill became more widespread after the Supreme Court upheld the right to contraception for couples in 1965 and for everyone else in 1972. Although there were other forms of contraception available to women, such as condoms and diaphragms, the pill soon became the symbol of sexual liberation and by 1973 was the preferred method of contraception. Although currently the pill is only one component of a variety of contraception methods, its introduction accelerated the trend towards greater sexual freedom and the widespread use of contraception. By 2017 nearly all women had used contraception sometime in their lives, and nearly two-thirds of American women 15-49 were using some form of contraception. This percentage was highest for women over 30 (nearly three-quarters of them) and lowest among young women (15-19 with 37 %).²⁷

Divorce. Divorce has been part of family dynamics in America since colonial times, especially in New England. Initially divorce decisions were made by the Governor or by selected legislative committees, and later this power was transferred to the courts. In all cases divorce was granted only on a "fault" basis, with one of the parties being guilty, and the most serious marital offense was adultery. After the Revolutionary War many States formalized the legal treatment of divorce and expanded the list of causes for divorce to include cruelty, insanity, imprisonment, habitual drunkenness, desertion, and impotency. Divorce laws varied among States, and soon some States began to weaken the restrictions on fault-based divorces and an increasing number of divorces were granted for the vague "cause" of mental cruelty. In 1933 New Mexico moved closer to introducing no-fault divorce as an addition to the tradition divorce allowed marriages to be dissolved for "incompatibility." The final blow to the traditional divorce was given by California in 1969 when, under Governor Ronald Reagan, it legislated no-fault as the only form of divorce. By 1980 no-fault was the law in all 50 States.²⁸

Abortion. The practice of abortion has been part of the way of life in America since colonial times, as were adultery and pre-marital sex. The legal status of abortion, however, differed among the colonies. In the British colonies it was legal

up to the stage of quickening (the mother feeling the baby's first kick in her womb). In the French colonies it was illegal, but not enforced, and in the Spanish and Portuguese colonies it was illegal and enforced. Abortion was still legal in most States from 1776 to the 1860s but was considered socially unacceptable. Starting in the late 1860s States began to introduce and enforce strict anti-abortion laws.²⁹ These restrictions did not stop the practice of abortion, they just shifted it to unsafe underground procedures. The result was an increase in abortion-related deaths. By 1930 abortion became one of the main causes of death for women and was responsible for 18 percent of maternal deaths.

States began slowly to ease some of the restrictions on abortion and by the early 1960s women could legally seek abortion if carrying the pregnancy would have endangered their life. In 1967 Colorado extended the reasons for legal abortion to include also endangering mental health, pregnancy from rape or incest, and medical evidence that the child would be born with severe physical or mental defects. By the time in 1973 the Supreme Court ruled that women had the right to abortion without excessive restrictions from government, almost all States had reformed their restrictive abortion laws.³⁰ In the years immediately following the 1973 Supreme Court decision, abortion rates per 1,000 women 15-44 rose steadily from 16.3 in 1973 to 29.3 in 1980. Since then, these rates have been steadily declining, reaching 13.7 in 2017.³¹ All States reacted to the Scotus 1973 decision, but not in a uniform manner. By the end of 2019, 8 States had passed legislation restricting access to abortion, 7 States were considering passing similar legislation, and 6 States enacted legislation strengthening women's right to legal abortion.³²

Civil Rights. Women had to fight hard for centuries to gain the rights that white men received freely at birth. Less than 60 years ago they obtained the legal rights to equal pay (Equal Pay Act of 1963). One year later—when discrimination on the basis of race, religion, and national origin was rendered illegal by the Civil Rights Act—discrimination on the basis of gender was not included in the original bill, but was added later as an amendment. It took 3 more years of fighting by women to ensure the end of discrimination on the basis of gender. Many African-American women played leadership roles in the civil rights movement. Notable among them are: Ella Baker, who was a mentor to Martin Luther King Jr and Rosa Parks; Daisy Bates, a newspaper publisher who fought for civil rights in Arkansas; Fannie Lou Hamer, who fought racial injustice in Mississippi; Dorothy Height, who labored to improve opportunities for African-American women; Diane Nash, one of the most

influential student leaders of the civil rights movement; Septima Poinsette Clark, teacher and advocate for women's education; and Jo Ann Robinson, who started the 1955 Montgomery bus boycott. The leaders of the struggle to end discrimination on the basis of gender were Kathryn Clarenback, Betty Friedan, Caroline Davies, and Aileen Hernandez. The fight for women's rights continued and led to the Pregnancy Discrimination Act of 1978 and the Family and Medical Leave Act of 1993. Although there is still a racial divide in the United States and women still face discrimination, including sexual harassment, in the workplace, the gains in human rights over the past century are testimonies of the faith, courage and endurance of many heroines.³³

The Individualization of Leisure

In the 1950s leisure involved a variety of activities. Leisure as a social use of time was in part due to technology and the size of houses and in part to traditions and social norms. Houses were small and technology offered only the radio, the gramophone, and the television as instruments of at-home entertainment. During the first 5 days of the week, family members were quite busy—fathers at their jobs, mothers working at home, and children going to school and doing their chores and homework. Leisure was confined to after-dinner time, listening to the radio or watching TV. This was an extension of the “together time” spent at the dinner table. Other recreational home activities included “playing games, solving puzzles, reading books or comics, working on paint-by-numbers kits, and playing with toys.”³⁴ Even telephone calls were a form of social leisure, as the single phone usually placed in the kitchen did not offer any privacy. On the weekend the social nature of leisure extended to the community. Parents and children went together to church where they spent time with their neighbors or parishioners from other parts of town. Some people went back to church in the afternoon for Bible classes. The weekend was also the time for going to the movies, an activity that claimed 15 percent of the recreational and entertainment budget. Young people went to the movie theatre with their friends or with their families. Another major recreational activity was attending or participating in sports events. This was probably the most important of the “social leisure” activities as children bonded with teammates and parents gathered together to express their pride and their support for their children. The automobile also helped “family togetherness” by re-defining the family vacation. Summer weekends were perfect occasions for family outings, the

“Sunday drive” institutionalized another aspect of “family togetherness,” and the annual vacation became a major event in family life, which allowed the entire family unit to show-off their large family car and explore America traveling over the new highways. The nostalgia for “family togetherness” and community ties remained so strong that it made *The Waltons* (1972-1981) and *Little House on the Prairies* (1974-1983) two of the most beloved family TV shows of all time.

A variety of demographic, labor market, housing, technological, and behavioral changes have transformed leisure from a social to an individual activity. On the demographic front, the major changes were the increase in the share of singles and widowed/divorced/separated. In 2019 one-third of people 15+ were single compared to less than one-quarter in 1950. Also, the share of the widowed/divorced/separated in 2019 (15%) was 50 percent higher than in 1950 (10%).³⁵ The family structure has become more fluid and more unstable. Children living in hybrid families with second or third marriage parents may not share the same experiences, traditions, bonds, and values, factors that in the traditional families of the 1950s helped “family togetherness.” In the labor market there was a large increase in the number of women participating in the labor force and the associated increase in the share of husband and wife earners. In some cases, the work schedule of husband and wife are not harmonized, thus preventing the enjoyment of shared leisure time. Both spouses coming home from work tired, especially after a long commute, is not the ideal situation for the kind of leisurely dinner that one-earner couples could enjoy in the 1950s. Moreover, a portion of the employed population holds more than one job, a situation that leaves little time for leisure and even less for “social” leisure. In 2019, 5.1 percent of those employed were multiple jobholders. The rate was higher for females (5.6%) and even higher for widowed/divorced/separated females (6.5%).³⁶

The more than doubling of the floor space per household member from 1950 to 2019 offered greater individual privacy for personal leisure. The single and common land-based telephone and black and white TV for the whole family of the 1950s have been replaced by individual mobile devices and a private colored TV per family member. Each private room may also be equipped with a personal computer and selective audio equipment. Currently technology allows a single man living on passive income to enjoy an independent life with minimal human compact: prepared food delivered to his residence at the touch of a button,

automated house cleaning, information and entertainment through the use a variety of electronic equipment, companionship with the help of a fully functional female robot with human features, and the choice of virtual contacts with thousands of “friends” all over the world without leaving his chair.

Although families no longer “play together,” a form of social leisure still remains in the social media where a person can establish online relationships with large numbers of “friends” at the same time. The nature of these social interactions, however, is very different from the traditional social leisure which involved human interactions which often included personal touch. Laughing loudly at a friend’s joke while sitting on the porch on a summer evening is different than sending a laugh icon on Messenger, and giving a loving embrace is quite different than attaching the heart icon to an email.

Beyond Necessities

Most of the 1950s population carried memories of the economic scars of the Great Depression, and their children heard those stories repeated through the years as the recounting slowly healed the wounds. Another portion of the population was back home from the war, also remembering pain and fear. Their American dream was not accumulating large amounts of wealth, but satisfying their basic human needs: finding a job, getting married, buying a house and a car, raising a couple of children. A small house, a single car, a single TV in the living room, food on the table, money for gasoline and for occasional trips was enough. Family and friends filled their emotional needs. That was plenty.

Americans today spend the same share of their budget as in 1950 (87%) on what are called “necessities”: housing, food, transportation, and health care. The term necessity, when applied to modern spending on these categories of goods and services, however, is a misnomer. American families on average have long gone beyond the 1950s’ concept of necessity. Offering each household member 2.5 times the living space available in 1950 is not a necessity and neither is a garage the size of the average house in 1950. Having 3 bathrooms for 3 people instead of one bathroom for 3.5 people is not a necessity, nor is driving a four-wheel-drive SUV in a southern city built on a flat plain. Having a healthy diet is a human necessity, but spending half of a family’s budget eating prepared food away from home is not.

As productivity growth generated higher wages and income, prosperity created new elective wants, and these, as they were satisfied, became entrenched as needs, giving space for the creation of new wants. Thus, “keeping up with the Jones” was followed by “keep up with the Kardashians,” the goalpost for the American dream was moved from becoming a millionaire to becoming a billionaire, and for billionaires to become the richest person in America. This process has become the driving force in American life, blessed by religious, political, and business leaders, and devoid of any public awareness that it is fed by dissatisfaction and leads to unfulfilled expectations.

The Expansion of Debt

For many people the “pursuit of happiness” through the limitless acquisition of material things aimed at satisfying an endless desire for new experiences could not be fulfilled by current income. Thus, more and more Americans began to feed the present by borrowing from the future. In 1950 mortgages plus consumer credit amounted to \$69.2 billion, equivalent to one-third of personal disposable income. Residential mortgages accounted for two-thirds of household debt and consumer debt for the remaining one-third. Over 60 percent of consumer debt was in the form of installment credit, and 41 percent of the latter was for car loans. Student debt, which was included in the data for consumer debt, was minimal and largely in the form of subsidized loans from the G.I. Bill program.³⁷

Over the following 21 years, the combination of mortgage and consumer debt increased almost seven-fold to \$467 billion, and its share of personal disposable income rose to 56 percent. The share of mortgage debt edged up to 70 percent,³⁸ and the increase in mortgage debt was largely due to an expansion in the number of households taking up home mortgages.³⁹ The growth of household debt accelerated, particularly during the past 30 years and by 2019 (second quarter) the combination of mortgage and consumer debt reached the level of \$14.3 trillion, equivalent to 88 percent of personal disposable income. Mortgage debt still accounted for the lion’s share at 72 percent. More than two-thirds of consumer debt was in the form of student loans (37%) and car loans (32%).⁴⁰ Three important trends over the past half a century are worth noting. First, the growth of mortgage debt was due largely to rising home values rather than increases in households with mortgages. Second, there was an explosive growth in student debt. Negligible in the 1970s, by 2019 it accounted for more than one-third of

consumer debt and was equivalent to 9 percent of personal disposable income. Third, the growth of household debt resulted in a major differentiation between the rich and the poor in terms of its purpose: “richest strata of the population increased debt to purchase assets while the poorest Americans increased debt for consumption.”⁴¹

The Financialization of Economic Activity

The insatiable appetite for the goods and services required to satisfy the ever growing wants of generations of Americans chasing a material version of the American dream was fed by the expansion of credit from a financial sector freed of the shackles of the Bretton Woods Agreement. From July 1944 to August 1971, under the Bretton Woods Agreement, the activities of the global financial system had been constrained by the rules that linked all currencies to the American dollar and pegged the latter to gold at a price of \$35 dollars per ounce. The regulation of the US financial system had preceded the post-war international agreement and had been strengthened in response to the financial collapse during the Great Depression. In 1933 the Glass-Steagall Act instituted the Federal Deposit Insurance Corporation (FDIC), gave the Federal Reserve increased powers, separated commercial banking from investment banking, and regulated the interest rate paid on deposits. Banks could not pay interest on checking accounts, and could offer up to 5.75 percent on savings accounts and between 5.75 and 7.75 percent on time accounts depending on maturity. The States had also control over interest rates within their jurisdiction through statutes known as “usury laws.” At the same time, the Securities Act strengthened disclosure and transparency in the securities market, and a year later the Securities and Exchange Act created the Securities and Exchange Commission to regulate the stock exchanges. This system was maintained even during the life of the Bretton Woods Agreement and served as the foundation of the American financial system until 1971.⁴²

When in August 1971 President Nixon withdrew America’s commitment to the gold standard, the global financial system was given the power to create money out of thin air and the decisions were left in the hands of individual governments and their central banks. This new policy flexibility initiated a process of deregulation that has led to a financial system more prone to instability. In the United States a major step towards deregulation was taken in 1980 with the introduction of the

Depository Institutions Deregulation and Monetary Control Act (DIDMCA). Under previous rules, keeping reserves against deposits was required only of commercial banks that were members of the Federal Reserve System and these comprised less than 40 percent of banks. The DIDMCA established new reserve requirement ranges, gave the Federal Reserve the power to vary the reserve rates within those ranges, and extended those reserve rules to all depository institutions. This move expanded considerably the Federal Reserve's power over the money supply and monetary policy in general. The DIDMCA also raised the deposit insurance coverage from \$40,000 to \$100,000, permitted the phasing out of interest rate ceilings on federally-insured deposits, bypassing the provisions of States' usury laws, allowed the introduction of new services and investments previously considered unacceptable—such as investments in commercial activities by thrift institutions—and let the Federal Reserve charge a price for its services. Two years later the Garn-St Germain Act offered additional deregulation by broadening the powers of savings and loans (thrift) institutions. Thrifts took advantage of the new powers and expanded their investments in riskier real estate areas, such as condominiums and commercial properties.⁴³

Banks continued lobbying for less regulation. In December 1986 the Federal Reserve, in a re-interpretation of the Glass-Steagall Act, gave banks the permission to earn up to 5 percent of their revenues from investment banking. In 1996 this percentage was raised to 25 percent, a move that effectively eliminated the provisions of the Act dealing with the separation of banking from investment activities. The existing constraints on interstate banking were eliminated in 1994 by the Riegle-Neal Interstate Banking and Branching Efficiency Act. Three years later the Interstate Banking Act allowed banks to expand interstate branching through consolidation. These legislative changes stimulated a process of banking consolidation that led to a reduction in the number of banks and to an increase in the size of some banks. The final blow to the Glass-Steagall Act was given in 1999 by the Financial Modernization ACT (Gramm-Leach-Bliley Act), which allowed banks to conduct banking, investments, and insurance under one roof. This Act led to further banking consolidation and the creation of a few mega-banks. Finally, in 2004 the regulations regarding global investment banks were further loosened and the banks were given the power of self-regulation.⁴⁴

The deregulation of the financial system in the United States created major challenges for the regulators. Since a single institution could now perform banking,

investment, and insurance in the same building, supervision of these activities required inspectors from different agencies and a novel coordination among them. Moreover, in response to the newly acquired freedom, banks developed a wide variety of new financial instruments, including innovative forms of mortgages, using a process of secularization whereby illiquid assets were transformed into highly liquid securities that could be traded freely. The derivatives market expanded rapidly, in part because of the lack of regulation.

The deregulation of the financial sector in the United States was accompanied by rapid growth and increased economic strength. As its capacity to create and market novel and increasingly complex financial instruments globally rose, so did its earning power. The financial sector's share of US corporate profits rose from an average of 17.4 percent during the period from 1960 to 1984 to an average of 30 percent from 1985 to 2008 and reached a peak of 44 percent in 2002.⁴⁵ The higher profitability was associated with greater capacity to attract the most talented employees. As a result, the gap between the average remuneration between the financial and non-financial sectors widened substantially. According to Khatiwaba (2010, p. 3), the wage premium in the financial sector rose from 3-4 percent in the 1970s to over 20 percent in the post-1980 period, and increased from \$11,000 in 1987 to \$40,000 in 2007. The profitability of the financial sector also altered the management style and the priorities of non-financial firms. This change is manifested in three areas: a shift from real to financial assets, increasing share of revenue from financial assets, and higher distribution of profits. From 1951 to 2008 the value of financial assets as a proportion of non-financial assets more than tripled, rising from 30 percent to 100 percent. The share of profits distributed as dividends also tripled during the same period, rising from 20 percent in 1950 to 60 percent in 2008.⁴⁶

The influence of financial institutions expanded beyond the private sector and reached the top layers of the federal government. Over the past 40 years one-third of the US Treasury Secretaries (Donald Regan, Robert Rubin, Henry Paulson, and Steven Mnuchin) had previous experience as executives in large private financial institutions (three of them with Goldman Sachs and one with Merrill Lynch).

The deregulation of the financial system, occasionally joined by ill-timed policy initiatives, led to greater economic instability with three major economic bubbles bursting in the span of 30 years. The first was the savings and loans (thrifts) crisis of the 1980s. The savings and loans institutions, originally dedicated to the

provision of residential mortgages, entered a period of crisis in the late 1970s as rising inflation and associated increases in nominal interest rates created an imbalance between mortgage revenues and the cost of deposits. Federal and State policymakers not only ignored the difficulties faced by many insolvent thrifts, but tried to resolve the problem by relaxing constraints on their activities. In particular they increased the limit of insurable deposits from \$40,000 to \$100,000, thus offering an incentive to compete for deposits, and allowed these institutions to expand into the riskier non-residential mortgage market. The industry responded by expanding its activities and its assets grew by 56 percent in the span of 4 years from 1982 to 1985. The bubble burst in 1986 from a combination of lower oil prices—that led to a collapse of the real estate market in Texas, Louisiana, and Oklahoma—lax regulatory oversight, lenient accounting rules, and fraudulent practices. Between 1986 and 1995 one-third of the savings and loans institutions went bankrupt, and American taxpayers ended paying \$130 billion.⁴⁷

The second was the tech bubble of the late 1990s. When Netscape Communications Inc. made its initial public offering in March 1985, it initiated a process of excitement among investors that—through the power of cheap money, capital market overconfidence, unrealistic expectations, and pure greed—led to inflated valuations of a flood of new tech companies. In a speech at the Enterprise Institution in Washington, D.C., delivered the 6th of December 1996, Alan Greenspan, Federal Reserve Chairman, wondered openly whether these high valuations were not the result of “irrational exuberance.” Still the Federal Reserve kept the federal fund rate stable for another year and then reduced it by three quarter of a point in the span of three months in 1988 in response to the Asian crisis and Russia’s default. The fund rate did not go back to 5 percent until the first part of 1999. The extra liquidity helped fuel the already high valuation, helping create a bubble that finally burst in the first quarter of 2000. As the Nasdaq dropped by 50 percent of its value by the end of the year, American investors lost trillions of dollars.⁴⁸

The third bubble led to the Great Recession of 2008. A new storm began brewing not long after the recovery from the tech bubble. The deregulated alternative mortgage market, which dealt with riskier loans, expanded rapidly and overtook in value the safer traditional market. More than one-third of these riskier loans would have not qualified for a traditional mortgage (Sherman, p. 12). The risk of the alternative mortgages was transferred to the new types of securities that served as

backing. The expansion of this riskier part of the mortgage sector gained strength from the Federal Reserve's low interest rate policies that extended well into 2005. As in the case of the savings and loans bubble, these two factors were combined with misleading information by lenders on the safety of the new and more complex financial instruments, lax government regulation and oversight, and sheer speculation by people who wanted to make quick gains from a hot housing market. By the beginning of 2008 the bubble was ready to burst. As housing prices stopped rising and adjustable-rate mortgages were re-negotiated at higher rates, some new homeowners could no longer make the required payments. The housing crisis caused a decline in the value of the ubiquitous mortgage-backed securities, leading to large losses by banks and the failure of prominent financial institutions. This time the financial crisis spread to the whole economy causing a deep downturn known as the Great Recession. Even with an unprecedented level of government intervention and a massive financial rescue package, it took several years of a slow recovery for employment and real GDP to reach pre-crisis levels.

Political Polarization

In the 1950s a variety of factors contributed to a bi-partisan approach to public policy: the desire of Americans for stability after the World War II turmoil and sacrifices, their focus on rebuilding a prosperous civilian economy, their unity in fighting the threat of Godless communism, and shared political power in Washington. Because of these factors, President Eisenhower was able to cooperate successfully for two terms with a Democrats-controlled Congress. As pointed out by Hendriks (2019, p. 163), "three-quarters of the proposals he sent to Congress were passed." The expanding middle class during the 1950s and 1960s strengthened centrist coalitions and promoted a climate of bi-partisanship. Even the 1964 Civil Rights Act, initiated by President Kennedy and brought to a successful end by President Johnson, was approved with large bi-partisan majorities in both House and Senate, despite strong opposition from southern Democrats and Republicans. The enforceable extension of civil rights to minorities of color combined with the unstable economic conditions of the 1970s led to a political shift from the center-left to the center-right. As minorities migrated North in search of jobs, they became competitors with the descendants of white immigrants for the limited job opportunities offered by an economy in crisis. The minorities settled in poor neighborhoods close to the areas where White working-class Americans

lived, a move that led to heightened racial tensions. These tensions were further exacerbated by busing and the expansion of the Welfare State which working class Whites saw as way for minorities to freeload on the taxes they paid on their hard-earned money. Ronald Reagan understood these grievances and upon them built a Northern strategy that won him two landslide victories with the support of what became known as Reagan democrats. In the 1980 presidential election Reagan received the support at the polls of 54 percent of white working-class voters and 47 percent of union members.⁴⁹ Still, the political power remained in the broad center.

A similar coalition led Donald Trump to the Presidency in 2016 as he received the votes of 64 percent of Whites without a college degree, 77 percent of White Evangelicals, and 64 percent of White non-Hispanic Catholics. Nearly 90 percent of his votes were from White voters.⁵⁰ As economic growth led to rising inequalities of income and wealth and the demise of the middle class, the political center was hollowed. Over the following four years political polarization was solidified along racial, educational (college-educated versus the rest), and geographic lines (rural versus urban ad sub-urban), and mutated into a form that transcends the rational expression of ideological differences and enters the realm of dogma. The paralyzing effects of this extreme form of political polarization were unmasked by the Covid-19 pandemic as politicians were unable to even reach agreement on the advice of health experts, the severity of the crisis, and the appropriate policy measures.

Summary

The influx of women in the labor force stimulated economic growth as it lessened potential labor supply constraints and helped create new industries. It also produced social and political changes as women became financially independent and acquired more political clout. Greater women's economic and political power combined with technological developments and rising prosperity led to new family structures and the transformation of social leisure into individual free time activities. Productivity growth and rising wages allowed most American families to rise beyond the satisfaction of basic needs. Consumer spending is now driven by elective wants which are endlessly created anew just as they are satisfied. In the endless pursuit of new experiences, current income is not sufficient. As a result, an increasing share of current consumption has been financed by borrowing from the

future. The expansion of private and public debt together with industrial restructuring from a goods-producing to a services-producing economy was accompanied by the rise of the financial sector. The financialization of the economy has created an increasingly larger sector dedicated to the creation and manipulation of complex financial instruments backed by money created out of nothing. This structural change has been used as an instrument of economic stimulus, but it has operated through bubbles in a manner leading to greater economic instability. Finally, over the past half a century, economic growth has led to rising inequalities of income and wealth, associated in large part with differentials in educational achievement. Economic polarization has been translated into a degree of political polarization that may prevent timely and effective responses to national crises.

PART III THE FUTURE OF WORK AND LEISURE

CHAPTER 9. WORK, LEISURE, AND HUMAN NATURE

A major feature of the labor market over the past 70 years has been the remarkable stability of the number of weekly hours of work—defined to include market work (paid work, associated activities, and time spent on education/human capital acquisition) and non-market work (home production and volunteer activities)—in a period where real GDP per hour of work increased more than eight-fold. Over the 69 years period from 1950 to 2019, the average number of hours worked per person in the United States increased by nearly 3 hours per week, largely due to an increase in market work. For non-market work the major change was an increase in the weekly hours by men and a corresponding decrease by women. Why did the average workweek remain roughly unchanged over such a long period of time instead of declining as Keynes (1932) had predicted and one would expect from the increase in labor productivity? In this chapter I will address this question in three steps. First, I will evaluate Keynes prediction about the growth of living standards and the decline in working hours. Then I will extend my discussion to the concept of leisure. Finally, I will relate the trends in work and leisure to some traits of human nature.

Work

In a 1932 essay John Maynard Keynes predicted that, because of capital accumulation and technological change in the following 100 years, the material standard of living, “the standard of life” in his words, in developed countries would be four to eight times higher. He also predicted that a 15-hour workweek would be sufficient to satisfy our material needs.¹ Was Keynes right?

Let’s start our investigation by looking at the material standard of living. Because capital accumulation and technological change relate to production, the material standard of living may be measured by real Gross Domestic Product (GDP) per person. However, the term “standard of living” generally refers to the power of individuals and families to purchase goods and services. In this case real Personal Income (PI) per capita is a more suitable measure. In the United States real personal income per capita increased at an average annual rate of 1.8 percent from 1950 to 2019 leading to an increase by a factor of 3.5. If this growth rate

materialized also for the following 31 years, real PI per capita after 100 years from Keynes' writing would be higher by a factor of 6, a value at the midpoint of his prediction. Similar results would be obtained using real GDP per capita as a measure of material living standards as its growth factor over the same 100 years is 7.2. In the United States Keynes' prediction about growth in living standards came to pass: over a period of 69 years the US economy generated enough real personal income growth that, if distributed equally among all people, would have allowed every American to enjoy a material standard of living nearly 5 times as high as in 1950, higher than the lower bound for a full 100-year period.

Analyzing Keynes' prediction about the 15-hour workweek is a more complex task. He offers two reasons for his prediction: the satisfaction of human needs and the built-in drive to work. With respect to the former Keynes identifies two types of needs: absolute needs, which are common to all human beings regardless of their economic position and are satiable, and relative needs, which serve to make us feel superior to others and may be insatiable. Since with respect to the workweek he refers to the *old Adam*, i.e., man who throughout human history had to work long days just to survive, it may be more meaningful to focus on the individual worker instead of the bread winner in a family. Because in his time a relatively small portion of the female working-age population was engaged in work for pay, I will only refer to the male worker. I also assume that he worked in the manufacturing sector and earned the average hourly wage. In 1950 a single male spent an estimated \$1,661 per year.² At the average hourly wage of \$1.44, he would need to work 22.2 hours per week to finance the above expenditures. A similar result would be obtained for employment in all other sectors with the exception of services and natural resources (agriculture, forestry and fishing). The same bundle of goods and services would have cost \$2,943 in 1973 and \$17,673 in 2019. At the wage rate of \$3.36 per hour, in 1973 he would have to work 16.8 hours per week. In 2019 the same bundle of goods would have required 12.2 hours of work per week at the average hourly wage in manufacturing. Therefore in 2019 a worker earning the average hourly wage in manufacturing (which was slightly lower than the average hourly wage for all employees) could have maintained the same material standard of living (measured by consumer spending) as in 1950 by working almost 3 hours per week less than assumed by Keynes. If real average hourly wages increased by 1 percent per year over the next 31 years, this standard of living would require only 9 hours a week of paid work.

If we analyze Keynes' prediction in terms of the inborn drive to work, a more meaningful measure would be total work, i.e., the sum of paid and unpaid work. Using the estimated number of unpaid weekly hours of work for males in the 20-24 age range (mostly single men), the workweek for the male worker in the above example rises to nearly 34 hours in 1950 and close to 24 hours in 2019. A 15-hour paid workweek at the average hourly wage in 2019 would have allowed a single young male worker to finance the average living standard of 1950 and take care of his household chores with a total work effort of less than 30 hours per week.

Keynes' twin predictions about living standards and the workweek, whether or not they actually materialized, were internally consistent. As increases in labor productivity reduced the amount of the labor input necessary to produce a given commodity, the satisfaction of absolute needs would have required declining hours of work per week. If a large number of workers kept working standard weekly hours, an increasing number of workers would be unemployed, a phenomenon called technological unemployment. This logic was predicated on a particular view of human nature. Before dealing with that issue, I want to explore some economic factors that may help explain what at first blush may seem an inconsistency: stable working hours in the face of labor productivity growth.

Changing Workers' Priorities. In economic models the actual number of weekly hours of work is determined by the interaction between the hours that workers are willing to offer at different wage rates (the supply of labor) and the hours demanded by employers, which are derived by market demand for the products they produce. In reality the process of determining hours of work is constrained by a regulatory framework which reflects in part the relative political power of employers and employees, exercised directly at the ballots box and indirectly through lobbying and political contributions.

In Colonial America these institutions either did not exist (labor and business organizations) or had limited scope (government). The norm for able-bodied men and women was to fill the hours of sunlight with work. Although the work requirements may have differed among economic sectors, especially agriculture versus the industrial sector, the general standard was to work from sunrise to sunset. In 1830 the average workweek in manufacturing was 69 hours, equivalent to nearly 12 hour per day for 6 days. As factories replaced artisanal shops in the

early 1800s, workers began to organize and to demand a shorter workweek. It took federal government action, in the form of an executive order from President Van Buren, to formalize the 10-hour per day workweek, although only for federal employees engaged in manual work. By 1890 the 10-hour work day for 6 days had become very common and the average workweek in manufacturing had declined to 60 hours.

The movement for an even shorter workweek re-emerged after the Civil War and gained strength later with the formation of the American Federation of Labor (AFL). The new bargaining power of the labor movement yielded some gains and by 1919 the 8-hour day for 6 days had become the general standard in manufacturing. In 1926 Henry Ford introduced the 40-hour workweek. Again, it took legal action from the federal government to formalize the rules for the standard workweek through the Fair Labor Standards Act of 1938, which set the standard workweek at 44 hours (extra hours had to be paid at overtime rates). Two years later the standard was lowered to 40 hours, a standard that has held to the present.

The struggle for a shorter workweek faded in the postwar period. Having won a major expansion in fringe benefits, such as pensions and health care insurance, through the bargaining power of labor unions, workers were not interested in more leisure. They wanted higher wages and more opportunities to earn extra income through overtime. For them a shorter week incorporated in labor contracts was simply a marker for creating higher overtime opportunities. To assess workers' sentiments about lower working hours, in 1956 the AFL-CIO organized a conference on shorter hours. The workers' views were succinctly summarized by Albert Epstein, an economist for the International Association of Machinists, "Working hours of today are not so burdensome as to make the choice for shorter hours inevitable. His desire for goods and services to enjoy during the leisure he has already gained seems to be far greater. ... Most people, most workers, feel more interested in the goods they can buy with extra money than they are with the question of shorter hours and leisure."³ For American workers the equivalent of the 15-hour workweek sought by Kenyes was 40 hours per week.

The Consumer as the Driver of Economic Growth. This widespread desire for "the good things in life" was fueled by a war-driven backlog of marriages, expanding

job opportunities, rising wages, affordable new housing in the suburbs, and an increasing variety of household appliances which led to an explosion of consumer spending. As young couples formed new families and moved to the suburbs, they stimulated new housing construction and increased the demand for furniture and all kinds of household appliances and equipment—modern stoves, refrigerators, freezers, washing machines, dishwashers, vacuum cleaners. The ubiquitous automobile broke people’s dependence on the local neighborhood stores and opened up new shopping experiences in supermarkets and shopping malls, and the developing fast food industry offered new and affordable culinary choices. Industry was eager to satisfy this newfound thirst for material goods by bringing to market a never-ending variety of new products.

As higher incomes began to satisfy what Keynes called “absolute needs,” the door was open for needs created by human imagination which delivered pleasure not by their exclusive consumption or use by the purchaser but by their capacity to advertise the economic position of the purchaser—what Keynes called “relative needs,” later identified as conspicuous consumption, and commonly known as keeping up with Joneses. This expansion of human desires for material possessions was aided not only by producers, who raced to meet the rising consumer demand and fostered the creation of these desires by bringing to market an increasing variety of products with a programmed short life, but also by a growing advertising industry and the introduction of the television. During the 1950s the TV set became the dominant feature in the living room of American homes. Besides offering the daily news and entertaining programs, the TV became the family’s shopping consultant as it allowed advertisers to join the family’s discussions through the TV screen and help create new wants (Hendricks, pp. 44-8). Consumer spending was no longer just a means to satisfy basic human needs, but it became a new way of life and a state of mind which associated happiness with the possession of material things not just in absolute amounts but in relation to one’s neighbors.

Both the financial sector and the government saw potential benefits from the conspicuous consumer. The former began to develop new financial instruments that would facilitate consumer spending. Why allow the satisfaction of one’s desires to be constrained by current income limitations if it is possible to buy today and pay tomorrow? Starting in 1950 Americans could avoid potential embarrassment at a restaurant by showing the Diners Club credit card, the first of its kind in the world. In 1958 the American Express card extended this consumer

power to purchases at gas stations, hotels, and selected stores (Hendricks, p. 51). Over time the term “charge it” not only facilitated consumer spending by reducing the need for cash, but became a status symbol, an outward sign of the card-holder’s financial capacity.

The government also realized the potential benefits of the new American lifestyle. The postwar American consumer’s love affair with shopping stimulated a virtuous cycle whereby increased consumer demand gave a boost to production and technical change. This, in turn, led to higher productivity, higher employment, and higher wages. Buoyed by rising incomes and by expectations inflated by an expanding advertising industry, Americans kept on spending, transforming the consumer as the new driver of economic growth. The government gained from this renewed growth as a progressive income tax system began filling the fiscal coffers. A stronger economy was also an important tool in the Cold War as a solid fiscal position provided the financial means for accelerated military spending. Consumer spending not only turned into the driver of growth through the pursuit of conspicuous consumption, but became a patriotic duty.

American consumers could not remain the drivers of growth simply by spending all the income they earned. They needed to spend more, anticipating purchases ahead of earnings, and fulfilling expectations even without the necessary financial capacity. This general attitude of buy now and pay later, which was confined to the purchase of necessities in lean times, led to the explosive growth of debt. Total household debt, which in 1950 was equivalent to less than one-quarter of GDP, by 2019 had risen to nearly two-thirds of GDP. At the same time, non-mortgage debt (borrowing to finance current consumption) as a proportion of current consumer expenditures nearly tripled over the same period, rising from 11 percent in 1950 to 31 percent in 2019.

The importance of household debt as a driver of economic growth was emphasized in a report by the McKinsey Global Institute in the context of the Great Recession. Noting that household debt in the United States had nearly doubled from 2000 to 2007 and that consumers responded to the 2008 economic crisis by cutting down their debt, the report points that even a 1 percentage increase in the personal saving rate would create “a serious potential drag on the economy” as it would represent a \$100 billion decline in consumer spending.⁴ In other words, people as workers want to maintain the growth of output and jobs, and as

consumers they have to keep borrowing to buy the increasing production of goods and services even if they cannot afford them.

Chasing the elusive American dream through the endless creation of new needs, keeping up with the Joneses through conspicuous consumption, and performing the patriotic duty of driver of growth required a lot more working time than the 15 hours per week predicted by Keynes. Americans hung unto their working habits despite the increase in labor productivity and earnings. They could not afford additional leisure and they did not want it either.

Education and Human Capital. In 1950 nearly half of the population 25+ had no high school education, about 20 percent had completed high school, and only 14 percent had earned a bachelor's degree or higher. The labor services offered were largely in the form of muscle power and the wage rate was largely a return to physical effort. Moreover, most of the jobs were either tedious or required heavy physical effort. In this situation, additional leisure for those who could afford it was a welcome respite. In 2019 only 10 percent of the population 25+ had less than high school graduation, 28 percent had a high school diploma, 26 percent had some college education, 23 percent had a bachelor's degree, and 13 percent had a Master's degree or higher. Overall, nearly two-thirds of the population 25+ had at least some college education.

There are two notable aspects of the educational attainment situation in 2019. First, pursuing higher levels of education is an investment in human capital and its acquisition is quite expensive for both the individual and the government, which subsidizes it because education generates benefits to society as a whole (positive externalities). Human capital acquisition imposes two costs on students: direct payments and the loss of income while studying (opportunity cost). Direct payments have been increasingly financed through borrowing. Over two-thirds of the class of 2019 had outstanding student loans which at the time of graduation amounted on average to 30,000 dollars.⁵ The amount of student debt varies by educational level. In 2016 it was \$10,000 for students with less than a bachelor's degree, \$25,000 for those with an undergraduate degree, and \$45,000 for post-graduate degrees.⁶ Second, because education and skills are human capital, the portion of wages and salaries which represents the education premium is a return on capital. Through human capital acquisition, individuals are increasingly becoming worker-capitalists. Unlike physical capital which is separate from its

owner or user, human capital is embedded in human beings and can yield a return only through human work. Both individuals and governments gain from higher weeks of work. The latter receives higher tax revenues, which are needed to offset the public subsidies to education, while the former can use the additional revenue to pay off outstanding student debt and increase discretionary spending. For individuals, optimizing the return on human capital by extending hours of work also helps finance conspicuous consumption which serves to advertise one's success and social standing.

Widening Income Inequality. As mentioned in an earlier chapter, widening disparities of educational attainment are an important factor in the rising inequality of income and wealth. In this setting the standard of the American dream is determined by those at the top. For those at the bottom it often becomes the impossible dream. Yet both groups strive for it. Those at the top have to work hard not only to optimize their return on human capital, but also to maintain their position in the economic and social pecking order. Those at the bottom have to work even harder just to make sure that their dream remains alive, for their children and grandchildren if not for themselves. For immigrants, in particular, giving up that dream would be an admission of failure.

Leisure

Time spent working, both paid and unpaid, is only a portion of the total time available to an individual over a week. In time-use studies total available time is generally allocated to three general activities: fulfillment of physical needs (called necessary time), work, and free time (called leisure). In chapter 3 I suggested a variant of this classification by dividing free time into two separate components: time spent on creative activities (creative leisure) or on consumption (recreational leisure). The latter can also be separated into two components: social leisure, which involves activities shared with other people, and personal leisure, which is confined to activities directed at exclusive enjoyment by an individual, though even these may generate positive or negative externalities. Creative leisure also involves largely activities of a strictly personal nature.

A number of human activities straddle both necessary time and free time. While acknowledging the importance of satisfying our physical needs, I suggest that equally important for human well-being is the fulfillment of emotional, intellectual, and spiritual needs. The importance of these non-physical needs is manifested by the fact that the most powerful human institutions—the family, religion, schools—were created for the purpose of satisfying them. Some of these non-physical needs are satisfied through leisure activities. Creative leisure activities may satisfy intellectual needs (example: writing poems) or emotional needs (composing music). Reading a book as part of personal leisure may serve both intellectual and spiritual needs, and social leisure is aimed directly at the satisfaction of emotional human needs.

Table 9-1. Allocation of Time by Major Activity in 1950 and 2019, Average Weekly Hours per Person

Major Activity	Average Weekly Hours per Person		
	1950	2019	Change
Physical Needs	73.6	75.6	2.0
Market Work	27.3	29.2	1.9
Non-Market Work	27.4	25.6	-1.8
Free Time	39.7	37.6	-2.1

Source: Endnote¹.

In Table 9-1, leisure is calculated as a residual in the context of the overall allocation of the total hours in a week. Because of the small changes in the time allocated for work and for satisfying physical needs, the weekly hours available as free time also changed little. The small decline in the hours of non-market work were more than offset by the small increase in hours of market work, therefore, the additional 2 hours allocated to the satisfaction of physical needs were gained at the expense of free time. At the aggregate level, all that happened with respect to the allocation of time between 1950 and 2019 was a small shift from non-market to market work and a similar small shift from free time to necessary time. Basically, adult Americans spend 45 percent of the week sleeping, eating and drinking, and grooming, 32 percent working, and 23 percent doing whatever they like.

Some details on the components of leisure activities are presented by De Grazia (1962) and are based on a 1955 survey of American males and females aged 20-59.

His survey shows that 25 percent of leisure time was spent on activities away from home. These activities involved time spent visiting relatives and friends and on sports, church-going, pleasure rides, and going to dances, movies, and the theatre. Twenty-seven percent of the leisure time spent at home was dedicated to reading books, newspapers, and magazines (19% of total leisure). A large portion of the remaining leisure time was assigned to watching TV. According to the data presented by De Grazia, 57 percent of the respondents watched TV (38% watched it with family or friends). If half of the leisure time at home was taken up watching TV, this activity would account for 37 percent of total leisure time. Under this assumption, 88 percent of leisure time at home was spent on the combination of reading and TV watching. The 1955 survey also indicates that most of the leisure activities were in the form of reading or socializing. If we add the leisure activities away from home, which were almost entirely of a social nature, to two-thirds of TV watching, and one-third of the remaining leisure activities (net of reading), we end up with 58 percent of total leisure time. In 1955 leisure consisted of two major categories of activities: social leisure (58%) and reading (19%) for a combined share of over three-quarters of the total. It seems that leisure time in 1955 was largely dedicated to fulfilling emotional and intellectual needs.⁷

Details of the major components of leisure in 2019 are shown in Table 9-2. The most glaring feature of this table is the large share of leisure time allocated to watching television, a share over 40 percent (nearly 16 percentage points) higher than in 1955. By contrast, the share of leisure time dedicated to reading in 2019 (5.1%) is nearly 14 percentage lower than in 1955. Table 9-2 also shows that the overwhelming share of leisure time is used for personal leisure activities. Social leisure accounts only for one-quarter of the total, less than half the share in 1955. The evolution of leisure time over the 64 years from 1955 to 2019 has led to a decline in activities directed at intellectual pursuits and socializing, the component of leisure aimed at satisfying emotional needs through interpersonal relationships. This decline is consistent with the trend towards the individualization of leisure. When a large part of leisure activities took place within a communal setting, as it did in the 1950s, it served also as a means of emotional bonding. As leisure became increasingly an individual pursuit through personal activities, its social context waned and the emotional bonds were weakened.

Table 9-2. Percentage Distribution of Various Components of Leisure in 2019

Item	Share of Leisure Time (%)
Watching Television	52.6
Computer Use for Leisure and Games	8.1
Reading for Personal Interest	5.1
Relaxing and Thinking	5.8
<i>Sum: Personal Leisure</i>	<i>71.6</i>
Socializing and Communicating	12.0
Religious and Spiritual Activities	3.0
Sports, Exercise, and Recreation	6.4
Arts and Entertainment (Except Sports)	1.5
<i>Sum: Social Leisure</i>	<i>25.9</i>
<i>Other^a</i>	<i>2.5</i>

^a Half of unclassified activities.

Source: US Bureau of Labor Statistics (2019), *ATUS 2019*, Table A-1.

Work, Leisure, and Human Nature

The failure of leisure time to increase in response to labor productivity growth in the United States has also been documented by De Grazia (1962) over the century starting in 1850. De Grazia separated available time into four activities: work, work-related activities, subsistence (sleeping, eating, cooking, shopping), and free time. Analyzing a variety of data sources, he observed that the extra time made available by the decline in the workweek was occupied by newly created activities, some of which resulted from lifestyle changes associated with the growth of income and financial capability, and concluded that “since 1850 free time has not appreciably increased” (p. 90).

In addition to presenting detailed information on how Americans allocated their time and their expenditures, De Grazia offers a lengthy discussion on the meaning of leisure from the Greeks to modern times. I will confine my brief review to the classical concept of leisure, represented in De Grazia’s book by the writings of Plato and Aristotle. De Grazia distinguishes free time from leisure. The former is simply the measurement of a component of available time, what is left after we subtract total work and necessary time, what de Grazia calls “subsistence.” Leisure

activities do take place during free time, but leisure is not measured in time units. It “refers to a state of being, a condition of man” (p. 8). More specifically, “leisure is a state of being in which activity is performed for its own sake or as its own end” (p. 15). According to Aristotle the essence of life is found in the activities we pursue in free time, but not all those activities are part of leisure. For Aristotle two special activities are worthy the name of leisure: music and contemplation. The former fills the soul while the latter feeds the mind and leads to true understanding (pp. 16-7). Only in contemplation human beings are free, and only through contemplation they can get closer to the nature of the gods (p. 20). Contemplation was not a refined form of idleness, but a special mental activity that ultimately led to understanding and enlightenment. Although contemplation was an individual activity that elevated a human being to a godly level, according to Plato it had the potential to generate benefits to society as a whole. For Plato individuals were inextricably connected with the community (*polis*), therefore, in contemplation they considered personal enlightenment not in isolation but in the context of the wellbeing of the community (p. 26).

The two activities that are closely related to the Greek classical idea of leisure—arts and relaxing, and thinking—accounted together for less than 8 percent of the total use of free time or 14 percent of the time spent watching TV. In America the inquisitive life of the contemplative mind idealized in classical Greek leisure has been replaced by the lethargy of the oblivious mind.

Keynes prediction of a 15-hour workweek around 2030 was based on an idealized view of human nature and a European tradition that deemed to be demeaning for ladies, gentlemen, and educated men and women to do any kind of physical work. Keynes noted that for most of human history up to the 18th century human beings had to struggle with the economic problem of scarcity. The limited opportunities for capital accumulation and the lack of major technological developments imposed severe constraints on economic progress for centuries and prevented the standard of living from growing. The struggle for survival required long hours of back-breaking and tedious work. Creativity in human activity was limited to a few —artists and specialized trades people—and leisure was the privilege of the ruling classes.

According to Keynes these chains on economic growth were broken by “science and compound interest” which, for the first time in human history, extended the choice between work and leisure from the few to the masses. In the new age of

abundance human beings were freed from the historical bonds of scarcity, but now had to face their permanent existential choice, “how to use (their) freedom from pressing economic cares, how to occupy (their) leisure ... to live wisely and agreeably as well” (p. 363). Keynes believed that, free from the yoke of scarcity, the *new Adam* would embrace a virtuous life based on “the most sure and certain principles of religion and traditional virtues” (p. 364). The most important of those principles were: (1) “avarice is a vice,” (2) “usury is a misdemeanor,” and (3) “the love of money as a possession ... is detestable ... a somewhat disgusting morbidity” (pp. 363-65). Keynes believed that man’s natural inclination was not to keep working hard even in the age of abundance in order to accumulate increasing amounts of wealth but to lead an “agreeable” life, being satisfied that his daily needs had been met with a minimum work effort. For Keynes it was natural for men to choose a shorter workweek as labor productivity increased because the agreeable life required more of the pleasures that would be offered by leisure—artistic and intellectual pursuits, relaxation, fellowship with other human beings—and not more material possessions. A similar view of human nature is expressed in the song “If I Were a Rich Man” from the musical *Fiddler on the Roof*. For the leading character, should he become rich, the most rewarding activity would be to “have a seat by the Eastern wall,” and “discuss the holy books with the learned men.”

Keynes realized that while for most of human history the old Adam lived with the constraint of scarcity, the new Adam, freed of scarcity by technology and capital accumulation, would face perhaps a more daunting problem: how to spend the extra time granted by productivity growth. What Keynes saw did not lead to optimism about human choices. Looking at the general public, he noted that “it is a fearful problem for the ordinary person, with no special talents, to occupy himself, especially if he no longer has roots in the soil or in the custom or in the beloved conventions of a traditional society” (p. 363). The prospects were not more encouraging among the upper classes: “to judge from the behavior and the achievements of the wealthy classes’ to-day in any quarter of the world, the outcome is very depressing ... for they have most of them failed disastrously ... to solve the problem which has been set them” (p. 363). Though he was not a religious man, he could not accept the idea of a human nature that, freed from scarcity, could do no better than re-enslave himself in the endless pursuit of material things. In this, De Grazia was more realistic. Defining leisure as “a state

of being, a condition of man,” he observed that it is a condition “which a few desire, and fewer achieve” (p. 8).

Summary

One of the defining features of American life over the past 69 years is the remarkable stability in the allocation of time. The number of weekly hours devoted to total work, including time spent on the acquisition of human capital, in 2019 was virtually equal to those in 1950, and a small increase in the time spent on the satisfaction of physical needs was offset by a small decrease in leisure. This stability occurred during a period marked by productivity growth, rising living standards, and major social changes, and is at odds with Keynes’ prediction of a 15-hour workweek within a couple of decades.

Keynes had envisioned a new man who, freed from the shackles of scarcity, would work less and embrace a virtuous and agreeable life. The American experience suggests that Keynes’ vision was an illusion. The American version of the new Adam is neither the enlightened and civic-oriented being envisioned by Plato and Aristotle nor the noble creature wished by Keynes. He/she is a person leading a life guided by individualism and subjectivism, driven by an insatiable desire for material possessions, and operating within a weak and mistrusted institutional framework. This human nature and mode of operation may be on a collision course with modern technological developments. In the past innovations tended to be complementary to labor in the sense that the operation of the new machines required the direct involvement of an operator. The development of artificial intelligence will weaken this complementarity, changing the role of human beings in the production process. The implications of this potential conflict will be discussed in the next chapter.

CHAPTER 10. SOME LESSONS FROM THE PAST

There is an ongoing debate on the future pace of innovation, technological change, and economic growth in the United States. On one side there are those who believe that the pace of technological change has stabilized and, combined with lackluster education outcomes and demographic changes affecting negatively labor force participation rates, will result in a trend of relatively low potential output growth. The other side includes researchers and business leaders who see a future of ever rising living standards generated by the accelerating expansion of technological change.

A brief analysis of these contrasting views of the economic future of the United States is presented in the next chapter. In this chapter I focus on two areas: (1) the existing living standards and (2) some important lessons from the past.

Abundance

The debate about future growth takes place in the context of plenty. The main issues are not whether future economic growth will free Americans from economic scarcity, but the rate at which an already high standard of living will be improved through innovation and productivity growth, and whether all Americans will share those higher living standards.

For most of human history the progress of living standards was constrained by limitations in the supply of natural resources and the capacity to produce enough food. Technology has shattered these constraints. Let's take a look at the two main supply side constraints: Energy and Food.

Energy. The history of mankind can be traced through the changes in the main energy sources from bulky to more refined, portable, and versatile ones. Up to just four centuries ago the main sources of energy were human and animal power for the production of goods and biomass (mostly wood) for heating and cooking. Some other sources of energy have been known from ancient times. For example, outcrops of coal were used by the Romans, water power was exploited by Greeks for grinding grains as early as three centuries B.C., and windmills were known to

the Persians in the 7th A.D. century. Their contribution to the energy supply mix, however, was minor.¹

The big change in the evolution of the energy supply started in England in the 16th century and was driven by a combination of factors: increased urbanization, climate change, and change in land ownership. Up to the end of the 1500s England's population was scattered through a large number of villages and small towns. Even London at the time had a population of about 60,000. Over the next two centuries the population of London experienced explosive growth, increasing tenfold by the end of the 1700s.² At the same time average annual temperatures began to decline leading to what is commonly known as the Little Ice Age. The combination of urbanization and colder climate put an unbearable strain on the supply of wood and charcoal and led to deforestation and skyrocketing prices of wood. The poor turned to coal, a dirtier but cheaper fuel. The production of coal benefited from government policy when in 1534 Henry VIII expropriated the property of the Catholic Church and opened the coal-rich lands of Northern England to private enterprise. Initially coal was produced from open-pit mines. As demand increased, deeper seams of coal were mined and these new mines were subject to flooding. Early attempts by Spanish and English engineers at solving this problem through the use of pumps powered by steam engines were successful only in the case of shallow wells. A major improvement was made by English engineer Thomas Newcomen who in 1712 built the first commercially successful steam-engine pump. The transformation of the steam engine into the driver of the Industrial Revolution was largely due to the inventive ability of James Watt, a machine maker associated with Glasgow University, and the business acumen of Mathew Boulton, an English entrepreneur.³ The steam engine made coal the king of fuels.

In the United States coal was employed by the Hopi Indians for a variety of uses since the 1300s. Commercial mining, however, began in the mid-1700s but remained at the small-scale level until the late 1880s. Coal mining then spread from Virginia to Pennsylvania, where a higher quality called anthracite was mined, Ohio and many other States. US coal production peaked in 1924 when the industry employed 860,000 miners.⁴

As in the case of coal, oil seeping at the surface was used in small amounts in ancient times at various locations. Digging wells for commercial purposes began only in the mid-1800s in the South Caucasus (1846), Poland (1854), and Canada

(1858). The first modern well using steam engines for pumping was drilled in Titusville, Pennsylvania, the 27th of August 1859 by Colonel Edwin Drake.⁵ With the invention of the internal combustion engine and the introduction of the first cars in the late 1800s—Karl Benz and Gottlieb Daimler introduced separately automobiles with internal combustion engines in 1886—oil became the prominent energy source.

Electricity joined the list of new energy source in 1882 when in the span of several months three separate generating plants came into operation: the world's first hydroelectric plant, using the waters of the Fox River in Appleton, Wisconsin; the world's first coal-fired generating plant in London, England; and the Pearl Street coal-fired station in New York. Sixty-seven years later General Electric installed the first gas-powered generating plant. In the early 1950s nuclear power for electricity generation entered the stage. An experimental nuclear reactor was developed at the University of Chicago in 1951, and three years later a small nuclear reactor became operational in the Soviet Union. On December 1957 the first commercial nuclear generator in the United States began producing electricity.⁶ In the 1800s physicists discovered that exposing certain mineral solutions to light could generate electricity. In 1839 American inventor Charles Fritzsche produced the first solar cell using selenium. The first modern photovoltaic cell using silicon was created in 1954 in the Bell Laboratories by Daryl Chapin, Calvin Fuller, and Gerard Pearson.⁷

By 1950 Americans had the choice of all the energy still available today. However, the primary energy supply was still dominated by hydrocarbon fuels which accounted for 91 percent of the total: petroleum (38.4%), coal (35.7%), and natural gas (17.2%).⁸

Of the novel energy sources, nuclear power was the most promising and by 1971 in the United States 22 commercial nuclear power plants were in operation. The growth of the nuclear power industry was undermined by two major incidents: the first took place in August 1979 and involved a nuclear reactor at Three Miles Island near Harrisburg, Pennsylvania. The other occurred in April 1986 in Chernobyl, Ukraine. Despite these disasters, in 2017 commercial nuclear power plants were operating in 31 countries, in 15 of them nuclear power provided at least 20 percent of electricity generation, and in France this percentage exceeded 70 percent. In the United States in 2020, 96 nuclear reactors were active in 58 nuclear power plants located in 29 States.⁹

Despite a variety of technological advances in alternative energy sources, the world supply of primary energy in 2018 was still dominated by fossil fuels, which accounted for 81 percent of the total: crude oil (31%), coal (27%), and natural gas (23%). Nuclear power accounted for 5 percent, hydroelectric power for nearly 3 percent, biomass for 9 percent and other renewable for 2 percent. Renewable energy sources have made a great leap in the electricity generation sector by contributing more than a quarter of the total electricity generated.¹⁰ A similar pattern is found for the United States in 2019 where fossil fuels accounted for 80 percent of total primary supply: natural gas and liquids (41%), crude oil (25%), and coal (14%). Nuclear power contributed 8 percent and renewables 12 percent.¹¹

Technological advances have created a diversity of energy supply never known before, bringing to life new energy sources, facilitating the discovery of new reserves of traditional fuels, and making their extraction cost-effective. Technological change has shattered the energy boundaries that constrained economic progress for most of human history and has ushered the potential for a new age of energy abundance.

Known reserves can satisfy current world production levels for 50 years in the case of crude oil and natural gas and 132 years in the case of coal.¹² These are very conservative estimates. Current levels of productions are unlikely to be maintained over the next 50 years because an increasing share of additional demand is being met by renewable energy sources. As reserves are being depleted, prices will tend to rise and technological improvements will help discover new reserves.

Technological advances, which have reduced costs and increased safety, have helped nuclear power maintain its role in electricity generation. These advances include new generations of reactors that use different coolants, small modular reactors (SMRS), which can be installed in sequence over time to create a larger generating plant as demand rises, and recycling of spent fuel.

The evolution of energy sources from wood, which served only cooking and heating functions, to coal, which expanded manufacturing and transportation by fueling steam engines and later supported electricity generation, then to crude oil, which fueled the automobile revolution, and finally to electricity, which serves as the energy source for the digital revolution, and to nuclear power and renewable energy other than hydro and biomass to generate electricity, has also been associated with increased efficiency in energy use. For example, the fuel efficiency

of the average car in the United States almost doubled from 1950 to 2019 rising from 15 miles to 25 miles per gallon, and some compact cars exceed 40 miles per gallon in highway travel. Even greater strides in energy efficiency have been made in lighting. LED lighting, a technology which has not yet reached its full potential, uses 75 percent less energy than traditional incandescent bulbs and lasts 25 times longer. The most significant impact on energy consumption has resulted from the transition from the goods-based to the service-based economy. Overall, in the United States in 2019 it took roughly one-third of the energy than it did in 1950 to produce a given bundle of goods and services, as the energy-to-GDP ratio fell from 15.11 to 5.25.¹³

Technological advances and change in the industrial structure of the economy will continue in the future and will lead to further reductions in the energy constraints to economic progress as they tend to reduce the growth of consumption at the same time as they improve efficiency in the production of energy, particularly in the renewable sector.

Food. Analyzing food in the context of abundance requires a conceptual separation between actual production and the capacity to produce. For millennia human beings had to grapple with food shortages and periodic and widespread famines, but did not have the technical or financial capacity to address those problems. Large portions of the world population are still suffering from hunger. Researchers using a new index of food insecurity developed by the United Nation's Food and Agricultural Administration (Food Security Experience Index) found that in 2017 nearly 30 percent of the world population lacked food security. The food insecure population was concentrated in certain regions and among the poorest countries. More than half of the Sub-Saharan population, and nearly one-third of the population in South America and the Caribbean suffered from food insecurity as did 58 percent of those living in poor countries. Even in the richest countries food insecurity afflicted 11 percent of the population.¹⁴

Unlike the case of our ancestors, food insecurity does not result from insufficient technical knowledge or financial resources. Rather it depends on unequal economic development, lack of global policy coordination, unending warfare, and a low propensity to share technology, financial means, and agricultural output. It also results from high degrees of food waste. A quarter of the food calories all over the world are wasted annually. In the poor countries this waste occurs between the

farmer and the market because of inadequate transportation and refrigeration capabilities. In the rich countries it is the by-product of opulence as abundance tends to breed waste.¹⁵ The United States leads the world in food waste. Americans waste roughly 40 percent of the food supply (over 200 pounds of food per person per year) and food thrown out accounts for nearly one quarter of municipal solid waste.¹⁶

The existence of food insecurity in some parts of the population even in rich countries is due to social and political factors, not in the lack of suitable technology and financial affordability. In fact, technology has been the main driver of the expansion in food production. In the United States, for example, in 1950 one farm worker produced enough food to feed 21 persons (total population divided by the number of persons employed in farming). In 2019 this value was roughly seven times higher. Technological advances will continue to improve food production capabilities all over the world. Some of the new technologies include (1) soil and moisture sensors to optimize fertilizer and water use; satellite imaging that complements the above sensors; expanded automation, which includes autonomous machines, drones, and integrated machines; minichromosomal technology, which is capable of improving crops productive capacity without changing the original chromosomes; and new lighting and watering technologies that facilitate urban food production in enclosed spaces.¹⁷

The Dynamics of Free Markets

This section summarizes a variety of changes that resulted from the gradual shift in the structure of the American economy since 1950.

From “Managed” Economy to Unfettered Markets. In the 1950s and 1960s the United States had a free-market economy operating within the context of a “managed” economy: internationally through the Bretton Woods agreement, and nationally through direct government involvement in research and development and through a labor market conditioned by labor laws that supported direct bargaining by employers on one side and a strong labor union movement on the other. Even personal behavior was “managed” to a certain degree as it was conditioned by strong social institutions, Church and family in particular, which provided the supporting moral compass. But the free-market economy, at least in the form in which it evolved in the United States over the past three-quarters of a

century, relies on individualism, i.e., human behavior unconstrained by moral norms, social conventions, and concerns for the ecosystem. It has a relentless built-in mechanism that uses private or public channels to eliminate any obstacles that may constrain the activities of “economic man.”

Accumulation. The driving force behind capitalism is the compulsion to accumulate. As shown by Piketty (2014, p. 571), when the rate of return on capital exceeds the rate of growth of output over the long-term, accumulated wealth grows at a faster rate than wages and output. This condition is manifested by a rising share of capital income (and a corresponding declining share of labor income) and a rising ratio of capital to GDP. We already saw in Chapter 4 how wage growth followed productivity growth during the 1950s and 1960s and how it lagged behind thereafter. This pattern was repeated with the capital-to-GDP ratio. The data developed by Piketty (2014, p. 26) show that in the United States the value of capital remained at about three times that of GDP throughout the 1950s and 1960s. It then followed an ascending path that led to a ratio of five in 2010, two-thirds higher than in 1950. An upward trend is found also in the ratio of net worth to personal disposable income for the household and non-profit organizations sector. This ratio first declined from 4.5 to 3.4 from 1952 to 1970 and then it rose to 5.3 in 2019.¹⁸

Mobility. According to Piketty there are also forces that lead towards convergence by weakening the tendencies towards the concentration of capital accumulation, principal among them economic mobility associated with education and human capital acquisition. In the 1950s and 1960s the stability in the ratio of capital to GDP was associated with declining income inequality and rising upward economic mobility. Using census data and measuring mobility by comparing educational and income achievements of children relative to their fathers', Hilger (2015) concluded that relative intergenerational mobility increased greatly from 1940 to 1960 and kept increasing, though at a lower rate, up to 1980. The driving force behind the rise in economic mobility was the dramatic increase in high school graduation among the poor compared to the rich and the rising wages of high school graduates. During the first couple of post-war decades, the public school system contributed greatly to upward mobility by offering to young people in low income families the opportunity to upgrade their education level at an affordable cost.

The rise in income inequality, which accelerated in the post-1980 period and was associated with an increase in the ratio of capital to GDP, led to a decline in economic mobility. In a recent paper Davis and Mazunder (2020) used longitudinal income data from a large sample of the National Longitudinal Survey to measure relative and absolute mobility for two cohorts: those born in the early 1960s, who entered the labor force in the rising inequality period, and those born around 1950, who entered the labor force in the early 1970s, a time of lower inequality. They used inter-generational elasticity (IGE)—the correlation between the income of parents (or the father) and the income of children as adults (40 years)—as a main indicator of mobility. The higher the value of IGE, the stronger is the persistence of income from parents to children and the lower the degree of mobility. Davis and Mazunder (p. 4) estimated that the value of IGE more than doubled from the cohort born around 1950 to the cohort born in the early 1960s, rising from 0.21 to 0.56. They also analyzed the changes that may have led to the decline in mobility and found that two of the main determining factors were the increase in the education premium and the positive association between family income and the educational achievement of children.¹⁹ Davis and Mazunder also estimated the values of absolute mobility for the above two cohorts and found that the percentage of children with real income exceeding that of their parents at the same age declined from 63 for the cohort born around 1950 to 51 for the cohort both in the early 1960s.²⁰ This result is consistent with the results from Chetty et al. (2017) who estimated that the above proportion fell from 90 percent for children born on 1940 to 50 percent for children born in the 1980s.²¹

The above studies show the importance of educational attainment in the process of income distribution and economic mobility. In the 1950s and 1960s improvements in educational attainment operated as the great equalizer and provider of upward mobility. Because the dominant change was the increase in educational attainment within the context of a “free” public education system, it resulted from the provision of equal opportunities for all children regardless of the economic standing of their families. For more recent cohorts of children education has had the opposite effects, which were generated through a variety of channels.

First, there was a dramatic increase in the cost of post-secondary education. As an example, tuition and fees at the University of Pennsylvania were \$600 dollars in 1950 (close to \$6,500 in 2020 dollars) and \$60,000 in 2020-21. The real cost of tuition and fees for gaining an undergraduate degree at this institution rose nearly

tenfold. To put this increase in perspective, in 1950 a full-time worker earning the average wage would have earned the value of the tuition in 2.5 months. In 2020 the same worker would have needed to work a full year to pay for 1 year of tuition and fees. As another example, 1 year of education at Bates College (tuition, fees, and room and board) cost \$2,015 in 1960 (\$17,600 in 2020 dollars) and \$73,500 in 2020, 4 times the real cost in 1960. In 1960 it would have taken 5 months for a full-time worker earning the average wage to pay the full money cost of 1 year of undergraduate education. The same worker would have needed to work 15 months to achieve the same result in 2020.²²

Second, the increasing cost of post-secondary education, which outstripped the capacity to pay of the average worker, created an increasingly insurmountable barrier to mobility through education for the children of lower income families. According to the National Center for Educational Statistics (2020), 54.4 percent of 9th grade children in 2009 entered college in the first year of graduation and in 2016 had either graduated or were still enrolled. For children in families at the top fifth of the economic status distribution in 2009 this rate (79.0%) was 2.5 times higher than that for children with parents in the bottom one fifth (32.0%). In the case of the bottom fifth of family's economic status, the proportion of children who never enrolled in college (44.3) was nearly double the overall rate (24.3%) and 6.5 time the rate for the top fifth (6.8).²³

Third, technological advancements have led to an increasing demand for higher levels of educational attainment and specialization. This, in turn, has resulted in greater stratification of post-secondary educational institutions, creating another barrier to young men and women from lower income families.²⁴

Fourth, with the above stratification the power of wealth over post-secondary education enrollment in general now extends to the choice of institution through the advantage in standard scores. The educational path of the children of wealthy families is formulated at birth to gain all the benefits of the privileged classes through attendance to the best schools, access to the latest technological educational products, and the assistance of personal tutors. As a result, they end up with higher high school scores and higher college entrance exams scores, both determining factors in being accepted at elite post-secondary education.²⁵ Data show that there was a large difference in the educational choices by students who enrolled in post-secondary institutions in 2016, depending on the economic position of their families. Nearly two-thirds (61%) of students from the lowest

quintile selected a two-year college as their first choice, more than 3 times the percentage for children in the top quintile (19%). By contrast, 37 percent of students from the top quintile enrolled in highly selective four-year colleges, more than 5 times the proportion for students from the bottom quintile (7%).²⁶ The stratification of educational institutions from kindergarten to Ivy League has been supported by public policy as private schools and universities benefit from favorable tax provisions, including the tax-free treatment of endowment income and the deductibility of alumni donations.²⁷ Middle-income families end up subsidizing the very institutions that create a barrier to the advancement of their children.

These four factors, together with the high educational premium at the top of the education level and the stratification of marriages on the basis of education and earning potential, create a powerful vicious circle leading at every turn to higher inequality of income and wealth and lower upward mobility. The faster is technological change, the stronger will be the effects of this vicious circle.

Meritocracy. The transformation of the education system from a force of convergence to a driver of divergence was institutionalized through a peculiar concept of meritocracy. Throughout human history privileged positions have always been justified through codified rationalizations. In ancient times pharos self-proclaimed themselves as Gods and biblical kings claimed their position on the basis of divine anointment. The rest of the population, mere mortals, had the privilege to serve these Gods or God's chosen emissaries. Later on these "anointments" became hereditary and in many countries power was maintained through complex marriage arrangements. In the early US history power rested with male property owners, who could also maintain their positions inter-generationally through marriages and acquisitions, but the number of decision-makers remained limited. Over time both economic and political opportunities opened up for the masses, though with racial limitations. The expansion of high school education in the 1940s and 1950s, the booming economy of the 1950s and 1960s, the expansion of well-paid manufacturing jobs, and the low education premium created an American dream that was based on the dignity of work. Hard work and thrift were the drivers of social mobility. Over the past 30 years a process of economic growth driven to an increasing degree by human capital has led to rising inequality of

income and wealth and the stratification of the labor force, and has created separate classes of workers and citizens.

Up to about half a century ago, wealth was transferred inter-generationally through gifts and bequests of real and financial property. In cases when being wealthy dictated a lifestyle that shunned work, wealth was soon dissipated and this process prevented the permanence of economic power in the hands of the same “families.” With the rise of human capital, wealth could now be transferred inter-generationally by increasing the capacity of children and grandchildren to earn higher income through education and the establishment of an economic system that favored the educated and the wealthy. Unlike the descendants of the nobles, obliged by tradition to dissipate the inherited wealth through a life of idleness, the educated children of the wealthy keep accumulating wealth through their work and their higher earning capacity. Not only the old classes of the nobility on one side and peasants on the other have been replaced by the new classes of the educated and wealthy and the uneducated and low income on the other side, but the new economic system has been structured to sustain this class division.

The coded rationalization for this class separation is a self-serving interpretation of the concept of *meritocracy*, i.e., a system where success is determined by a person’s abilities and performance, which has been hijacked to serve accumulation. In addition to promoting the formation of two separate classes, meritocracy has created different forms of entitlements and social responsibilities. At the top the belief that one’s position in the economic and social ladder is determined solely by one’s abilities and efforts has created the idea that higher education entitles a person to a higher economic and social standing. If one’s position has been earned through individual efforts, the individual has no debt to society and no obligation to help finance government programs benefiting the lower income classes. In this mindset people at the bottom of the income scale have themselves to blame as their precarious economic and social status is assumed to result from their lack of motivation and effort. For those at the economic top meritocracy reinforces an individualistic approach to life and creates contempt for those at the bottom.²⁸ The population at the economic bottom, however, does not blame itself for its plight but resents an economic system that it considers to be staked against it. It expects rising living standards by sharing productivity gains not by making the adjustments required by an economic system that is being reshaped by technological change. Its blame is directed at the educated elites, the government, and some notion of a

“deep state,” and the outward blame turns into deep resentment. The contempt by the top economic classes is mirrored by the resentment of the bottom economic classes, a combination which in a democratic system creates an explosive political cocktail.

Vulnerability and Insecurity. In 1950 nearly one-third of the population was economically vulnerable as the poverty rate stood at 32 percent. This vulnerability created a kind of insecurity quite different in nature than that of today. At that time poor people could not count on government support as public involvement in income redistribution was very limited. However, they could rely on an intricate web of private institutions, particularly the extended family, religious organizations, some municipal government programs, and labor unions. High vulnerability did not always translate into high insecurity.

Vulnerability and insecurity fell dramatically over the following couple of decades. By 1973 the poverty rate was reduced to 11.1 percent, one-third of its value in 1950. From an economic growth perspective, most significant was the decline in the poverty rate among the age group that forms the base of the labor force, people between 18 and 64 years of age. The poverty rate for this group, which had already reached 10.5 percent in 1966, fell further to 8.3 percent in 1973 and 1974. Even the youth (under 18) and the elderly (65+) experienced large reductions in poverty. For the former the poverty rate fell from 27.3 percent in 1959 to 17.6 percent in 1966 and to 15.4 percent in 1974. For the latter the poverty rate fell by nearly half between 1966 (28.5%) and 1974 (14.6%).²⁹

A very different pattern is noted after 1973. The decline in the poverty rate stopped despite technological change, economic growth, and the expansion of the social safety net. In 2019 the poverty rate (10.5) was only slightly lower than in 1973 (in 2018 it was still higher than in 1973). More significant was the trend for the core age group (18-64 years). Its poverty rate in 2019 (9.4%) was 1.1 percentage points (13%) higher than in 1973 and 1974. Even in the case of young people (under 18) the poverty rate failed to respond to economic growth: in 2018 (16.2) the poverty rate was still higher than in 1974 (15.4) and in 2019 (14.4) it was only marginally lower.³⁰

In 2016 on average the bottom 40 percent of families had no wealth (the bottom 20 percent has negative wealth while the next 20 percent has small amounts).³¹

Nearly three-quarters of workers are in debt; more than one quarter of workers are not able to put aside any money at the end of the month and 56 percent of workers save less than \$100 per month; and more than three quarters of workers live from paycheck to paycheck.³² If they were faced with a sudden financial shock of \$1,000, 43 percent of families would have to borrow to finance the shortfall.³³ Many Americans are also vulnerable to health care shocks. In 2019, 30 million Americans (9.2% of the total at the time of the interview) had no health insurance and 55.2 percent had insurance provided by their employer. For more than half of Americans losing a job creates two types of vulnerability: the loss of a steady paycheck and the loss of health insurance.³⁴ Among adults the uninsured rate in 2018 was 13.7 percent, only slightly lower than it was in 2008.³⁵

Rising concentration of income and wealth, declining mobility, and increasing economic vulnerability have created two kinds of insecurity. Americans at the low end of income distribution face existential insecurity as even a moderate financial shock may push them to a condition where they cannot afford even the basic elements of subsistence. High income Americans face status insecurity as they rely on two well-paid jobs to maintain their social status, which requires a high material standard of living through high spending. For these families the loss of one income would be catastrophic as it would jeopardize their social status and drive them down to a lower class. For a millionaire to be reduced to middle-class status would be as traumatic as for a middle-class person becoming homeless.

Structural Changes in Employment. Over time technological change alters a country's industrial structure and the industrial composition of employment. It was shown in Chapter 2 how over the past 70 years the US economic structure was transformed from one heavily based on the production of goods to one dominated by the service sector. To measure the restructuring effect of the computer revolution, I will now focus on a shorter time frame, specifically, the period from 1989 to 2019. This shorter period eliminates the effect of the influx of women in the labor market as the participation rate of women in 1989 was nearly identical to that in 2019. In the past 30 years the US economy created 40.2 million new jobs, but production and employment continued to shift from the goods-producing to the services-producing sector, driven primarily by a large drop in manufacturing employment (-5.9 million) and to a lesser extent agriculture and related industries

(-0.7 million). Despite a fairly large increase in construction jobs (3.7 million), the goods-producing sector lost 2.9 million jobs. The small increase in public administration employment was not sufficient to offset the decline in goods employment and the private services-producing sector ended up with 41.4 million additional jobs. Over the past 30 years technological change took place within the context of rising employment at the average rate of 1.4 million new jobs per year. As shown in Table 10-1, most of the increase in employment over the past 30 years was concentrated in a few traditional sectors and was driven by factors other than technological change—primarily population growth, changes in the age distribution, and increases in per capita income. Health care and education alone accounted for 44 percent of the employment increase. Together with eating and drinking places, they represented more than half of the new jobs created over the past 30 years. All industries incorporated new technologies in their operations, to the extent that they made them more competitive and more profitable, but there is no evidence of a change in the industrial structure of employment driven by technological change.

Table 10-1. Changes in Employment by Industry, 1989 to 2019

Industry	Change		% of Change in Service Sector
	Millions	Percent	
<i>Total Employment</i>	40.2	34.3	
Agriculture, Related Industries, Mining	-0.7	- 18.0	
Construction	3.7	48.1	
Manufacturing	-5.9	-27.3	
<i>Goods Producing Sector, Change</i>	-2.9	-8.8	
<i>Public Administration, Change</i>	1.7	30.6	
<i>Service Producing Sector</i>	41.4	52.5	
Transportation, Communications, Utilities	3.7	45.3	8.9
Wholesale and Retail Trade (Eating and Drinking Places)	5.2 (3.3)	21.6 (52.4)	12.6 (8.0)
Finance, Insurance, Real Estate	2.8	34.8	6.8
Health and Education ^a	18.3	104.0	44.2
Other Professional Services	7.9	161.2	19.1
Business Services	1.5	28.5	3.6
Other Services	2.0	19.6	4.8

^aIncludes all services.

Source: Statistical Abstract of the United States, 1992, Table 632-633; US Bureau of Labor Statistics (2020), Labor Force Statistics from the Current Population Survey, Characteristics of the Employed, Table 18b.

In Table 10-2, the structural changes in employment are viewed in terms of occupations. This table shows that three-quarters of additional jobs created from 1989 to 2009 were in the managerial, professional, and technical occupations. Nearly one in four additional jobs was filled by managerial, professional and technical personnel in health care and education. Only 3.9 million jobs (less than 10% of the total) were created in the computer and mathematical occupations. Service occupations accounted for 28 percent of the additional jobs created. Nearly half of these new service jobs were in health support and food preparation and service occupations. These two occupations accounted for nearly 1 million more additional jobs than the computer and mathematical occupations. The increase in sales jobs (1.5 million) was more than offset by declines in administrative support and clerical jobs (loss of 0.6 million) and production and transportation of goods occupations (loss of 2.5 million).

Table 10-2. Changes in Employment by Occupation, 1989 to 2019

Occupation	Change		Share of Change (%)
	Millions	Percent	
Managerial	12.2	44.8	30.3
Professional/Technical	18.0	94.0	44.8
(Health Care/Education)	(9.7)	(102.7)	(24.1)
Computer/Mathematical)	(3.9)	(278.5)	(9.7)
Service	11.4	73.4	28.4
(Health Support)	(1.8)	(90.1)	(4.5)
(Food Preparation/Services)	(3.0)	(56.6)	(7.5)
Sales	1.5	10.8	3.7
Admin. Support/Clerical	-0.6	-3.4	-1.5
Prod./Transp. of Goods	-2.3	-6.5	-5.7

Source: Statistical Abstract of the United States 1991, Table 652; US Bureau of Labor Statistics (2020), Labor Force Statistics from the Current Population Survey, Characteristics of the Employed, Table 11b.

The above two tables show that the computer and internet revolution of the past 30 years had only a modest impact on both the industrial structure and the distribution of occupations in the United States. The shift from the goods-producing to the services-producing sector would have occurred even in the absence of computers, and most of the increase in service employment was in traditional industries, primarily health and education and trade, and was driven by demographic changes and increases in spending power. Similarly, most of the changes among occupations were independent of the computer revolution. Managerial occupations and health and education occupations combined for 57 percent of the increase in jobs from 1989 to 2019. Moreover, the increase in employment in each of these two major occupations was about 3 times higher than the increase in computer and mathematical occupations.

Borrowing and Spending. Keynes' predictions that productivity growth would lead to technological unemployment and substantially lower average weeks of work did not materialize in the United States. Despite an increase in labor productivity (real GDP per hour worked) by 3.5 times from 1950 to 2019, average annual hours per worker declined by less than 10 percent (about 30 minutes per week every 10 years) and the unemployment rate fell by 2 percentage points. The American experience of the 1950-1970 period indicates that productivity growth may cause higher unemployment or lower hours of work or a combination of the two only when total expenditures fail to keep up with productivity growth. In the United States the increase in total spending was not generated by the internal dynamics of the free-market economy, but was driven to a large extent by government policies. The post-war pent-up demand and the accelerated rate of family formation combined with technological change generated a virtuous cycle: increased spending stimulated production and provided incentives for the introduction of new products. In turn, productivity gains raised wages for all sectors, largely through the intermediation of labor unions, and higher income led to further spending. The government was a major beneficiary of this virtuous cycle as a progressive tax system, dominated by a progressive personal income tax rate structure which was not indexed for inflation, transformed strong economic growth into even higher growth of tax revenues. This robust revenue growth helped finance the expansion of social programs without the need to raise tax rates.

The growth of spending during the first two post-war decades was self-sustained and did not receive additional stimulus from government policies. Because the prevailing economic ideology among many politicians still favored fiscal prudence, during the period from 1950 to 1973 the federal government recorded budget surpluses five times. Budget deficits were quite small relative to GDP and only in two years they exceeded 2 percent of GDP. Even the 1964 substantial reduction of personal and corporate income tax rates, originally designed as an economic stimulus, did not have much of an expansionary effect because its revenue loss was balanced by reductions in government spending. As a result, the deficit-GDP ratio from 1964 to 1967 (average of 0.5% per year) was lower than in the previous three years (average of 0.8% per year).³⁶

By contrast, from 1974 to 2019, a period double in length than the previous one, there were only four surpluses, and deficits exceeded 2 percent of GDP in more than three quarters of the entire period (35 years), and 4 percent of GDP in more than one quarter of the period (12 years).³⁷ The balanced budget approach to federal fiscal policy during the post-war period helped the debt to decline relative to the size of the economy and, despite the heavy debt load accumulated during war time, by 1974 the federal debt amounted to 31 percent of GDP. The increasing deficits after 1974, generated in part by tax cuts, accumulated over time to a federal debt that exceeded 100 percent of GDP (103.2 percent of GDP in 2019).³⁸ Households imitated the government's budgeting behavior and began spending in excess of current income at an accelerating rate. Household debt rose from less than one-quarter of GDP in 1952 to three-quarters in 2019. A good portion of the growth in aggregate demand over the past 40 years has been driven by changes in fiscal orthodoxy, which supported deficit financing, and household behavior that promoted a "buy now and pay later" attitude and a shift to other generations of the taxes needed to finance current publicly-financed goods and services.

Over the past two decades this behavioral change has been supported by monetary policies that have led to declining and low interest rates. The average interest rate on the US public debt declined from 8.8 percent in 1988 to 2.5 percent in 2018, a drop of over 70 percent in the span of 20 years.³⁹ This precipitous decline in interest rates fed the borrowing appetite of households and governments by lowering the share of the budget consumed by interest payments. Federal interest payment first rose from about 7 of federal spending during 1950-1970 to 15 percent in 1990-1995 and then dropped to 5 percent in 2010-2015 before rising

again and reaching 8.7 percent in 2019.⁴⁰ Similarly, interest payments by households rose from about 10 percent of personal disposable income from 1980 to a peak of 13 percent in 2007 before beginning a steep decline to 10 percent in 2012 and slightly less than that in 2019.⁴¹

Free Markets and Political Dynamics

Are there any limits to the process of accumulation in a capitalist system? Marx would answer no. Unless capitalists lost their desire to accumulate, he saw no built-in mechanism that would abate the process of accumulation in an orderly fashion. The incentives to accumulate do weaken as the rate of return on capital declines, but the unabated desire to accumulate will not and will lead to competition among capitalists and the search for ways to raise rates of return. If the rate of return on capital remains above the growth of output and income, the share of capital will increase indefinitely and wealth will be concentrated in fewer and fewer hands. Marx believed that in the latter case the dispossessed would eventually revolt and capitalism would find a bloody end. A more optimistic view of the relationship between economic growth and the inequality of income and wealth was presented by Kuznets in 1955. Analyzing the US national income data he developed for 1913-1948, and interpreting the great compression of the 1940s as an expression of the dynamics of capitalism, he suggested that during the process of development income inequality first increases, as the benefits of growth in the early stages accrue to a small number of people, and then reaches a plateau before embarking on a descending trend as the entire population shares the benefits of productivity growth. The experience of the 1950s and 1960s supported Kuznet's optimistic view, but for reasons extraneous to the internal dynamics of capitalism. The decline in the inequality of income and wealth during the three postwar decades was due to a moral environment that favored solidarity, an interpretation of the Bible that supported the social Gospel, strong labor unions that protected workers' rights to a fair share of productivity gains, and government control over the financial system.

The US experience of the past 40 years is more consistent with Marx's analysis: the rate of accumulation resumed its unimpeded march and the institutions that held back this march in the previous few decades were sidelined. Piketty (2014) takes a position between Marx and Kuznets. Still he recognizes that the forces of divergence are stronger than the forces of convergence, that the trend towards

accumulation can be restrained only through international cooperation and policy coordination and through appropriate domestic policies, and that establishing the appropriate national and international institutional framework will be a difficult task.⁴²

In this section I will focus only on the dynamics of the political system in the United States which contains unique characteristics. Theoretically in a democratic system the forces of divergence built into the free-market economy are kept in check by a political system where the power of wealth is substituted with the power of the ballot. In practice economic power has been able to infiltrate the political structure, transforming it into a valuable ally. In the United States the alliance between economic and political forces has been facilitated by an electorate that ranks at the top a variety of non-economic interests: freedom to carry guns, ability to form armed militias, freedom to spread misinformation through the media, judgmental morality, and racial intolerance. In this context government policies that promote economic justice and lower inequality of income and wealth find little support among voters, and the concentration of wealth continues unabated. An example of this behavior is the income tax reform of 2017 which was acclaimed by voters who knew that the overwhelming share of the benefits would accrue to high income taxpayers but was promoted by a party that offered the desired menu of non-economic interests to the supporting voters.

The alliance between free-market agents and political agents in the context of an electorate that gave priority to non-economic factors ensured that political polarization moved in lock step with economic polarization. This marriage of convenience was aided by the exploding costs of electoral campaigns, the control of the media, the organizational capacity of the powerful, and the successful efforts at suppressing the voting rights of minorities.⁴³ Because of the importance of non-economic factors for most voters, political polarization in the United States is characterized by peculiar alliances. On one side there is a coalition of White voters, particularly those living in rural areas, who are fearful as their long-standing political power is being eroded by demographic developments, White male voters with little formal education who see their American dream evaporate into a mirage and resent the higher economic status of the educated, and fundamentalist Christians who interpret the Gospels strictly in terms of material gains and

personal morality. On the other side there is a coalition of minorities and of educated people of all colors—urban and sub-urban and particularly women—who wish to maintain their economic status through balanced economic progress and still cherish a social conscience. At the moment these two coalitions have comparable political power, a situation that may lead to a stalemate at the policy-making level and is favorable to the process of accumulation and rising inequality.

Automation

I mentioned earlier that human history can be viewed as a process of discovering more versatile energy sources and more efficient ways of using them. Associated with this trend was the replacement of animal and human energy with mechanical power. As coal replaced wood as the main energy source, the steam engine began to replace horses in transportation and gave impetus to the opening of the West. It also provided the fuel for heavy industry. The discovery of vast reserves of crude oil revolutionized the entire transportation system. Electricity created new ways to use fossil fuels and also to harness hydro power on a large scale. It also powered the modern era and opened the door to the development of sources of renewable energy less intrusive and more decentralized than hydro.

The process of replacing animal and human energy with machines is called automation. We can identify two phases of this process: phase 1 automation dominated by non-autonomous machines, and phase 2 automation dominated by autonomous machines. In phase 1 automation machines are complementary to human beings and help them be more productive. These machines are not autonomous but require direct human involvement. For example, a tractor allowed a farmer to till a larger area per hour of work than a team of oxen, but still needed the farmer to operate it. Similarly, when the electric engine and then the internal combustion engine replaced real horses with horse-power machines, the need for a driver remained. It was this complementarity that allowed employment to increase along with technological change. As workers became more productive, their income increased and their higher purchasing power fueled consumption that created the need for additional workers to meet the rising demand.

Following Gordon's (2016) classification of industrial revolutions in the United States, we can identify three stages of phase 1 automation. The first stage is the *first industrial revolution* which covered the period between 1870 and 1920, was

based on inventions of the previous century—primarily the steam engine and the machinery that ran on it, such as railroad equipment and steamships—and relied largely on coal as the primary energy source. The *second industrial revolution* spanned the period from 1920 to 1970, relied on inventions of the previous half a century, and was based on innovations that used electricity and refined petroleum products as the power sources. Most of the electricity, however, was generated from coal and oil products. The *third industrial revolution* started in the 1960s and involved largely information and communications technology. It uses only electricity as its power source and an increasing share of electricity is being produced with renewable sources. According to Gordon, the information and communications revolution in part of phase 1 automation is still going on and will be going on for quite a while. He also believes that the information and communications revolution differs from the second industrial revolution of the 1920-1970 period with respect to its diffusion. While the latter “covered virtually the entire span of human wants and needs,” the latter “achieved revolutionary change but in a relatively narrower sphere of human activity.”⁴⁴ A similar view of the information and communications technological advancements up to the present is held by Martin Ford who attributed the lackluster effect of computers on productivity to the fact that, “The computer revolution seems, so far, to have largely turned its energy inward in itself, resulting in advances in the information and communication area.”⁴⁵

Phase 2 automation involves the development and use of machines with increasing degrees of autonomous operation which can replace both human muscle and brain power, thus reducing the complementarity between workers and machines. A major component of phase 2 automation is the development of advanced robotics. In the United States the first robot (a programmable arm) was developed by George Devol in the early 1950s and was called UNIMATE. Joseph Engleberger purchased Devol’s patent and transformed Unimate into the first industrial robot. Although it took a couple of decades for robots to become a mainstay of manufacturing, their growth over the following 40 years has been astounding. Starting from a stationary programmable arm, we now have entire factories that are completely automated. The original stationary, single-task robots have evolved into smarter machines, mobile, flexible in their operation, capable of performing a variety of complex tasks and making autonomous decisions, and suitable even for low-volume production. Technical advances have reduced their

prices, making them increasingly competitive with human labor in an expanding range of tasks, and the cost of their installation, operation and maintenance. Robots have a variety of advantages over humans, some structural and other financial. They take less time for reproduction and preparation for active operation; do not require energy during downtime; can operate 24 hours a day without breaks; they are not susceptible to physical or mental illness (though they occasionally can malfunction); they use refined energy thus eliminating the resources and environmental effects of food production and consumption; they can be easily scrapped and recycled at the end of their useful life; and they are not subject to payroll taxes for health care, unemployment, and pensions.

Because of these advantages and because of the existing technological infrastructure, the process that has led from a stationary programmable arm to fully automated factories will continue unabated into the future and will extend its horizon beyond our planet. Since all the new technological advancements will involve greater degrees of automation, this process by itself will lead to the replacement of humans with machines in ever expanding areas. This process will also create new occupations and new employment opportunities. It will also raise productivity, income, and purchasing power. If the increase in productivity leads to higher income inequality (as the wages received by the displaced workers are appropriated by the owners of the machines), it will not be translated into the kind of mass purchasing power that in phase 1 automation offset the labor-saving effects of technological change. This issue will be discussed further in the next chapter as part of the ongoing debate over future economic growth.

Summary

This chapter discussed briefly some important lessons learned from the major economic developments since 1950. Technological change, especially in the energy and food production sectors, has broken the supply constraints that have plagued humanity for millennia. Shortages of energy and food are no longer permanent natural constraints but arise from the failure of human choices. In terms of economic structures, the period from 1950 to the present contains two economic experiments. The first, which covers the 1950s and 1960s, includes a free-market economy whose behavior was constrained by international agreements, strong government intervention in research and development and the functioning of the

financial sector, protection of workers' rights through strong unions and collective bargaining, and an institutional framework and moral compass that favored solidarity. This experiment, in which free primary and secondary public education played a pivotal role, generated high growth rates of productivity and income and rising wages, promoted economic and social mobility, and led to declining poverty and lower concentration of income and wealth. During the second experiment, which covers the past 50 years, the constraints on the operation of the free-market have been released, the institutions of solidarity marginalized, solidarity replaced by individualism, the role of education has been transformed from the great equalizer to a major driver of divergence, and the government has become the enabler of capital accumulation. The results of this experiment have been lower productivity growth, stagnant wages for most of the lower-wage workers, increased concentration of income and wealth, and political polarization.

CHAPTER 11. THE DEBATE OVER TECHNOLOGICAL CHANGE AND ECONOMIC GROWTH

There is an ongoing debate over technological change, economic growth, and the future prospects of the American economy. At opposing ends of the debate we find on one side the “techno-pessimists,” represented in my analysis by Robert Gordon (2016) and the other the “techno-optimists,” represented by Brynjolfsson and McAfee (2014), and both focus on supply side developments, that is, the potential of the economy to deliver high growth rates of output and material living standards. In between there is the Congressional Budget Office which prepares medium-term projections of potential output. An alternative view of future growth has been advanced by Lawrence Summers (2016), who suggests that the supply side potential will be constrained by developments on the demand side that may lead to a state of secular stagnation. More recently a different view of future of the American economy has been presented by Roubini (2020) who combines demand and supply forces.

In this chapter I review briefly the above expressions of the debate on technological change and economic growth in the United States as a first step towards understandings future prospects for work and leisure, which will be discussed in the following chapter. Because most of this debate took place before the onset of the Covid-19 pandemic, I first analyze the pre-pandemic arguments and then discuss how they may be affected by the pandemic. I start with Gordon’s view of technological change and economic growth. Because Gordon identifies a specific time frame for his analysis—the period from 2015 to 2040—when making comparisons, I also use a time frame that ends in 2040.

Pre-Pandemic

Gordon. Using real GDP per person as the measure of the material standard of living, Gordon estimates the growth of potential output as the sum of the growth of real output per hour of work (labor productivity) and hours of work per person. In his 2016 book entitled *The Rise and Fall of American Growth*, Gordon divided the

period from 1920 to 2014 into two sub-periods: 1920-70 and 1970-2014. His calculations show that, despite the technological advances associated with the computer revolution during the 1970-2014 sub-period, the average annual growth rate of labor productivity (1.62) and real GDP per person (1.77) was only 57 percent and 73 percent, respectively, of the rate during the former sub-period. Gordon interprets the developments over the second period as indicating the continuation of the second stage of phase 1 automation. In his view, “the digital Third Industrial Revolution..., though utterly changing the way Americans obtain information and communicate, did not extend across the full span of human life as did” the Second Industrial Revolution of 1920-70.¹ Accordingly, Gordon projects that from 2015 to 2040 labor productivity will grow at an average rate of 1.2 percent per year.

The growth of hours of work per person depends on demographic developments, which determine the size of the population that potentially could be available for work, and personal choices, which determine the proportion of the civilian population 16+ that is willing to work at existing wage rates (participation rate). In his projection Gordon assumes that changes in hours of work per person will be affected only by the retirement of the baby boomer generation. Referring to studies on past trends, he assumes that from 2015 to 2040 hours of work per person will decline by 0.4 percent per year. Combining the two factors determining the growth of material living standards—labor productivity growth of 1.2 percent per year and hours of work decline of 0.4 percent per year—leads to an average annual growth of real GDP per person of 0.8 percent. Because of a number of restraining factors (“headwinds” in his terminology)—rising inequality, slowdown in the growth of educational attainment, and high government debt-to-GDP ratio—the standard of living will grow at a substantially lower annual rate as the real median disposable income per person is projected to rise on average by less than one-third of 1 percent per year.²

It is evident that a projection which includes a relatively low rate of productivity growth and automation with considerable complementarity with labor does not allow technological change to have dramatic effects on employment. That’s Gordon’s general conclusion. In his own words, “job growth will continue and ... new jobs will be created as rapidly as technology destroys old jobs.”³ What does that mean in terms of employment growth? To answer this question, I applied Gordon’s assumptions to the period from 2019 to 2040 with the additional

assumption that the number of hours per worker remains constant at their 2019 value. In this case the number of hours per person (H/P) is equal to the number of employed workers per person (E/P) times a constant and both H/P and E/P have the same growth rate. Under Gordon's assumption that hours per person will decline by 0.4 percent per year, their level in 2040 will be 8 percent lower than in 2019. This implies a decline in the ratio of employment to the population from 49.8 percent in 2019 to 45.8 percent in 2040. Since the US population is projected to increase by 45 million during the same period, employment will be higher in 2040 by 7.6 million despite the decline in the employment to population ratio. This higher level of employment in 2040 would imply an average annual addition of 362 thousand jobs. Although this annual job creation is much lower than current levels, this shortfall would be associated with a greater number of retired people rather than unemployed workers due to population aging over the projection period.

Brynjolfsson and McAfee. Brynjolfsson and McAfee (2014) argue that Gordon underestimates the power of digital technologies which, in their view, have reached an evolutionary point that signals the beginning of a new technological age, “a second machine age” (equivalent to my phase 2 automation). In this new age technological improvements will grow exponentially, driven by the expansion of digital information (big data) and the explosive capacity of “recombinant innovation” through which “each development becomes a building block for future innovation” in a process that is limited only by human imagination.⁴ Although Brynjolfsson and McAfee do not provide an estimate of the growth of output and living standards in the second machine age, they affirm their confidence that “innovation and productivity will continue to grow at healthy rates in the future”⁵ and that “the fundamentals are in place for bounty that vastly exceeds anything we’ve ever seen before.”⁶

Unlike Gordon, they acknowledge that rapid technological change will create drastic disruptions in the labor market and may lead to rising unemployment. They concede that “there is no ‘iron law’ that technological progress must always be accompanied by broad job creation.”⁷ Since Brynjolfsson and McAfee do not provide estimates of the employment effects of technological change, I offer a hypothetical case. While Gordon assumes that labor productivity will follow a trend roughly similar to that during the period from 1970 to 2014, I assume a

repetition of the period from 1920 to 1970 when labor productivity rose at an average annual rate of 2.81 percent and the employment to population ratio fell by 0.41 percent per year.⁸ Adding the 0.4 percent decline due to baby boomer retirements, we end up with a growth of living standards of 2 percent per year, double the CBO's (January 2020) projection of potential output growth. I continue to assume that hours per worker remain unchanged. Under these assumptions the employment to population ratio would fall by 15.7 percentage points by 2040 and the number of jobs would decline by 6.6 million. This job loss this time would be translated into higher unemployment.

If Brynjolfsson and McAfee are correct about the rapid acceleration of technological change, the negative effect of growing labor productivity on employment should increase over time. While even the high-productivity period from 1920 to 1970 was still be part of phase 1 automation, the new machine age would represent the dawn of phase 2 automation. Therefore, for a given rate of labor productivity growth, there should be a steeper decline in the employment to population ratio over time. Whether phase 2 automation is already here, as Brynjolfsson and McAfee assert, or is far down the road, as Gordon believes, is a debatable issue. Assuming that there will never be a new pervasive technological revolution which will alter dramatically the economic structure is a misreading of four centuries of past history. In my view the issue is not whether such a shift will occur but when and how strong and pervasive its effects will be. It behooves policymakers, business leaders, and individuals to ponder seriously on the implications of rapid technological change and the institutional, behavioral, and policy changes that will be needed to address these future challenges.

Congressional Budget Office (CBO).⁹ A slightly more optimistic view than Gordon's is contained in the pre-coronavirus economic projections by the Congressional Budget Office (January 2020) for the 2020-2030 decade. The CBO projects an average annual growth rate of potential real GDP per person of 1.3 percent, 0.5 percentage points higher than Gordon's projection over a longer period (2015-2040). Sixty percent of this difference is due to the projected change in the number of hours of work per person which, in the CBO's projection, decline by only 0.1 percent per year, one-fourth the rate of decline assumed by Gordon. In the CBO's projections, potential labor productivity (real output per hour of work) increases at an average annual rate of 1.4 percent, only 0.2 percentage points

higher than in Gordon's analysis. The CBO projects an increase in the unemployment rate to 4.5 percent in 2030 which implies the addition of 5.4 million jobs from 2019 to 2030. This figure is slightly lower than the 6 million additional jobs projected by the Bureau of Labor Statistics for the period from 2019 to 2029.¹⁰

Summers. Summers (2016 and 2020)¹¹ holds a view of the US future economic prospects similar to Gordon's, but for different reasons. He suggests that the United States may have entered a period of *secular stagnation*, a theory originally advanced by Alvin Hansen in 1938. Hansen argued that investment and high rates of capital formation are necessary conditions for strong economic growth. Reviewing American economic history, he concluded that three factors, individually or in combination, had been responsible for economic progress: (1) population growth, (2) territorial expansion, and (3) inventions. Noting that the rate of population growth had subsided and that the opportunities for territorial expansion had been exhausted, Hansen affirmed that the only way to stimulate investment for the purpose of achieving and maintaining full employment was through technological change. He also agreed with Wicksell's view that investment decisions are affected more by profitability than by low interest rates. Therefore, he did not believe that monetary policy was an effective instrument for stimulating investment. He was not optimistic about fiscal policy either, because only a portion of government spending is in the form of productive investment and deficit financing would ultimately affect negatively private capital formation.¹²

While Gordon and Brynjolfsson and McAfee focus on the supply side of the economy (potential output), Summers argues that economic growth in the industrial world will be constrained by inadequate growth in aggregate demand. This, in turn, leads to excessive savings which, in the new technological age, cannot be absorbed by investment. The results of this imbalance are sluggish economic growth, low inflation, and low real interest rates. According to Summers there are a variety of factors at work leading to an increase in the saving rate, most important among them rising income concentration and higher uncertainty. On the spending side, investment growth is constrained by a slowdown in the growth of the working-age population, which holds back housing investment, the IT-induced "demassification" of the economy—less office space, e-commerce—and a new trend towards sharing of facilities and equipment. By widening the gap between savings and investment rates, these forces will lead to a "neutral" real rate of

interest, i.e., the rate that balances saving and investment at full employment, which is so low that makes monetary policy ineffective. In this environment monetary policy may actually be counterproductive. In the absence of profitable investment opportunities, an easy money policy would simply chase existing assets, artificially raising their prices. Unlike Hansen, who is hesitant about the use of fiscal policy, Summers argues that fiscal policy is the main policy tool that can be effective in counteracting secular stagnation.

Roubini. Roubini¹³ has put forward ten reasons why within this decade the US economy will enter a state of *stagflation*, characterized by slow economic growth and higher inflation. Some of these reasons are associated with the Covid-19 pandemic and will be discussed later in this chapter. Prominent among the causes of the projected stagflation are a number of supply shocks, all of them originating from changes in international economic relations and the “cold war” between the United States and China.

Even before the supply-chain disruptions created by the pandemic, there were forces at work unfavorable to the expansion of international trade because, as stressed by van Bergejik (2019),¹⁴ “phases of strong globalization carry the seeds of their destruction.” In the most recent case which began in the 1980s and intensified after 1990, the dominant economy sought trade expansion largely to take advantage of lower labor costs in less developed countries, primarily China, and at the same weaken the bargaining power of organized labor at home. The gains from expanded trade are seldom distributed equally. While China made large employment and technology gains, the lower prices of manufactured products enjoyed by American consumers came at the cost of declining manufacturing employment as the industrial structure of the US shifted from the production of goods to that of services. As the pace of globalization progressed it became clear that the greatest beneficiary was China and doubts about its economic benefits began to grow in the US. The Great Recession produced a negative shock to globalization by reducing total expenditures. To this day neither trade in goods nor financial flows have reached their 2007 peak levels. The slow job recovery strengthened anti-globalization sentiments as the search for culprits pointed, correctly or incorrectly, to trade imbalances and the offshoring of jobs. Under the

Trump administration trade disputes soon exploded into an open trade war as tariffs were met with counter-tariffs.

A crucial component of the China-US “cold war” is the battle for technological leadership. In tomorrow’s geopolitical arena the winners will be determined not by their control over natural resources, but by their technological capacity, which need not be domestically developed as new technology can be obtained from outside sources through purchase or industrial espionage and patent infringements. Protecting domestic advancements by restricting international technology exchanges not only reduces the volume of trade, but restrains the pace of technological change worldwide and raises the costs of domestic production.

De-globalization leads to re-shoring of production for two reasons. As middle-class jobs are being lost to automation, political pressure to create jobs intensifies. Protectionism (bringing jobs back) becomes the easiest political response as it puts the blame on external forces thus avoiding painful domestic policies. In addition, advancements in robotics and production processes allow lower cost production even for small runs. These technological advances in many cases make domestic production competitive with offshore supply as they reduce transportation costs and minimizes the risk of supply-chain disruptions. However, as cheap foreign labor is replaced by increasingly cheaper robots, re-shoring production will not lead to higher domestic employment. It will simply change the source of profits. According to Roubini, while protectionism, de-globalization, re-shoring, and technology wars will disrupt economic growth, monetary policy needed to monetize huge and expanding public levels will eventually fuel inflation, leading to a new bout of stagflation.

Insufficient Growth of Aggregate Demand?

If, as Summers suggests, the real economic problem faced by industrialized countries is insufficient growth of aggregate demand in general and investment in particular, it is necessary to delve in more details on the factors that will drive total spending over the next twenty years. Let’s start by looking at the components of aggregate demand contained in Table 11-1. We notice that over the period from 2012 to 2019 personal consumption expenditures accounted for more than two-thirds of total aggregate demand, private investment and government spending accounted for 17/18 percent each, while net exports made a negative contribution of 3/5 percent. There were some notable changes from 2012 to 2019: the share of

consumer expenditures rose by 1.6 percentage points, the shares of private investment and government purchases moved in opposite directions and by nearly equal amounts with the former increasing and the latter decreasing, and the negative effect of net exports expanded by 1.5 percentage points.

Table 11-1. Shares of Real Total Expenditures

	C	I	G	X-M
Average from 2012 to 2019	67.9	16.2	19.4	-3.5
2019	69.5	18.1	17.4	-5.0

Note: C = Personal Consumption Expenditures, I = Private Investment, G = Government Purchases of Goods and Services, X-M = Balance of Trade (Exports minus Imports).

Source: Federal Reserve Bank of St. Louis, FRED Series GCEA, GPDICA, NETEXC, PCECC96, GDPCI.

According to the CBO’s pre-coronavirus projection, real GDP growth over the next ten years will slow down to 1.7 percent per year, but personal consumption expenditures will remain the dominant component of aggregate demand, accounting for about 77 percent of its growth. Private investment will add a contribution of about 19 percent and government close to 6 percent, while the negative effect of the trade imbalance will be reduced to 2 percent.¹⁵ Although I cannot offer an alternative set of projections, I nonetheless can still ask: what forces will drive the growth of these components of aggregate demand over the next two decades?

Let’s start with the trade balance. In 2019 the United States had a trade deficit equal to nearly 3 percent of GDP. The CBO January 2020 Budget and Economic Projection indicates that this trade imbalance will disappear by 2025. While it is not clear what forces will bring about this change, some trends are self-evident. First, the election of Joe Biden as President of the United States will likely reduce international economic tensions and slow down the forces of protectionism. This, in turn, may also restrain the process of de-globalization. Still, it cannot change the built-in forces towards re-shoring of production created by technological advances. The growth of international trade over the next twenty years will be slower than

during the past two decades. Whether it will lead to the elimination of the current US trade imbalance remains to be seen.

With respect to public spending on goods and services, the ability of the US government to stimulate aggregate demand in the future is severely hampered by its unsustainable fiscal system. Gross federal debt already exceeded the value of GDP in 2019¹⁶ and the CBO projected in January 2020 that the ratio of the federal debt held by the public to GDP will continue expanding over the foreseeable future, rising from 81 percent in 2020 to 98 percent in 2030 and 180 percent in 2050.¹⁷ Some fiscal stimulus would be expected if the new administration did implement a massive infrastructure program financed by higher taxation on higher income individuals and families because, in this case, part of the additional government spending on goods and services would be financed by a reduction in private savings. It's impossible to even guess in advance what the total expansionary effect of this potential policy would be and how long its effect would last. Since the CBO's pre-pandemic projection yields a growth rate of government spending on goods and services equal to a fraction of the projected growth of GDP, even with a substantial increase in public spending, public sector consumption and investment would still not provide a stimulus to GDP growth.

The future path of personal consumption expenditures is determined by the growth of the population and purchasing power per person. Let's start with demographic projections. According to projections by the US Census Bureau (2017),¹⁸ the US population will increase at a rate of nearly 0.6 percent per year from 2020 to 2040, one-quarter less than its growth rate during the previous twenty years. More importantly, most of the increase will be in the population 65+. The population under 18 will grow at an average annual rate of 0.2 percent and that between 18 and 64 at a rate of 0.3 percent. The growth of households from 2020 to 2040 will also be roughly one-third less than during the previous two decades. Moreover, 80 percent of the increase in households will be by people 65+. Among households 25-54, only 17 percent will be with children.¹⁹

These unusual demographic developments will impact negatively the growth of personal consumption expenditures. First, the slowdown of population growth will lead to a slower pace of consumer spending. Second, the shifts in the age distribution of the population will affect both the growth of consumption and the allocation of the aggregate consumer budget. Seniors have no longer the need to save but do not need to borrow either. In fact, if they knew their date of death and

had no intention of leaving bequests, they would consume all their income and wealth. Therefore, the effect of a rising share of seniors on total consumer spending is not entirely clear because their higher propensity to consume is counterbalanced by their lower propensity to borrow. Moreover, seniors spend their income on different items than young people. First, seniors have income equal to about 80 percent of the average. Thus, an increase in the share of seniors, other things being equal, would lower total spending. Second, the income of seniors increases at best in line with inflation and does not benefit from productivity growth and rising wages. Finally, seniors do not need to purchase new houses—they are either staying put, downsizing, or moving to retirement homes—they already possess their furniture and household equipment, and they have below-average expenditures on transportation.

The change in the age structure of the population will also impact the rate of household formation. One of the drivers of consumer spending is the rate of formation of households with children, which affects decisions about housing and furnishings, and also spending patterns over a long period of time which often extends to a child's years in college. According to the above-mentioned study by McCue (2018), from 2018 to 2038, the number of households is projected to increase by nearly 29,000, but the number of households with married or unmarried members 25-54 with children will rise by only 3.7 million, which represents 17 percent of the total increase.

Let's now turn to the growth of the spending power of non-seniors. This demographic group receives most of its income from wages and salaries. Their spending depends on their income level and their capacity and inclination to borrow. With respect to the former, we have to distinguish between overall wage growth and its distribution. The growth of real wages depends largely on the growth of labor productivity. How much of productivity growth is transformed into higher wages, however, depends on the share of income that accrues to labor services. For about the first forty post-war years the labor share fluctuated moderately around a value of nearly two-thirds. Over the past forty years, and particularly since 2000, it has followed a declining trend. According to a study by the McKinley Global Institute, the labor share stood at 65.4 percent in 1947, declined to 63.3 percent by 2000 and dropped to 56.7 percent in 2019. The decline per year from 2000 to 2019 was 10 ten times that from 1947 to 2000 (McKinley

Global Institute 2019). Looking at future trends, the above report projects that the labor share will continue to decline although at a slower rate.

The fall in the labor share was associated with an increase in the concentration of labor earnings with most of the increase in real wages accruing to the top of the earnings distribution. An indicator of this concentration is the ratio of median hourly wages to average hourly wages. The lower this ratio, the higher is the degree of concentration. A declining ratio indicates increasing concentration. A recent study shows that from 1991 to 2019 the growth of mean wages adjusted for inflation increased at an average annual rate of 1 percent compared to a growth rate of 0.7 percent for median wages. As a result of this difference, the ratio of median to mean wages decline from 72.1 percent in 1991 to 67.9 percent in 2000 and to 66.0 percent in 2019.²¹ The view that the trend towards greater concentration of income and wealth will not abate is shared by both techno-pessimists and techno-optimists.²² Rising concentration of income will have negative effects on the growth of consumer spending for two reasons. First, those at the top of the income scale tend to save a larger proportion of income (those at the bottom have no capacity to save at all). Second, spending patterns differed drastically by income level. As stressed by Martin Ford (2009),²³ the economic effect of personal spending is driven by mass consumption not by the niche consumption of the wealthy. Let's consider the hypothetical case where, on one side, ten middle class workers are given \$10 each and each one spends the windfall by purchasing two bottles of beer. On the other side a company executive is given \$100 and he buys a bottle of champagne. It is evident that a single bottle containing three-quarters of a liter of wine cannot create the same production activity as twenty bottles and seven liters of beer.

Finally, personal consumption among non-seniors is affected by the capacity to borrow. As shown in an earlier chapter, American families, especially those in the middle- and low-income groups, are already heavily indebted. Currently the burden of this debt has been alleviated by historically low interest rates. There is no room for further monetary stimulus to consumption in the future. Eventually interest rates will begin to go up, though perhaps not by much, creating a dampening effect on consumption. Because of the large debt position of families (and governments), even small interest increases will have significant impacts on aggregate demand, and large increases would be disastrous. As pointed out by Roubini, "There is so much debt; if long-term interest rates go from 0 to 3%, the

economy is going to crash.”²⁴ All the above factors suggest that over the next twenty years real personal consumption expenditures will grow at a lower rate than potential real GDP.

The CBO projects that over the next ten years private investment will increase at a faster rate than GDP, thus giving a boost to production. This projection is based on the assumption of healthy growth in consumer spending and strong exports growth that lead to the elimination of current trade imbalances. Investment decisions by firms take into account both interest rates and the demand for their products. As in the case of personal consumption expenditures, firms are benefiting from a low interest rate environment, but they cannot count on further monetary stimulus. Moreover, as stressed by Summers (2016, 2020), we are in an economic environment that renders monetary policy an ineffective tool for stimulating investment. If the growth of personal consumption decelerates for the reasons explained above, the projected growth of exports does not materialize because of trade wars, and the growth of government purchases is hampered by high public debt levels, private investment will not be able to meet the growth rate projected by the CBO.

Effects of the Pandemic

The Covid-19 pandemic will have widespread and long-lasting effects on the population, economic activity, and living standards. Although it is not possible at this time to make a full assessment of the magnitude of these effects because the pandemic is still ongoing, we can nonetheless identify some of its major effects. For analytical purposes it may be useful to distinguish the supply-side from the demand side effects.

Supply-Side Effects. The pandemic will have a significant impact on population growth. We do know that close to 350,000 Americans died of the virus by the end of December 2020 and projections indicate that an addition 300,000 may die in 2021. We also know that the behavioral restrictions due to the coronavirus have reduced the death rate from other causes, such as travel and workplace accidents. Still, it is not farfetched to assume more than half a million net coronavirus-related deaths in 2020 and 2021. The pandemic may have also affected the fertility rate both in the short and long-term by creating uncertainty about a person’s future financial situation and by increasing parents’ awareness of the costs of raising

children. A recent survey by the Guttmacher Institute (2020) found that the proportion of women who plan to postpone pregnancies or have fewer children because of the pandemic (34%) is double the proportion of women who plan to have earlier pregnancies and more children.²⁵ A study by the Brookings Institutions, based on an analysis of the 1918 Spanish flu and the 2007-2009 Great Recession, concluded that in 2021 there may be 300 to 500 thousand fewer births because of the virus.²⁶ Finally, the restrictions on migration will likely reduce the number of immigrants to the United States in the short-term. These three factors—increased number of deaths, lower number of births, and fewer immigrants—may lead to one million fewer people in the US by the end of 2021 compared to the pre-Covid-19 projections. This difference will be amplified by 2040. As an illustrative example, I considered the case where the US population grew by 0.5 percent a year from January 2020 to January 2040. As an alternative I considered the case where the population in January 2022 was lower by one million and grew at the rate of 0.4 percent per year. Under these assumptions, the post Covid-19 US population in 2040 would be 7.5 million less its pre-Covid-19 value.

If the pandemic lowers the number of births, this demographic change will affect the civilian population 16 and over only 16 years from now and the labor force 20 years from now, because the participation rate of those 16-19 is quite low. However, the labor force may be negatively affected even in the short-term by three other factors: the death of people over 16 years of age, lower immigration, and a decline in the participation rate.

Roughly 600,000 Americans will die of Covid-19 and 100,000 of them will be in the age range 15-64.²⁷ By the end of May 2021, 33 million Americans had contracted Covid-19. A portion of them will continue to have lingering effects throughout their life. According to the Mayo clinic, Covid-19 affects a variety of organs. It can weaken the heart muscle, damage permanently the tiny air sacs (alveoli) and even cause strokes, seizures, and temporary paralysis.²⁸ These long-term effects of Covid-19 have led doctor Rober M. Califf to warn that “once the acute phase of this crisis is past, we will face an enormous wave of death and disability.”²⁹

The pandemic has reduced immigration flows. This, in turn, will tend to reduce the labor force as most immigrants enter the US for the purpose of working. It is unknown whether immigration levels will rebound in the future because their numbers are largely determined by government policy. The pandemic also

depressed the participation rate which fell by 2 percentage points from January to September 2020. In April 2021, the participation rate was still 1.7 percentage points lower than in February 2020. As a result, the civilian labor force in April 2021 was nearly 4 million lower than in February 2020. One of the reasons for the decline in the participation rate was the need for at least one parent to stay home and take care of young children due to the closure of in-person learning. It is not known yet whether pre-Covid-19 two-income families with young children will make long-term adjustments to more traditional arrangements with a single breadwinner.

The effects of the pandemic were also selective in terms of employment and unemployment. From January to April 2020, employment dropped by 25 million. The percent reduction for those without a high school diploma (25.5%) was nearly 4 times that for employees with at least a bachelor's degree. Part of those jobs were recovered by September when total employment was 11 million less than in January. However, the percentage job loss from January to September for those without a high school diploma was still over 4 times that for employees with a college degree. The pandemic has also affected the duration of unemployment as the percentage of workers unemployed for 15 weeks or more rose from 35 percent in January 2020 to 58 percent in September 2020. Moreover, some of the workers who were re-employed ended up with fewer hours and lower wages.

The pandemic is also impacting the structure of the American economy because its effects are unequal among different sectors. Air transportation and the entire hospitality industry have been most heavily hit as well construction, repairs and maintenance, and personal services.³⁰ Small businesses were hit particularly hard. More than 1 million small businesses have closed since the beginning of the pandemic and that number is expected to grow throughout the year.³¹ Even though there has been some recovery since April, only 41 percent of small businesses were fully open in June 2020 and an additional 38 percent were partially open.³² It may take a fairly long time for a full recovery and even then many small businesses may remain closed. A study by McKinsey found that “after the 2008 recession, larger companies recovered to their pre-crisis contribution to GDP in an average of 4 years, while smaller ones took an average of six.”³³

The pandemic also disrupted the supply chain, especially the elements associated with international trade. According to a survey of 200 senior executives conducted by Ernst and Young, 72 percent of respondents reported negative effects on business operations. The impact was more significant and more widespread in the goods-producing sector, particularly the automotive industry.³⁴

Demand-Side Effects. Three major factors will affect post-pandemic total spending: the reduction in population growth, pent-up consumer demand, and government spending.

The Covid-19 induced reduction in the growth of the US population will have a selective negative impact on total spending. The higher deaths, lower births and reduced immigration, which by 2040 may lead to a lower level of the population equivalent to 1-2 percent of the pre-Covid-19 projected population, will depress personal consumption expenditures in general and may also impact the demand for housing and furnishings. A lower number of seniors, the age group most affected by the pandemic, will reduce government spending on pensions and health care as well as personal consumption expenditures, and lower births will depress spending on health care and education.

Not only did the pandemic hit harder seniors, minorities, and lower income individuals and families, but affected the economic status of Americans in a selective way. Again, those who suffered most economically were low-wage workers and young people. According to a Pew Research Center study,³⁵ 44 percent of low-income Americans had to dip into their savings to survive, 46 percent had trouble paying their bills, 35 percent used the Food Bank, and 32 percent had problems with making rent and mortgage payments. The comparable percentages for those at the top end of the income scale were, respectively, 16, 5, 1, and 3. While low-income families had difficulties surviving and had to dip into their savings, high-income Americans whose jobs were unaffected by the pandemic ended up with large unplanned savings as their spending on travel and restaurant meals was drastically curtailed.³⁶ In the future, high-income families may have even greater spending capacity because of the pandemic, which will stimulate consumer spending, but lower-income families may have a reduced spending capacity because of the depletion of their savings and their more limited ability to borrow. Overall, the net savings of American families increased substantially during the pandemic and may exceed \$2 trillion by the time the

restrictions are lifted. In the short-run economic performance depends to a certain degree on how these funds will be used: spending, paying down debt, keeping higher balances for precaution. In the long-run the issue is whether the households' saving rate will return to its pre-pandemic levels or will remain at a higher level.

To a certain extent the increase in consumer spending capacity is due to the high level of government financial support delivered through two large stimulus packages. Because these programs added to the overall pandemic-induced increase in the public debt, there is some increasing political resistance to the introduction of new spending programs that do not include appropriate revenue offsets. This means that the potential for additional fiscal stimulus may be quite limited.

There is no general agreement on how Covid-19 will affect the performance of the American economy. The pandemic may have strengthened the conditions that have led Summers (2016) to predict a period of secular stagnation for the United States. A recent study by the International Monetary Fund,³⁷ which analyzed the yield on long-term sovereign debt dating back to the 14th century, discovered that during past pandemics the natural rate of interest, i.e. the rate associated with non-inflationary full-employment growth, was 1.5 percentage points lower 20 years after the pandemic. Even if there are mitigating factors in the current pandemic—such as greater government financial stimulus, which may reduce the decline to 1 percentage point given the already low pre-Covid-19 natural rate, the ineffectiveness of monetary policy in these conditions, and the limitations of fiscal policy imposed by high and rising debt-to-GDP ratios—such a decline might be sufficient to usher a new bout of secular stagnation. While recognizing that, in an environment of de-globalization and trade wars, the pandemic will help push the American economy towards long-term stagnation, Roubini argues that the expansion of government debt and its monetization through easy monetary policy will be associated with currency depreciation, in more than one country, and will eventually create inflationary pressures and lead to a period of stagflation similar to the one initiated in the early 1970s by the oil crisis (2020).

A more optimistic view of the post-pandemic performance of the American economy is held by the Congressional Budget Office³⁸ which in its February 2021 economic outlook treats the pandemic as a cyclical phenomenon. In this projection real GDP will reach its pre-pandemic level sometime in 2021 and will end with the same growth rate between 2019 and 2030 as in the pre-pandemic outlook. The

CBO's analysis highlights the disconnect between the growth of real GDP and the growth of employment as the latter will reach its pre-pandemic level only in 2023, two years later than real GDP.

Looking at the economic effects of the pandemic, we may distinguish between short-term, medium term, and long-term. In the short-term the accelerated pace of economy recovery, due in large part to the coordinated combination of expansionary fiscal policy and easy monetary policy, is beginning to hit supply constraints and create inflationary pressures. While the Consumer Price Index (CPI), both total and net of food and energy, rose by less than 2 percent from February 2020 to February 2021, there was a substantial uptick over the next two months, raising concerns about the potential of accelerating inflation. In my view private sector dynamics do not support the acceleration of inflation. The pressures on wages result from temporary labor demand/supply imbalances and not market power. With millions of Americans still out of work and millions more out of the labor force largely for family or safety reasons, these imbalances will be corrected when high vaccination rates dispel the fear of human contact at work and day care centers and schools fully reopen. The spike in fuel prices is due to a combination of recent increases in crude oil prices and refinery shutdown. The refinery has returned to full production and crude oil cannot continue climbing because there is excessive oil production capacity. Even supply chain constraints will begin to subside as firms implement corrective measures. In the medium-term, once the pandemic is behind us, market forces would tend to be self-corrective and lead to the resumption of stable, though perhaps lower, economic growth. The unknown about the potential for accelerating inflation is the conduct of macroeconomic policy. If the federal government continues deficit-financed spending increases and the Federal Reserve keeps monetizing the additional debt, the demand/supply imbalances will persist and inflation may accelerate. Eventually the Federal Reserve would be forced to tighten its monetary policy stance. The ensuing higher interest rates would restrain aggregate demand but might not rein in inflation, thus validating Roubini's prediction of stagflation.

Over the longer-term the dominant force will be technological change and the more lasting effect of the pandemic may be the acceleration of its pace. From the experience of previous crises, we can expect a restructuring of the economy driven by consolidation, accelerated automation, and more precarious job arrangements.

Small businesses operate on narrow profit margins and do not have the financial capacity to withstand a protracted economic crisis. Some of them will close for good, others may seek partnerships, and still others may be acquired by larger companies. Examples of these changes are already taking place in the airline industry and others will likely follow in other sectors. Even for larger companies long-term survival and growth depend on the accelerated introduction of new technology, in particular labor-replacing automation. The pandemic has added another advantage of robots over human labor: robots are immune to the health issues that plague humans. Even during a pandemic they can still operate unimpeded and can even interact with both healthy and sick humans. The process of phase 2 automation will also be accelerated by the prospects of lackluster growth in aggregate demand, a situation that requires intensified efforts at cost cutting. These developments will have a negative impact on the demand for labor. Not only will employment grow at much slower rate than in the past, but work arrangements will tend to weaken the position of permanent contracts in favor of part-time, short-term contracts. The implications of these long-term economic developments for the future of work and leisure will be discussed in the next chapter.

Summary

The future path of the US economy—employment as well as output—depends on the factors that determine long-term trends of potential output (the supply side) and total spending (the demand side). There is a debate among economists about the trends of potential output between techno-pessimists and techno-optimists. The former see technological change proceeding at the slower rate recorded from 1970 to 2014, while the latter project an explosion of technological progress. Less disagreement is found on the demand side. Economists expect that a combination of factors—lower population growth, lower rate of family formation, rising concentration of income and wealth, and the high level of debt by individuals and governments—will dampen the growth of total spending. The Covid-19 pandemic will affect the supply side from different angles. Its negative effect on population growth—more deaths and fewer births—may be offset by a potentially higher rate of automation as firms will compete for market shares in an environment of slower

spending growth through efficiency measures that reduce costs. This economic environment limits the power of monetary and fiscal policy as both have little room to maneuver, the former because interest rates are already at record lows and the latter because debt-to-GDP ratios are at record highs.

Chapter 12. THE FUTURE OF WORK AND LEISURE

The previous chapter discussed the long-term trends in aggregate demand and potential output. In this chapter I analyze the impact of these trends on employment and theorize on the future of work and leisure. On the demand side it was shown that a number of demographic developments, some related to the pandemic, will have a negative effect on the growth of total spending which, in turn, will hold back the rate of job creation. On the supply side the pace of employment growth will be affected by both the nature and rate of technological change. Because there are divergent views on the future trends of technological change and its impact on job creation, I will discuss this issue at greater length in this chapter.

Major Features of Technological Change

My interpretation of past experience, especially that of the past 40 years, has led me to the following general conclusions. First, technological change involves a *unidirectional process*. Once a new technological breakthrough is commercialized, it initiates a process that leads to its diffusion through refinements. The main factors behind diffusion are variations in the original product to make it useful in different applications, improved efficiency in its production and its use, and reduction in its cost of production. Computing capacity and computing machines are perfect examples of this process. As early as 1965 Gordon Moore observed that the cost of computing power in integrated circuits had fallen by half each year and predicted that this trend would continue for at least a decade.¹ Flamm has shown that “Moore’s Law,” as this prediction was called, dominated for more than one decade. He presents evidence that, through process innovation, the cost of manufacturing transistors on a chip had declined by 20 percent per year. This decline is even steeper when the effect of innovations in chip design and architecture are included.² Similar results are presented by Brynjolfsson and McAfee (2014), who show that from 1990 to 2010 there was exponential growth in supercomputer speed, supercomputer energy efficiency, and hard drive cost efficiency.³ Flamm also presents evidence that the speed of cost decline has recently subsided, an expected effect of the expansion of a given technology which eventually would meet some constraints from the laws of physics. Such a decline is a signal that new materials, processes, or designs are required. Since the production

of semiconductors is a major industry with well-established research facilities in all industrial countries, the process of moving to the next generation of semiconductors is already well on its way.

The decline in the price of semiconductors was translated into cheaper, more powerful, and more versatile products. The computer, which started as a computing machine that required an entire floor, evolved into a stationary computing device for home use (the personal desk-top computer), then into a smaller, mobile, and more versatile laptop. As an example of such development let us compare two machines with equal computing power: the Cray-2 supercomputer introduced in 1985, and the 2018 iPhone XS. As referred by Brynjolfsson and McAfee (2014, p. 51), the Cray-2 was “deaf, dumb, blind, and immobile.” It weighed 5,500 pounds, occupied an area of 16 square feet, had a volume of 1.8 cubic meters, storage of 32 GBs, a memory of 255 megawords, consumed 195,000 watts, and cost \$30 million in 2017 dollars. By contrast, the iPhone XS weighed one quarter of a pound, had a volume of 0.007 cubic meters and storage of 512 GBs, a memory of 4 GBs, consumed less than 1 watt, and cost \$900.⁴ Another example is the evolution of photovoltaic panels. In 1975 solar power cost \$105.7 (in 2015 dollars) per watt. In the following 15 years this cost fell to \$7.9 dollars, a decline of over 90 percent. Over the following two decades the cost continued to fall by about 30 cents of watt per year. From 2010 to 2020 it declined by a further 90 percent reaching a level of 20 cents per watt.⁵ As a result of the technological developments that have dramatically reduced their costs, solar and wind have become the cheapest new sources of electricity generation in most of the world.⁶

Second, technological change is the result of a *cumulative process* through which yesterday’s inventions, which were born out of previous theoretical achievements, beget today’s innovations. Moreover, the accumulated knowledge remains as part of the human heritage and any part of it can be accessed at any time. As the most developed countries compete at the leading edge of technological advance, less developed countries can utilize time-tested and cheaper technologies, and through that process over time new technology spreads all over the world. A relevant example is the development of the transistor, “a device that regulates current or voltage flow and acts as a switch or gate for electronic signals.”⁷ The transistor lies at the foundations of the digital revolution. Its roots go back to 1874, the year Ferdinand Braun—a German electrical engineer who in 1909 shared the Nobel prize in physics with Guglielmo Marconi—invented the solid-state rectifier.

Because this device was unstable in its initial form, it was replaced by the vacuum tube. This technology also had its limitations: it did not perform well at high frequencies. The ideas of developing stable versions of the rectifier were kept alive. They received a boost in the 1920s from the development of quantum mechanics and the successive work on the quantum theory of solids, largely by British physicists. In the United States Marvin Kelly in 1936 formed a solid-state device group at Bell Laboratories, which included Bill Shockley, Russell Ohl, and Jack Shaft. This group was disbanded during the war, but was re-established in 1946 under Kelly, and included Walter Brattain, John Bardeen, John Pearson, Bert Moore, and Robert Gibney. One year later, in November, Bardeen and Brattain presented the first transistor. Shockley, who at the time was in Europe on a short sabbatical leave, began working on the theory of transistors and published his findings in a book entitled *Electrons and Holes in Semiconductors*. As work on this invention continued, in particularly through material improvements, contractual arrangements required Bell Laboratories to share this invention. Through licenses sold at the price of \$25,000 each, the transistor spread throughout other companies in the United States and Japan. Thus, was born Silicon Valley.⁸

Third, *technological growth is exponential*. The cumulative process of technological advance follows an evolutionary pattern in the sense that at each stage only the best technology is transformed into innovation and later becomes the foundation for the next stage. As success builds upon success, the stock of knowledge and successful applications continues to accumulate. Because innovators are chasing financial returns, financial resources are largely directed at the inventions with greater odds of bringing large returns. This focusing of financial resources serves as an additional stimulus to technological growth by stimulating research efforts. The process leading to exponential technological growth operates in stages. First, a given stage of technological evolution exploits its capacity to the end of its potential. As the returns to this stage begin declining, researchers are at work for the next stage. At some point the new inventions will create a paradigm shift in technological evolution and the process of technological advance will continue, but along a new path. History teaches us that the built-in tendency of technological advance is to shrink the time between paradigm shifts in technological change.⁹ It took thousands of years to move from animal and human muscles power to the steam engine, but less than an additional 200 years to build

the first coal-fired electric generating plant (1882). The first nuclear plant became operational in 1954, only 72 years after the first coal-fired one. The first commercial production of solar photovoltaic electricity began in 1972. Forty-eight years later PV panels make a substantial contribution to total electricity generation in many countries. For most of human history the most powerful computing device was the abacus. In 1944 two professors at the University of Pennsylvania (John Mauchly and J. Presper Eckert) built what is considered to be the grandfather of all computers, named ENIAC. This machine occupied a 20 by 40 feet of space and contained 18,000 vacuum tubes. Sixty years later the first Apple iPhone came on the market, a device more powerful and more versatile that could be held in the palm of one's hand.

Fourth, technological change is *overlapping* in the sense that different technologies coexist at the same time in the same place, even during a paradigm shift. Reaping the fruits of each technological advance requires the development of appropriate physical, technical, and administrative infrastructure. For the users of the new technology, the products purchased represent an investment which, in the case of business enterprises, may require a sizable financial commitment. Therefore, new technologies initially have limited market penetration. As they evolve and become cheaper, and as the existing devices depreciate, the technically more advanced machines expand their market reach until they acquire complete domination.

This feature of technological development may explain the coexistence of different views about the future of economic growth. The techno-pessimists look at the status of the current technological evolution and assume that the future involves a continuation of the current technological paradigm. The techno-optimists focus on the future of technology and believe in the power of the next technological evolution. I suggest that we are currently in a transitional period from phase 1 to phase 2 technology. The former is the technology that generated economic progress over the past couple of centuries and is based on some form of complementarity between man and machine. The defining feature of the latter phase is the weakening of this connection through the development of autonomous machines.

Technological change will also affect the evolution of the labor market. Three aspects of this effect are analyzed in this sub-section: the change in total employment, the change in occupational distribution of employment, and changes in the structure of the labor market.

Total Employment. In the previous chapter I suggested that employment growth faces three major head winds. First, phase 2 automation will accelerate the replacement of human labor with autonomous machines. Second, unlike the situation in phase 1 automation, increases in total spending will have a declining effect on employment because the additional output to meet demand will be produced to increasing degrees by autonomous machines. Moreover, a number of special factors—lower rate of growth of population and family formation, and high debt rates for individuals and governments—will act as breaks to aggregate spending. Third, the Covid-19 pandemic is affecting negatively both the labor supply and total spending. How long this effect will last, how strong it will be, and what permanent changes in behavior and economic structure, including accelerated rate of automation, is not known yet.

Employment projections by the Bureau of Labor Statistics published shortly before the Covid-19 outbreak indicated that during the decade 2019-2029 total employment would increase by 6 million jobs, or 50,000 jobs per month on average. Projections of a similar employment increase were made by the Congressional Budget Office.¹⁰ How will the pandemic alter these projections? According to the Bureau of Labor Statistics (2021), seasonally-adjusted employment in December 2020 was 8.9 million lower than in December 2019.¹¹ How quickly this employment gap will be filled is not known. Some economists project that the US economy will create 3.9 million jobs in 2021 and 3.8 million in 2022.¹² If we add 1.2 million jobs in 2023, the December 2019 employment level will be reached in December 2023. If we then assume the creation of 600,000 jobs per year in the following 6 years (close to the average annual increase under the BLS projection), we end up with 3 million more jobs in 2029 than in 2019. This implies an average increase in employment of 300,000 jobs per year or 25,000 per month.

Occupational Changes. The effects of future technological change on the occupational mix have been analyzed by a variety of researchers. The seminal work of Frey and Osborne (2013) concluded that 47 percent of jobs in the United

States were are risk of automation.¹³ A less pessimistic outlook has recently been offered by the Organization for Economic Co-operation and Development (2019) which estimated that about 14 percent of jobs are at risk of automation. Still, this percentage would represent over 20 million jobs in 2040.¹⁴ McKinsey Global Institute (2020) offers a detailed analysis of job prospects for the United States by various characteristics. Their analysis leads to the following conclusions. First, although less than 5 percent of jobs can be totally automated, nearly 20 percent of jobs could be largely automated. Second, the process of change in the occupational mix is likely to accelerate over time. Third, 40 percent of current jobs are in occupations that could be shrinking over the next 10 years. Fourth, the change in the occupation mix will lead to greater polarization of employment and the “hollowing out” of the middle class. Fifth, job growth will be concentrated in urban areas. Rural areas will experience continuing de-population as job opportunities dwindle. Sixth, workers with lower levels of education will be most affected by automation. Seventh, automation will have a strong negative effect also on younger and older workers. Automation may displace nearly 15 million jobs for workers under the age of 34 and nearly 12 million jobs for workers over 50. The latter group is particularly vulnerable to automation because it may have fewer opportunities for retraining.¹⁵

The US Bureau of Labor Statistics (2020) is more optimistic. In its latest ten-year employment projection from 2019 to 2029, it shows a total increase of 6 million jobs. The breakdown by occupations and wage level shown in Table 12-1 below provides some interesting insights. The first part of the table indicates that more than half (5%) of the increase in employment will be in occupations that are not typically considered “private sector” jobs: health care, education, and social and community services. These jobs are related to population aging and rising income inequality rather than to technological change, productivity, and economic growth. Another 17 percent of the employment increase involves food preparation and service. This change is affected by both higher population, rising income, and lifestyle choices. The projected increase in employment in the occupations closely associated with technological change—computer, mathematical, engineering, and architecture occupations—accounts for only 11 percent of the total increase in jobs. This increase is nearly 300,000 less than the jobs that are projected to be lost in the office and administrative services. It is also 65,000 less than the projected job losses in production and sales combined.

Table 12-1. Projected Changes in Employment from 2019 to 2029: Share of Change by Selected Occupation and Wage Levels

Occupation	Share of Change
Health Care: Practitioners/Technical/Support	40.0
Education	7.3
Community and Social Services	5.8
Management, Business, Financial	16.3
Computer, Mathematical, Engineering, Architecture	11.0
Food Preparation and Service	16.7
Building and Ground Maintenance	4.6
Personal Care	6.0
Construction, Mining, Agriculture and Related	4.9
Transportation and Material Moving	7.4
Sales and Related	-5.0
Office and Administrative Services	-15.9
Production	-7.0
Other	7.9

Source: US Bureau of Labor Statistics (28 Sept. 2020), *Employment Projections, Employment by Major Occupational Group: 2019-2029*, Table 1.

Table 12-2 shows a pattern consistent with the “hollowing out” of middle-class jobs suggested by McKinley’s research. High income occupations, which are projected to account for 43 percent of the employment change, will experience only job increases. A modestly higher net job increase is also projected for the lower end of the wage scale, where increases in occupations accounting for 54 percent of total job growth will be only dented by a small decrease in occupations making up 5 percent of employment growth. The middle wage range accounts for only 8 percent of job growth because the gross increase of 31 percent in the share of more jobs is largely offset by a reduction of 23 percent in the share with fewer jobs.

Table 12-2. Projected Changes in Employment from 2019 to 2029: Share of Change by Selected Wage Levels

Wage Range	Share of Employment Change by Wage Range		
	More Jobs	Fewer Jobs	Net

Over \$68,000	42.9	0	42.9
\$31,000-67,000	30.9	22.9	8.0
Less than \$31,000	54.1	5.0	49.1

Source: As in Table 12-1.

These projections, particularly the one by the Bureau of Labor Statistics, are based on concepts that are more consistent with phase 1 automation. The early view of robots was that of machines capable of performing only strictly repetitious tasks and most suited to relieving humans of the burden of heavy or dangerous jobs. Even artificial intelligence is considered to have limited applications because occupations that require creativity and social interactions are considered to be an exclusive human domain. It is time to let go of this human arrogance and recognize that the pace and scope of technological change are not constrained by our inability to see its full potential. The fact that our ancestors could not fathom air travel did not prevent the development of airplanes. As stressed by Susskind and Susskind (2015), the defining property of future technology is the expanding capability of machines and production systems.¹⁶ This means that, as technological change advances at an accelerating rate, all occupations will be at risk of automation. Even the professions cannot escape the onslaught of technology and the transforming power of automation and innovation.

Although the above view is not universally shared, it seems to me that the arguments supporting special human advantages in cognitive capabilities and the ability to relate at the affective level and to make moral judgment are more expressions of anthropocentric conceit than scientific analysis. Robots are already capable of greater strength and higher computational ability. Their capacity to solve complex problems will expand over time while human intelligence seems to have reached a plateau. According to Rindeman, Becker, and Coyle (2016) a survey of experts has predicted that in Western countries IQ levels will remain roughly constant.¹⁷ In the United States Rindeman and Pichelman (2015) found that IQ scores of White Americans rose by 2.3 points from 1978-1980 to 1992, stayed constant from 1992 to 2012, and are projected to rise by only 0.3 percentage points from 2012 to 2026.¹⁸ Future artificial intelligence machines will not need super-brains in order to outperform humans, but they will have their unique operating systems. Businesses do not care whether AI machines are capable of

independent thinking or consciousness. What matters to them is their efficiency, i.e. their capacity to perform a given task at a lower cost than a human worker.

With respect to the affective advantage of humans, four points may be worth noting. First, we must distinguish between private and work-related affective relationships. For the former, it should be mentioned that the fundamental social change over the past half a century has been the move towards affective isolation. The fracturing of the extended family has created splinters with weak connections among their members. Grandparents either live in a different town than their children or in a different part of the same town (perhaps in a retirement home). In either case the in-person contacts are constrained by the busy life of their children and are confined to technically-aided distant communication. Second, in the market economy the need for in-person contacts is rapidly shrinking, in part due to technology. For example, in the financial sector, human services are being replaced by automatic teller machines, on-line banking, and on-line trading. Even portfolio management at most requires an occasional phone call. In schools, children from kindergarten may benefit from a flesh and blood teacher, but the rest need just competence not affectivity in their instructors. Whatever advantage humans may have in terms of affective capacity, it has little significance for the economy. Third, humans like machines. For some men a car is their “baby” and they lavish on it more attention than on their spouses or children. The iPhone has become almost a non-human appendage to the human body. People are so comfortable with ATMs that they prefer to stand in line in front of the machine rather than go to a live teller in the same branch. It is hard to imagine that the residents of a nursing home would be displeased to see an autonomous robot doing the cleaning or a robot with human features serving them meals and even engaging in conversation. Finally, humans are quite flexible in their affective relationships. As the extended family disintegrated and reduced the scope of affective relationships, people turned to non-human companionship. Pets, which used to be kept largely in rural areas for the purpose of performing useful tasks, such as catching mice or helping in hunting, now are viewed as family members and exceed by far the number of children in American households. AI machines are even beginning to intrude into the most private aspects of human life. Which woman in the future can compete with a life-size, anatomically-correct and fully functional artificial version of a never-aging Marilyn Monroe which can be programmed to be pleasant at all times, does not seek a permanent commitment, and does not create the risk of an

acrimonious and expensive separation? And which future man can compete with the life-size AI reproduction of a never-aging young Paul Newman or Robert Redford?

Finally, the claim of human superiority as moral agents is devoid of evidence. There is no universal set of moral norms to which all human beings adhere. Instead, we have fragmented systems of moral norms which often equate the difference between good and evil with personal gain or loss. The difference between humans and AI machines is that the latter cannot engage in transactional morality. Humans can express contradicting moral values in the same sentence and can shift their value system at the blink of an eye. Machines cannot do that because they are controlled by their moral subroutines. Their moral compass, which forces them to apply the same rules objectively to all situations, can change only when the sub-routines are modified. The potential failure of AI machines rests not with technological moral inadequacy, but with the biases of the human programmers. If the opportunity to program an AI machine existed prior to the Civil War, its moral compass would have been different if programmed by Jefferson Davies or by Abraham Lincoln. With respect to moral capacity, machines have greater potential because eventually they may be able develop the ability to self-program objectivity in their routines because they are not subject to the tyranny of self-interest that drives human decisions.

Labor Market Structure. Because the increasing capacity of AI machines in phase 2 automation will lead to the replacement of humans in an expanding range of tasks and occupations, technological change will lead to a more unstructured and more segmented labor market. The process of this restructuring and the shape of the end result depend largely on the mix of economic and non-economic determinants. The stronger are the non-economic factors, the weaker will be the restructuring effects of technological change.

The impact of technological change on employment will be more moderate in the public sector because governmental functions are not subject to the profit motive that drives the private sector. Regardless of the technology available to public administration employees, such as more powerful computers and more sophisticated software, the political apparatus together with the appendages of political operatives and lobbyists will continue to be an exclusive human domain.

A similar conclusion applies to the overall protective services sector. Some of its functions may be automated, correctional institutions will include new technological advancements, police officers will have access to more sophisticated equipment, lawyers will have quick electronic access to legal research, but we will still have flesh and blood police officers, prosecutors, defense lawyers, and judges. Health care and education are sectors with special characteristics. Health care services are delivered by the private sector, but paid in part by the government. They were a major source of employment growth over the past 70 years and are projected to account for more than one-third of employment growth over the next 10 years. Employment growth has been in part driven by population aging and will continue to do so over the next 10 years as the share of the population 65+ is projected to increase by 3.7 percentage points from 16.9 percent in 2020 to 20.6 percent in 2030. After that the pace of population aging will decelerate, resulting in decennial increases in the share of senior population of 1.0 percent from 2030 to 2040 and half of that the following 10 years.¹⁹ The deceleration of population aging combined with technological advances should lead to a substantial decline in the growth rate of employment in health care services. Employment growth in education services will depend not on technology but on public choices regarding the utilization of the available technology. The Covid-19 pandemic revealed that the technology already exists to replace most of in-person learning. This is particularly true for secondary and post-secondary education. Even for elementary education, the arguments against on-line education were largely non-educational in nature: schools need to be open for in-person learning because children need socializing and their parents need to be free to engage in gainful employment away from home. Another sector where technological advances will have less effect on employment is the one catering to human expressions of faith. Overall, public and semi-public sectors will continue to rely on human work, not because that work cannot be performed by autonomous intelligent machines, but because most of those jobs are well paid and are protected by powerful labor unions, and because humans will not willingly relinquish power.

In the private sector two emerging trends will transform the structure of employment. The first is the expansion of telecommuting, i.e., holding a job but doing the work at home. Already practiced by a small share of the working population, it increased dramatically during the pandemic. According to a Gallup

survey, prior to the pandemic 13 percent of existing telecommuters and 5 percent of all workers worked from home on a full-time basis. After the pandemic began (August 2020), these values more than tripled to 45 percent and 22 percent, respectively.²⁰ The second major change is the transformation of employment from career to gig, a shift facilitated by the ubiquitous presence of the internet. Unlike their counterparts of earlier generations, today's workers can upgrade their skills without ever entering the doors of a formal educational institution, and can perform the tasks of traditional workers without leaving home. Alternative work arrangements (gigs) already account for a sizable portion of the US economy. According to a Gallup (2018) survey – which defined gig employment as including independent contractors, on-line platform workers, contract firm workers, on-call workers, and temporary workers—for 29 percent of US workers, gig work is the primary form of employment: 24 percent of full-time workers and 49 percent of part-time workers. In addition, some workers hold a traditional job and also have some alternative work arrangements. When single and multiple job holders are combined, more than one-third (36%) of American are involved in the gig economy.²¹

The shift from traditional to alternative work arrangements is likely to increase over time, perhaps at an accelerating rate, for three reasons: it benefits employers, it benefits workers,²² and is consistent with the evolving value system. First, employers gain a variety of benefits by shifting from traditional to gig work arrangements. They are not limited to local labor markets in their search for talent, but can access a pool of talent worldwide. They can evade many national labor-law restrictions, such as overtime and work safety rules, by entering into personal contracts with individual worker-capitalists anywhere in the world. They can also legally avoid the costs of mandated workers benefits, such as contributions for pensions, unemployment insurance, and health care insurance. They can reduce substantially office space and can streamline management because, as shown by a recent Gallup (2018) survey, only about half of independent gig workers have a manager, compared to nearly 90 percent for workers in traditional employment. Managers represent a large overhead for companies and potential source of significant cost saving. According to Hamel and Zanini (2016) in the United States there is 1 manager per 4.7 employees, and managers represent nearly 18 percent of the workforce and receive 30% of total compensation. The above authors estimated that the cost of the excess bureaucracy amounts to \$3 trillion per year equivalent to

roughly 17 percent of GDP. The experience of vanguard companies indicates that even complex organizations can operate successfully with less than half of the management load carried by traditional large firms.²³

Second, greater flexibility of employment arrangements will also generate benefits to workers. The traditional working arrangements of permanent employment with a fixed 9 to 5 schedule provided financial stability at the expense of creativity and potentiality. Like other institutions, such as family and Church, these arrangements have served as another type of institution that constrained human potential. How employed people spent most of their waking hours and how much wealth, if any, they could accumulate, depended largely on decisions made by others. The availability of alternative work arrangements weakens these constraints and promotes individual freedom and creative pursuits. Individuals now can transform personal passions into gainful activities. By gaining greater control over the allocation of their time, they have the capacity to rearrange their priorities to better match their value system. Some may focus on the accumulation of wealth and dedicate even more time and effort to that goal. Others may find a more fulfilling life through activities with low financial requirements. Alternative work arrangements may also generate additional free time through at least two channels: the elimination of commuting to and from work, and increased productivity arising from greater flexibility in working hours. Not only can people adjust their working hours to their physiological needs and lifestyle preferences—some people are morning persons and other night persons—but they can more easily achieve peak performance. According to study by researchers at Ohio State University, the brain can be kept at peak performance by a schedule that includes 15 breaks for each hour of work.²⁴ By controlling their work schedule, gig workers can acquire additional free time through the resulting increase in productivity.

Third, the shift to alternative work arrangements is consistent with the new value system that holds at its core an individualistic approach to life. The managed worker of the traditional work arrangements has been replaced by the self-managed worker-capitalist. The foundations of the economic and social structure of the 1950s rested on the bedrock of solidarity. They now rest on the shaky grounds of creative individualism.

The increased flexibility of work arrangement and the additional freedom in the allocation of time will tend to complement the forces driving the concentration of income and wealth. As the number of gig workers expands, the mass of

independent workers becomes similar to the pool of young athletes aspiring to be stars. Only a few may reach their goal because the seats at the top are numbered. The rest will be part of an amorphous crowd, some able to maintain a middle-class living and others struggling just to survive, all of them still driven to fulfill the American Dream. Thus, the successful gambit of the few will be associated with the insecurity of the many.

Summary

In the early 1930s Keynes made two predictions about future economic growth and hours of work. The first prediction—over the 100 years that followed the material standard of living would increase between four and eight-fold—will come to pass. The second prediction—that the work would fall to 15 hours—will not materialize. I suggest that Keynes missed the mark on the second prediction for three main reasons: idealistic view of human nature, persistence of institutions, and a traditional industrial structure.

Throughout human history the lives of humans have been defined by the work they do. Until recently this definition of human life was determined by necessity as scarcity forced men and women to spend all their waking hours laboring. Forced by necessity to toil from sunrise to sunset just to survive, they could not even entertain the thought of leisure as they had just enough free time to give a break to their exhausted bodies. Even in the age of abundance, scarcity remains a stark reality for many people while for a minority it has been replaced by greed. As a result, throughout the economic and institutional transformation brought about by technical change and productivity growth, one thing has remained stable: the allocation of time. Despite great strides in labor productivity Americans on average keep working as hard as they did 70 years ago. The American experience of the past 70 years has shattered the view of Keynes and other idealists that the nature of man, freed from the shackles of economic scarcity and the survival imperative, would reveal itself fully through the choice of creative leisure over material accumulation and soar towards the heavens on the wings of arts and contemplation. In its American version the old Adam has evolved into a new creature that interprets the American dream exclusively in material terms, is driven by the compulsion to accumulate, is guided by individualism and subjectivism, operates in an institutional vacuum devoid of trust and a common moral compass, and is beset by economic instability and insecurity. This new Adam is not able to

embrace the possibility of a society where everyone can enjoy a higher standard of living by working less and spending more time exploring our creative capabilities and nurturing our social nature.

Keynes believed that the enlightened new Adam would operate within the stable structure of traditional institutions. In the United States the prosperity of the two post-war decades was sustained by a strong and integrated institutional framework and a set of shared values. The family and the institutions of faith provided a stable moral compass that supported social cohesion, labor unions offered workers with job and wage protection and promoted solidarity, the school system provided every child with the means for economic mobility at minimum cost, and social cohesion was cemented by trust in the media as honest providers of information and in the public institutions as servants of the common good. In the 1950s and 1960s prosperity rested on the foundations of civic pride, love of community, and a shared view of America as a compassionate society blessed by God.

Economic progress had sapped the life out of this institutional framework and value system. The religious apparatus has become an apologist for 21st century's capitalism as the social gospel has been replaced by the prosperity gospel, the family structure has been fractured and can no longer provide a unified moral compass, the education system has been transformed into a servant of the money elites, and trust in the media, politicians, and government institutions has all but vanished. Left to its own dynamics, 21st century capitalism followed an unchecked path that has led to a rising concentration of income and wealth, increasing precariousness of work, and a two-class society with a chasm between a small share of the privileged population at the top and a large mass of the needy at the bottom.

Keynes also projected into the future a traditional industrial structure which was dominated by the large firms involved in the production of goods and provided employment with standardized hours. As productivity growth reduced the number of workers needed to produce a given amount of goods and services, Keynes expected that the demand for labor would decline leading to either rising unemployment at the existing workweek or the maintenance of employment with a declining workweek. He failed to foresee the evolution of the labor input from human labor—provision of muscle power or low skill services—to human capital (physical capabilities augmented by acquired skills of increasing technical sophistication) and the rise of the worker capitalist. Through the evolution of the

labor market from a strictly structured institution to a new flexible system containing a variety of work arrangements, Keynes' potential "technological unemployed" have become the creators of their own jobs.

These transformations of economic and social structures, and of the value systems, will present novel challenges to both policymakers and individuals. Over the past 50 years the focus of public policy has been on promoting the supply side of the economy. In the future, if the promise of the new technological age materializes, the growth of potential output will encounter fewer obstacles than in the past. Aggregate demand, however, will face a variety of headwinds, the most significant among them being the deceleration in the growth of the population and family formation and the rising inequality of income and wealth. In this environment maintaining sustainable growth requires a shift of emphasis from supply-side to demand-side policies. In the presence of an economic system with a built-in tendency towards rising economic inequality, supporting the growth of aggregate demand would require re-distributional measures of rising magnitude over time. The implementation of these measures would be possible only through the expansion of the scope of government. This move would be inconsistent with the priorities of an electorate whose moral compass rests on individualism as the driver of human activity.

I interpret the experience of the past seventy years as a lesson that sustainable progress does not rely solely on economic forces but requires a supportive institutional framework and a value system that provides a suitable moral compass. While recognizing the pivotal role of technology and labor markets, I suggest that the fundamental issues facing the United States are largely outside the economic sphere. They involve inequality, justice, human relations, functioning institutions, trust, and shared values. Unless these issues are addressed in a coordinated manner, the prosperity promised by technological change may end up being a distant mirage for most Americans.

NOTES TO CHAPTERS

Chapter 1

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Chapter 3

¹ Sources of Data

Hours of Paid Work. For average weekly hours of paid work per worker in 1950, I started with the data in McGrattan and Rogerson (2004) and calculated the average annual hours of work for each age/sex group and the weighted average for all groups. Then I calculated the ratio of this value to that found in the OECD (2020) statistics on annual hours actually worked. Finally, I adjusted proportionately the data in McGrattan and Rogerson (2004) by the proportional difference in the total. Average weekly hours of work per person were derived by multiplying the above estimates of average weekly hours of work per worker by the employment rate (the ratio of employment to the civilian non-institutional population 16+). For 2019 I applied the same procedure to the data in the Bureau of Labor Statistics for hours of work (Bureau of Labor Statistics, 2019a).

Human Capital Acquisition. For hours spent studying in 1950 I relied on Ramey and Francis (2009 table 3, p. 201), who show the average weekly hours per person devote to school for a full calendar year separately for the age groups 14-17 and 18-24. For 2019 I used the data in the Bureau of Labor Statistics (2019b).

Coffee Breaks and Commuting to Work. Coffee breaks are rest periods between work negotiated between employers and employees. They benefit both groups: employees enjoy a break from work, and the rest makes them more productive after the break. Therefore, they are part of “work time” as the “unproductive break” is compensated by the greater overall productivity. In my calculations I have included two 15-minute breaks per worker per working day.

Commuting is also time related to work although it does not involve directly any production activity. Workers can perform their tasks only at the place of

employment. The time spent travelling to work, therefore, is an integral component to the time dedicated to work. There is no detailed information on the time spent commuting to work by age and sex in 1950. Instead, one finds partial information in studies covering later periods. I used the data from a report by the US Census Bureau (1995), *We Asked... You Told Us: Place of Work and Journey to Work*, Report No. CQC-21. This report concludes that “The average US worker took 22.4 minutes to get from home to work in 1990. This was a 3-percent increase from the average of 21.7 minutes traveled in 1980.” I extrapolated back to 1950 by using the rate of change per decade from 1980 to 1990, and assumed that a one-way trip to work took 20 minutes. For commuting in 2019 I used the relevant data in Bureau of Labor Statistics (2019b).

Hidden Economy and Job Search. The time spent in the *hidden economy* is time spent working, and this theoretically includes criminal activities. Economists have focused on the measurement of the “legal” hidden economy. As shown by Barthelemy (1988), estimates of the size of the hidden economy vary widely depending on the analytical approach used. Combining a variety of approaches, Barthelemy estimated that in the United States the hidden economy accounted for 6.4 percent of GDP in 1960 and 8.3 percent in 1978. The change from 1960 to 1978 is equivalent to an increase of 1.06 percentage points for 10 years. I assumed the same rate of change between 1950 and 1960. For 2019 I used the estimate found in Enste (2019), i.e., 7.4 percent of GDP and of employment. The time spent on *job search* should be included in the category of work as it is an activity leading to a specific objective: securing a new job. There are no detailed estimates of time spent on job search in 1950, therefore, I extrapolated evidence from other periods found in Krueger and Mueller (2008, 2011), adjusting for differences in the unemployment rate. For 2019 I used the estimates in Bureau of Labor Statistics (2019b).

Home Production and Volunteer Work. A detailed analysis of *home production* for a variety of years, including 1950, is found in Ramey (2009). For 1950 I relied on her results in tables 6A, 7 and 8A. For 2019, I used the data in Bureau of Labor Statistics (2019b).

There are no detailed data on time spent on *volunteer activities* in 1950. Robinson and Smith (2012) make a distinction between formal and informal volunteering.

The former refers to volunteering through official organizations and the latter to direct activities by individuals. Diez and Grimm (2016) show that in 1974 nearly one-quarter of Americans over the age of 16 engaged in formal volunteer activities. Robinson and Smith (2012) indicate that in 2003 formal volunteering amounted to one hour per week per person and informal volunteering to two hours per week. Also, according to Hammermesh, Frazis and Stewart (2005), in 2003 there was no difference in the hours spent on formal volunteering by men and women. In my study I assumed an average of three hours of volunteering per person (one hour for formal and two hours for informal volunteering), with no difference between men and women. For 2019 I used the data in Bureau of Labor Statistics (2019b) for formal volunteering and added twice that amount for informal volunteering to maintain consistency with the 1950 treatment.

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