

BALANCING WORK AND LEISURE

Scientific and technological advances have driven a transition to an information- or knowledge-based economy that has reduced work hours and increased leisure and entertainment time, especially in the affluent nations. Information technology, genetics, materials, and energy technologies have shaped this social change, comparable in scope to the agricultural and industrial revolutions. The transition accelerated with the introduction of the personal computer in 1980 and continues today.

Less work and more leisure in the knowledge economy did not come immediately. It accrued as the superstructure of global communications, financial, transportation, and environmental monitoring networks took root and people adapted to using them.

Free time created an explosion in varieties, possibilities, and choices for those in World 1, and the promise or hope of the same for World 2 and World 3 nations. More leisure has translated into more fulfilling lives. Survey data indicate that people are more satisfied with their lives today than any time in the last 100 years. More and more people report that they are “doing what they want to do.”

Machines working hard and smart

The historic pattern of the replacement of human labor with machine labor has continued over the last 30 years. The emphasis is shifting from machines replacing manual labor to replacing intellectual labor. Machines have already sharply reduced manual labor in the affluent nations. Advances in computer science and technology, especially AI, will further reduce the intellectual workload required of most people. Already, the less sophisticated intellectual functions are done by machines, and decision support programs are essential aids for more complex intellectual labor. In some cases, this enables people to focus on more challenging intellectual tasks. In others, people have lost their work and been unable to find anything comparable.

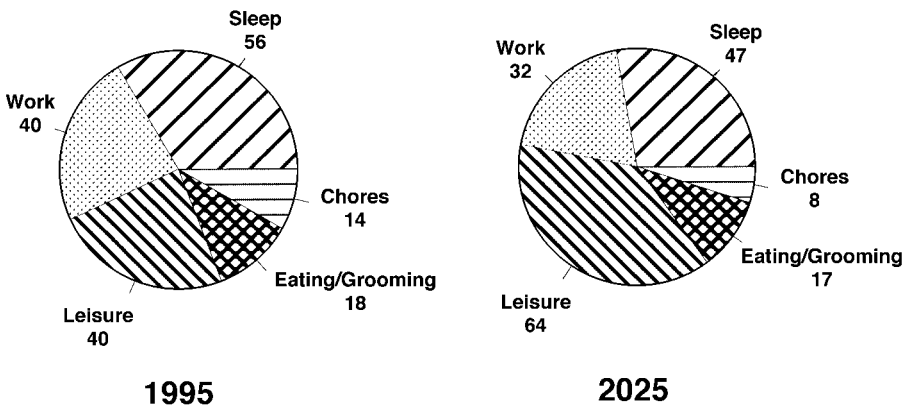
Growing numbers of people in World 2 are meeting their basic needs and enjoying more discretionary income. Spending on leisure and entertainment is a mark of success. While entertainment is generally a positive experience in these World 2 and World 1 nations, it is still seen as a relief from tedium and boredom in most World 3 nations.

In the decades just before and after the turn of the century, governments in affluent nations struggled to reduce seemingly intractable unemployment. A short-term focus characteristic of political and business leaders kept them trying to maintain and create more of the jobs that were already disappearing from the economy. This was difficult even in affluent nations and impossible in middle and destitute ones. It has become apparent over the last 15 years that a different approach to work was required. Legislation to reduce the work-week was a first step.

Rising affluence and value shifts have changed what society and people consider to be work. For example, psychology, psychiatry, and other forms of therapy and counseling became occupations just in the last century. Before that, therapeutic needs were met informally and nonprofessionally by the family or church. Today's societies, particularly the more affluent ones, can afford to train professionals to meet these needs.

Legislation and rising incomes in World 1 have reduced the average workweek from 40 hours in the 1990s to 32 today. Advances in sleep management, including hormone and light therapies, have reduced sleep requirements from an average of 56 to 47 hours per week. As a result, leisure time has increased more than 50% from 40 hours in 1990 to 64 hours per week today. Discretionary income has doubled from \$4,300 in 1990 to \$9,000. These statistics have translated into hundreds of billions of dollars for leisure and entertainment industries.

How People Spend Their Time, Weekly, United States



WORLD 1—Converging on best practices

Work practices have been converging in the affluent nations over the last 30 years. The North America, EC, and east Asia trade blocs have borrowed from one another. The strengths of one bloc have been benchmarks for others. For example, the EC is acknowledged as the leader in social welfare, Japan in building long-term market share, and the United States in managing diverse workforces.

Leisure and entertainment practices are also converging, but cultural differences show up more prominently than in work. For instance, each culture approaches time, or the pace of life, differently. Japan is the fastest paced and Europe the most relaxed. The cultures also vary in how they accommodate new practices or allow new people to join. Japan is the least accommodating, and the United States is the most.

Different cultural practices coexist alongside the mainstream global culture that has emerged over the last 50 years due to advances in communications technology and mass-media exposure. The United States leads the world in producing this mass culture. U.S. software underlies vids, films, nets, and virtual reality games. English is the global language of business and entertainment. The United States is often the trendsetter in foods, fashion, and fitness.

A CASE STUDY—U.S. work, leisure, and entertainment

The United States experience with work, leisure, and entertainment is similar to other World 1 countries. For growing numbers of workers, the distinction between work and leisure is blurred. When interests and jobs meet, it is hard to say when one is working or not. Is the professional gardener who taps into the gardening issue forum on the net when she gets home at night working or at leisure? The answer does not matter, unless one is doing a statistical analysis. What is important for the society, is that the transition to a knowledge economy enabled by advances in science and technology has improved the lives of people to where they are more often able to work at what they enjoy doing.

The transition has been rough in many areas. Millions of blue-collar workers and middle managers lost their jobs in seemingly endless downsizings in the 1990s and 2000s. They were often unable to find suitable replacements. Many had to do low-skill, low-wage service tasks that were not fulfilling. Rising affluence is improving social welfare programs so that people's basic needs are generally being met, but society is still wrestling with how to provide enough interesting work for everyone. Some argue, however, that finding interesting work is a task for individuals, not for government.

Forces that shape work, leisure, and entertainment

Underlying values and beliefs about work, leisure, and entertainment are still evolving. The primary forces that shape work, leisure, and entertainment include:

- advances in science and technology, in particular:
 - information technology, which has already reshaped organizations and work, now has become a key leisure and entertainment tool
 - genetics and brain science, which are capable of assessing aptitudes and influencing human capabilities
 - materials, which increase safety and lead to new sports and games
- demographics: the aging of advanced nations and youth explosions in the rest of the world
- increasing discretionary income for most of the middle class
- values shifts
 - from materialism to self-actualization
 - from quantity to quality
 - from passivity to interactivity
- risk analysis, which plays an informative, advisory, and enhancing role
- government policy, by reducing work hours

Information technology has enabled distributed work to become common today. Workers use an array of technologies such as personal communicators, palmtop and laptop computers, networking and groupware, and videoconferencing. At the same time information technology has reconfigured organizations to flat, networked, and team-based structures. It has also opened the organization to the outside—customers, competitors, and regulators across the globe. It is a primary training tool as well.

Information technology has permeated leisure and entertainment. People have acquired new tastes in information as it became more fun. Since entertainment is information-intensive by nature, information technology has made leisure activities more interactive, except in cases where people just want to relax. Marshall McLuhan's "medium is the message" concept has played out in this area. The virtual reality medium, for example, is leading to applications and games beyond the imagination of its initial proponents.

Genetics and brain science have combined to enhance learning, creativity, and emotional awareness using genetic testing and alteration and mind- and

performance-enhancing drugs. Genetic testing and profiles point out aptitudes or areas to watch. Their use was prevalent first in sports. Brain science advances in photic, acoustic, transmeditative techniques and imaging technologies such as MRI, PET, EEG (electroencephalography), MEG (magnetoencephalography), and SPECT (single photon emission computerized tomography) pinpoint centers of brain activity. Language centers were the first of many intellectual centers to be manipulated in 2009.

Materials science and technology advances have increased the safety of traditional leisure and entertainment activities—such as Pliantex[™] making lacrosse safer—as well as contributing to new ones. Materials have led to new sports and games such as piezoelectric rubber balls, photonic play jewelry, photonic racetracks, crazy cushions, electrotag shirts, virtual reality suits, and Stickysand[™]. Artificial surfaces have been particularly important in extending the seasonal and geographic ranges of sports—ice sailing, for example.

Demographic forces include aging in World 1 and the youth explosion in Worlds 2 and 3. The composition of workforces and the types of leisure and entertainment services that are required or do well differ considerably if one is serving a young or old market. The United States is the only World 1 country that does not have a flat or declining population. Denmark, for example, has been losing population since the 1990s.

Per capita and discretionary income has increased throughout World 1, doubling in the United States. Many World 2 societies have had larger gains in *per capita* income, but it has not necessarily led to increasing discretionary income, because their populations' basic needs are still being met and improved on.

Value shifts in affluent nations include shifts from materialism to spirituality and self-actualization, or needs from the neck up, and from passivity to interactivity. Shifts in work values include workers' calls for socially significant work, acknowledgment of their work functions, implicit or explicit employment contracts, and fair compensation.

There has been a general move to improving the quality of life. The QOL movement became firmly established by the 2010s. Personal values of quality, reliability, and service, have become guiding principles of business. QOL has led to personal change facilitators and consultants working to help people self-actualize. Cosmetic surgery has been complemented by personality makeovers. Sustainability principles are firmly embedded in the values of World 1. Any entertainment activity that harms the environment—off-road and recreational vehicles, tourism, etc.—risks public opprobrium.

Risk analysis plays an informative, advisory, and enhancing role in risk-taking recreation in which people use risk to heighten competitive aspects. It is also a key tool for insurers, who have had to come up with locked-tight contracts for the retailer of more risky sports.

Government policy for reducing unemployment has led to mandates for shorter workweeks. The Reduced Time Act of 2000 reduced the full-time work week to 36 hours. Ten years later the act was amended to further reduced the work week to 34 hours. The shorter weeks led to more holidays and vacation time.

Working or playing?

People get more out of life as work, leisure, and entertainment meld. Here, work refers to making a product or performing a service for which one is compensated. Leisure is the mirror of what has to be done, or the time left over after essential activities like working, washing, or cooking are done. Entertainment is a subcategory of leisure in which people purchase a good or service, such as virtual reality and muds (multiuser dungeon) games, vids, interactive television services and programs, films, and music.

Are you working or playing, or not sure?

Responses to a February 2025 Gallroper On-line Survey on employment contracts and distinguishing work and leisure were tallied as follows:

Always do work beyond employment contract: 5%
Sometimes go beyond employment contract: 57%
Never go beyond employment contract: 38%

Always find it difficult to distinguish work and leisure: 37%
Sometimes find it difficult to distinguish between work and leisure activities: 40%
Never confuse work and leisure: 23%

Work, leisure, and entertainment are deeply intertwined. In industrial society, goods consumption had to absorb production capacity. People had to have leisure time to purchase the products and services they made at work. Sustainability as a contemporary principle is reshaping attitudes toward production and consumption. The assumption that more is better is widely disavowed. Quality is winning out over quantity—society is moving to higher-quality, more durable material goods production.

Work, leisure, and entertainment have become closer with the knowledge society. Learning, for example, falls between work and leisure. Some learning is a prerequisite for work, some is purely for personal enrichment; most is mixed.

Visiting Africa

Sara, age 8, races to the HWSC center, puts on the virtual reality headset, and plunks down on the carpet. She could hardly wait to get home and begin her zoology assignment. She can move to the next level if she can complete today's assignment successfully. She calls up the quiz on the wallscreen.

The program is tailored to provide students with the help they need while encouraging them to think independently. The new virtual reality programs engage the students with sight, sound, and touch.

Sara is virtually transported to Africa, where she successfully identifies elephants, lions, cheetahs, and monkeys. She also correctly points out which animals do not belong. She misses only one example, which is logged for retest at a later date.

Sara can move on to the next level. She runs for a snack, because her science lesson, a tour of Zytix Laboratories by videoconference, will not begin for a half hour.

The home work-study center is another example of integration. There has been almost a tenfold increase in the dollar value of information technology in the home today since 1990. Homes are fully wired for connection to broadband fiber networks. The HWSCs are conduits to the world of information, be it for work, school, or play.

Productivity gains fuel leisure and entertainment

Productivity growth has been the key to higher incomes and more free time. Productivity growth has been above 3% annually since the turn of the century, using today's revised measures. Productivity growth also increased as people become more comfortable and capable with new technologies. A stronger commitment to training and retraining further boosted productivity.

Reducing hours, increasing productivity

In most cases, reducing work hours increases productivity. What shrinks is idle periods, such as breaks, water cooler talks, and the need to run errands. Concentration is also sustained better, because fatigue impairs effectiveness. Having a larger pool of workers working fewer hours adds to flexibility and the ability to meet a sudden upswing in workload.

Productivity problems of the 1990s and 2000s were partially definitional. Old manufacturing-based definitions based on input-output efficiency were extended to the information and services sector for lack of a better measure. They failed to capture the contrast between efficiency and effectiveness: gains in efficiency describe routine work being done faster and cheaper, and gains in effectiveness reflect improvements in the quality of work.

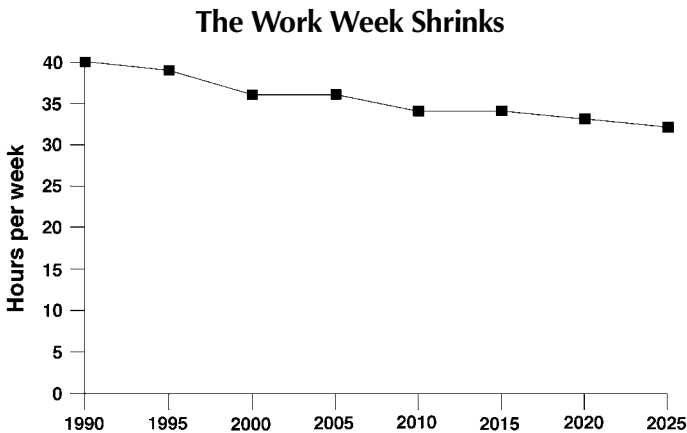
A new measure becoming more popular today is transformation, which is defined as innovation in how the work is done. Transformation would measure progress in improving processes and systems within the knowledge economy.

Your money or your time?

Productivity growth presents people with the opportunity for more free time or more money. Before the turn of the century, most people chose more money. After 2000, however, people began choosing more time. They turned away from the powerful positive feedback loop of work-and-spend, and began to focus more on spiritual matters.

Working and playing around-the-clock

The United States and other World 1 countries moved to an around-the-clock, 24-hour society. Pharmaceuticals are used by some to work longer or alleviate jet lag or a change in shift work. Advances in chronobiology, such as locating the so-called biological clock, have been a key enabler of the 24-hour society.



People have regained sight of the fact that the point of economic success is a good life. That may come from increased work for some or increased leisure for others. The notion that work is a moral obligation to be pursued at the expense of leisure no longer dominates value systems.

The average workweek today is 32 hours. The first reductions came from the Reduced Time Acts of 2000 and 2010. These acts were intended to reduce unemployment, the rationale being that a shorter workweek would lead businesses to hire more people. And because health-care and pension benefits are provided for under a national plan, companies are not penalized by having to provide benefits for new hires.

Voluntary reductions often took the form of performance bonuses in free time rather than increased pay. It was simply computed by how many days off a pay raise would buy.

There has been a longstanding controversy over whether people really have more leisure time. Legitimate arguments could be made about how leisure time was measured. Some measures did not include the time adults spend

going to school, taking part in clubs and other career-related organizational activities. Many people, especially two-income parents, report feeling busier and more hurried. They actually have more leisure time, but simply fill it up with activity. Although some high-powered executives and core workers who are exceptionally dedicated to their careers are losing free time, on balance most people are gaining it.

Work in the United States: continuity amidst change

Sixty-four percent of workers are classified as information workers, up from 60% in the 1990s. Fourteen percent are full-time information workers. Today, a smaller percentage of the workforce makes physical goods; more are involved in the abstract manipulation of symbols. Over 98% of all work involves some use of information technology.

Work is increasingly a means of meeting needs high up on the Maslovian scale and an important part of people's self-actualization. It is not sharply distinguished from leisure. Work is a love or hobby for more and more people today.

The Census Bureau and the Bureau of Labor Statistics adopted the system developed by I.M. Smith and F.M. Garcia in 1999. It was partially implemented in 2003 and became standard by 2007. Smith and Garcia received the Nobel prize in economics in 2018 for their work. The new structure of the workforce, primarily framed around categories relevant to the information era, benefited public- and private-sector planning, tax policy, education policy, and scores of other systems. The central feature of the new system is that it reflects the current dominance of information technology in the workforce. It goes beyond forced choice categories and uses the fuzzy logic techniques developed in the 1980s in the United States to allow a worker to participate partially in several work categories. Furthermore, the basis of employment, whether it is full-time, part-time, or contingent (i.e., temporary or term employment) is again coded into the work situation, as is the location, whether the work occurs in a factory, mill, central place office, partially off-site, or at home. The system has added a great degree of graininess to the understanding of the ebb and flow of work, labor rates, income, and so on. The two fundamental categories—information workers and service workers—are described as follows:

Information workers are

1. Those who create knowledge (primarily scientists and other researchers).
2. Workers who are 95%-100% involved with the use of information (doctors, lawyers, professors, clergy).

2025

3. Those who collect information (survey workers, reporters, census workers).
4. Those who primarily use information tools (managerial and supervisory workers).

Service workers are

1. Those who do physical labor (janitors, cleaners, maids).
2. Those who do heavy work (loggers, miners, farmers, port workers).
3. Those who do light-duty work (primarily maintenance and repair workers).
4. Those who perform productive functions (such as short-order cooks).
5. Those who are engaged in the arts and crafts.

The vast restructuring of the economy implicit in the new categories is highlighted when compared with the old standard industrial classifications. The old categories fail to convey the degree of economic restructuring.

Comparing the industrial and knowledge economies using 1990 Standard Industrial Classifications shares of GDP, 1990 and 2025

| Industry | % of GDP (1990) | % of GDP (2025) |
|---------------------------------------|-----------------|-----------------|
| Agriculture, forestry, and fisheries | 2.2 | 1.9 |
| Mining | 1.5 | 0.7 |
| Construction | 4.8 | 3.2 |
| Manufacturing | 18.7 | 20.0 |
| Transportation and public utilities | 8.9 | 10.3 |
| Wholesale trade | 6.6 | 2.6 |
| Retail trade | 9.4 | 10.3 |
| Finance, insurance, and real estate | 17.4 | 17.2 |
| Services | 18.8 | 21.3 |
| Government and government enterprises | 12.0 | 13.5 |

The power imbalance between management and labor redressed

The power balance between labor and management is in rough balance today after a bitter struggle. For two decades before and after the turn of the century, management clearly had the upper hand and often used it perniciously.

Unionization was declining to all-time lows as employment in manufacturing, the traditional bastion of labor unions, fell below 10% of the workforce.

Waves of downsizing, smaller pay raises, squeezes on benefits, job exports, and rising workloads in the name of international competitiveness began to wear thin by the turn of the century. Workers came to believe that temporary calls for belt-tightening were becoming institutionalized, so they began to organize. They learned from the many failures of past unions, such as insisting on obsolete work rules to protect jobs. They embraced the principle of merit- rather than seniority-based pay.

Knowledge and service worker unions also redressed the imbalance. These new unions were more sophisticated than their predecessors as well. Job actions, lawsuits, strikes, and seeking legislative relief were done efficiently and effectively based on the unions' first-rate organizing skills.

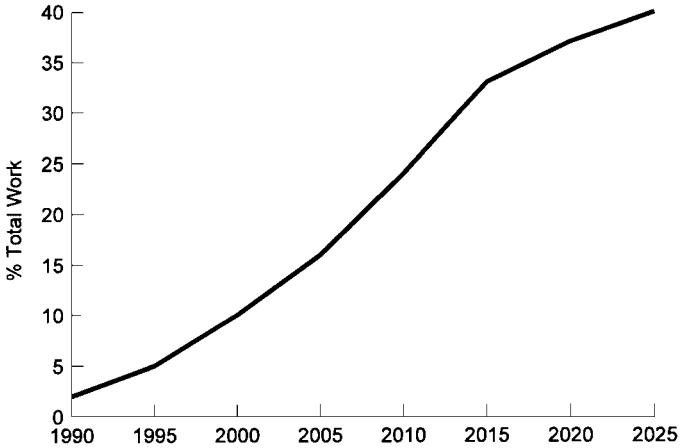
The government intervened with mandated reductions in work hours. New social programs to deal with health insurance and pension benefits removed the issues from the management-labor dispute. Another key legislation was the Bradshaw Act of 2004, which shifted fiscal and tax policy to encourage business to invest in the long-term future.

Some redress arose naturally in two-income households, as a move away from materialism and towards spirituality led many to use their independence to leave bad job situations. Businesses adopted friendlier policies in order to attract the best people—unfortunately, in many cases it only happened reluctantly.

Distributed work continues to grow

Forty percent of the workforce today works at least twenty hours per week off-site, often from the home, up from 2% to 3% in 1990. Distributed work provides flexibility for organizations and workers. Organizations reduce overhead costs and improve customer service by reducing the amount of time and space necessary to house its workforce. Workers spend more time at customer, vendor, or regulator sites and keep in close contact with the home office through information technology. Vehicles are mobile offices, equipped with plug-in modules to meet wide ranging information technology needs. Information technology enables more personal service. Workers balance family and lifestyle needs more effectively.

Growth of Distributed Work



The transition to distributed work has had its glitches. Abuses have taken place on both sides: Home workers have loafed or been unproductive and management has passed over distributed workers for promotions. There were tough legal issues of liability as the lines between work and nonwork time blurred. Corporate culture often suffered. The cohesion vital to nonhierarchical, team-based work was difficult to instill with conflicting schedules and far-apart team members. Greater comfort with information technology solved many of these problems. People eventually became used to meeting with people by videoconference, voice conference, and in person at the same time.

The flexible workplace: core and contingent workers

Flexible core workers supplemented by contingents is a standard business structure today. Today's common work formats for the core and contingent workforce include flexitime, part-time, job sharing, leaves of absence, telecommuting, job rotation, apprenticeships, temporaries, consultants, contractors, leasing, and internships.

More than half of all U.S. businesses operate with some form of core/contingent workforce. The core/contingent structure has evolved from the 1990s model when contingents accounted for about 30% of the workforce. Contingent work then was probably 90% involuntary. It was a means for many businesses to reduce payrolls and cut benefits, as well as the more positive goal of aligning the workforce with workloads.

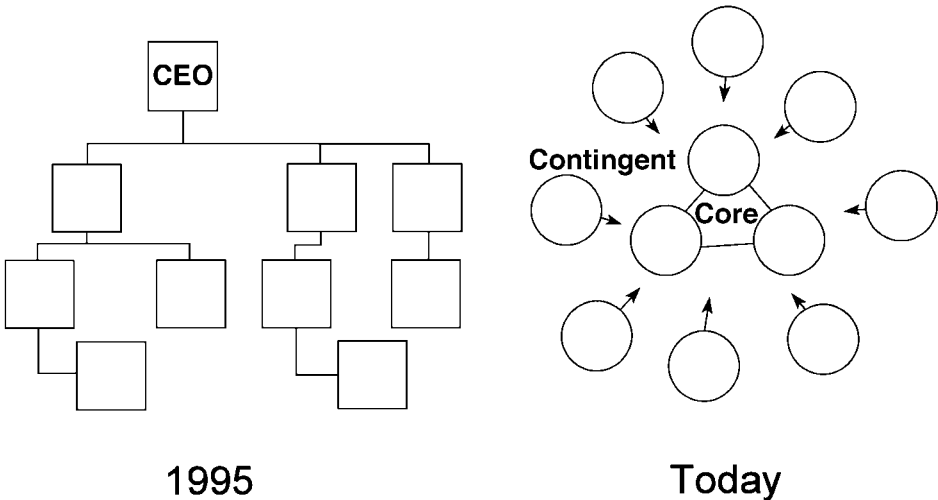
This issue was central to management-worker struggles from the 1980s to the 2010s. Contingent work became more voluntary. Legislation to stop the practice of outsourcing and hiring workers back as consultants or contract workers was passed in 2005. Another trend was the professionalizing of the contingent worker. More highly skilled people sought contingent work, and

more organizations sought to hire highly skilled workers on a contingent basis. Many workers wanted the flexibility that contingent work provided, whereas others preferred the greater security and commitment of being core workers.

Networked organizations redirect power flows

Today's networked organizations are more open—there are open spaces in which the amount of restricted, confidential, proprietary, and secret information is small compared with that of similar organizations last century. Organizations have greater contact, often electronically, with customers. Practically every employee meets with some customers. Training in interpersonal skills has improved over the last few decades but could be improved further.

Hierarchies and Networks



Work and family issues are balanced

Work and family issues are in balance today after a long and perhaps unnecessary struggle. Women in the workforce brought family issues such as child care and elder care to the forefront. The inability of management and workers to agree on work and family issues led to legislation. Parental leave and health-care reform set the stage in the 1990s. The bargaining power of dual-income couples was also a critical factor.

Women and minorities diversify corporate culture and practices

The predominant issue regarding women and minorities since the turn of the century has been their advance, or lack of advance, into upper management. Rates of 6% of women and 3% of minorities in upper management in the 1990s have been boosted to 35% and 29% respectively. Pay disparities have lessened to under 10% between men and women in comparable jobs.

Corporate cultures and practices have opened organizations to diversity. There has also been a shift towards more collegial and cooperative management styles. The composition and expectations of workforces have changed and required unprecedented degrees of flexibility in virtually every dimension of work.

The scientific and technical workforce expands worldwide

Science and technology developments draw people from all over the world to U.S. centers of excellence in corporations and universities. This globalizing of science and technology has opened up new opportunities for business collaboration.

Alliances become standard practice

Alliances have been one of the most significant developments in business practices over the last 30 years. Alliances are legal, semilegal, handshake, well-understood, or cooperative arrangements between two or more organizations. Lean, flat organizations are well suited to forming alliances to meet needs as they come along. They are a means of spreading risk as well. Alliances provide the missing components for a project. Virtual organizations are temporary groups that form to meet a single task and disband upon completion. Managing workers of different organizations and managing the flow of workers across companies in the alliances are still challenges today. As workers learn more about what competitors offer, they press for parity. Benchmarking reinforces this trend.

Education is the key to corporate and career success

Quaternary—postcollege and professional school—education and new kinds of skills are necessary to compete in the knowledge-based global economy. Businesses' increased requirements for educated and skilled workers were competing against a backdrop of failing K-12 education. Business has been forced to pick up the slack by extensive investment in training and retraining. The top percent of workers have had acceptable skills, but the lower half have been difficult to reach.

The long term: a work-free society?

Some futurists and visionaries forecast a paid work-free society as early as 50 years from now. This is somewhat a question of semantics, since people will still carry out activities that today are labeled as work. The primary difference is that people will be guaranteed a stipend that will take care of basic material needs. People will not be forced to "work," but will do so either because they enjoy it or they want to earn extra income. Detractors raise objections about creating a society of loafers, but proponents feel that only a small percentage will loaf, and the rest will find what they want to do.

As the relationship between educational attainment and economic success became common knowledge, learning became more prominent and practiced. Plans to raise the national average CPQ by 4 points between 2027 and 2037 are intended to take advantage of benefits gained from advances in genetics and brain and social science.

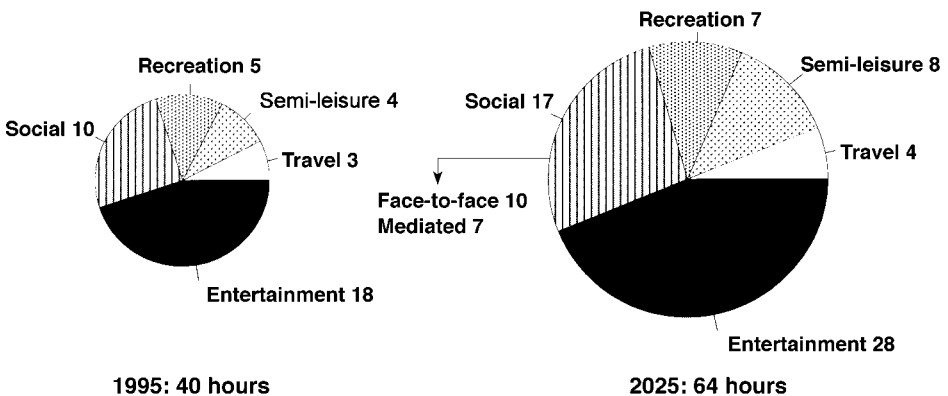
U.S. leisure and entertainment: participating, learning, and escaping

Choices in leisure and entertainment reflect social and cultural values. People seek high-quality experiences. Because basic social and material needs are generally met, leisure pursuits are often directly tied to self-actualization. Of course, not all people are consciously seeking personal fulfillment in leisure. Some are looking to get away from it all and recharge their physical and intellectual batteries.

People are working more with their minds than their hands. As a result, many seek physical exertion with their leisure. And many seek to avoid thinking-types of recreation. On the other hand, others have become so accustomed to cerebral work, that they pursue it in leisure as well.

Americans have more time for leisure—64 hours per week today compared with 40 in 1990. Although the amount of leisure has changed, the distribution has been relatively stable. The big gainer within leisure has been entertainment, dominated by information-technology-based multimedia games and interactive video. Socializing has resurged after holding steady and even declining in the last part of the 20th and early 21st century. Socializing was often sacrificed when people felt pressed for time, and it regained popularity with gains in free time.

Weekly Use of Leisure*



* definitions of categories are for *semi-leisure*: adult education, religious activities, organizational activities; *social*: visiting and conversing; *recreation*: sports and outdoors, hobbies and games; *entertainment*: TV, reading, music, relaxing; *travel*: to and from leisure; tourism not included.

| Spending on leisure and entertainment | | | |
|---|-------------|-------------|--|
| (\$ billions) | | | |
| Type | 1985 | 2025 | |
| tourism* | 49 | 183.5 | |
| toys/sports supplies | 20 | 69.4 | |
| magazines/newspapers | 13 | 38.7** | |
| flowers, seeds, and potted plants | 5.5 | 16.3 | |
| boats | 5.9 | 7.1 | |
| spectator sports | 2.8 | 14.5 | |
| cable TV | 8.6 | 53*** | |
| virtual reality | 0 | 35.2 | |
| * entertainment spending only | | | |
| ** includes electronic delivery | | | |
| *** includes interactive programming and information services | | | |

The average household spends \$5,625 a year on entertainment, up from \$1,500 a year in 1990. The single largest entertainment expense today is for interactive television and network access. Broadcast and cable television were the leading expenses at the end of last century.

Two strong trends and a countertrend have influenced leisure and entertainment over the last 35 years:

- Leisure and entertainment have become more active, participatory, and interactive,
- Information technology is enhancing the leisure and entertainment experience, and
- Escapism has become a prominent countertrend to the above two.

Sports leads mass entertainment

Traditional professional sports are supplemented by new sports. Technology has had a strong influence, leading to enhanced performance and safety and creating the boom industry of interactive sports.

Crime as entertainment? or training?

Crime has been a popular topic for newspapers, television programs, and movies for decades. It has dominated news headlines. Crime reenactment shows became popular about 35 years ago. Their offspring today are interactive crimebusters shows. They have become a national fad. Participants enter the programs as detectives or police officers and try to stop criminals. Equally popular, as well as controversial, are programs in which people try to commit and get away with crimes. Opponents of these programs claim that these games are teaching and training people how to commit crime. Supporters claim they are channeling base instincts into harmless play.

Genetic testing identifies proclivities to superior performance as well as susceptibility to injury. Athletes take advantage of biofeedback and sometimes drugs, hormones, or even blood transfusions to enhance their performance. The enhancement movement that has its roots in sports has spread to business, self-help, education, and health fields. The traditional Olympics are supplemented by an enhanced Olympics that allows athletes to push performance frontiers by any means. On average, enhanced athletes perform 10% better. In events like distance running, enhanced women can now defeat nonenhanced men.

Sports have become safer, thanks to new technologies and the growing popularity of less-violent sports. Soccer, for example, is gaining adherents at the expense of football. The appalling levels of injuries and permanent maiming in sports like football led to innovations that did not reduce the violence but did reduce injury. Body armor developed with extra support for vulnerable spots like the knees was phased in and did not change the appearance of players to fans, who might have resisted tampering with their pastimes.

Virtual reality games use footage from live sports and allow game players to get inside of their hero, or enemy, and experience what it is like. It also enables the hardier souls to test their mettle against the pros (which often leads to unsubstantiated claims of prowess).

New games follow the model of the ancient games of Rome, the Middle Ages, and even television shows of last century like *American Gladiators*. People can experience being thrown in with lions, jousting with Sir Lancelot, or battling against their friends. Some use these games as ways to resolve disputes, or at least blow off steam. Robotic competitions that stake company, university, or even national pride are a growth area.

Some chores move into leisure and entertainment

The once-onerous tasks of shopping, eating out, gardening, and cooking have become pleasurable leisure pursuits for many. As technology reduced the monotony of the tasks, it enabled people to focus on the parts they like. In cooking, developments like the tunable microwave and robot chef in 2019 and the automated pantry in 2020, took care of the burden of daily meal preparation and let the amateur chef concentrate on trying to replicate great-grandma's apple pie.

Top five leisure activities: 1990, 2025**1990***

1. [TV] viewing**
2. socializing
3. reading
4. do-it-yourself projects
5. shopping

2025

1. viewing
2. interactive Net games
3. network socializing
4. outdoors
5. volunteering

* These five activities account for half of the weekly total.

** Consumes 1/3 of Americans' free time during the week and 1/4 on weekends

Health and fitness, including bicycling, racquetball, running, ice-skating, rollerblading, swimming, and tennis, rose and fell in popularity in direct proportion to the numbers of young people. Interest was flat in the 1990s, surged around 2000, and receded again by 2020. There is a hard-core group of people fanatically dedicated to fitness. They typically resist any enhancement technologies, preferring to grunt and sweat their way to good health.

Learning as leisure has been an enormous growth area. It blends in with work and formal and quaternary education. The growth of quaternary education has led to an explosion in leisure learning. People use AI-based personal tutors to guide them into microworlds to satisfy intellectual curiosity. Finally, napping is still a favorite leisure activity. Many take advantage of technology to induce sleep, anytime and anyplace.

The art and practice of socializing renaissances

Socializing has made a comeback over the last 20 years. Contacts with family and friends often suffered as two-income households felt pressed for time. Socializing was gradually declining from about the 1970s to the 2000s.

Computer-assisted socializing is a service for helping people find friends. The stigma of its roots in personal dating services had largely passed by the turn of the century. More mobile societies made it harder to keep friends and continually presented the challenge of trying to make new ones. Programs mix preferences with similarities and complementary characteristics to improve compatibility.

Changes in indoor activities

Information technology is a key tool to making indoor activities come alive. Art galleries, museums, and historical sites are not simply spectacles to be viewed and quickly forgotten, but experiences to learn from. At historical sites, for example, reenactments have become standard features. Whether participating physically with other people, remotely by video, or by virtual reality, the visitor comes away with a feel for how it was.

Escape from technology

The growing science and technology basis of society has led many to seek escape from activities related to these areas in their free time. For some, anti-technology has become a cause. But for most, there is simply the occasional need to get away from it. This escapism comes out in a return to traditional, and often labor-intensive, activities. There has been a significant rebirth in crafts and handiwork. The once-forgotten arts of coopering and tinsmithing have resurged. Similarly, people often seek manual labor for the purpose of exercise or to experience how things used to be done.

The arts, such as painting, acting, holography, singing and dancing, have also made mild renaissances. The trend to participation is strong. People still go to museums and the theater, but they also appreciate creating art as amateurs. Seeing the professionals enhances their own experience. Many, especially older folks with less mobility, make video visits to these sites. They can take interactive guided tours, or simply browse.

The primary development in music is in its delivery. The distressing alphabet soup changes in formats, from LP to CD to DCC to DAT, became obsolete as the industry began piping recordings directly to home entertainment centers. People did not have to go to stores. Music stores have evolved into information centers where patrons sample the latest music, videos, and learn about performers and upcoming concerts.

Global affinity groups for collectibles such as coins, sports cards, photo CDs, and sea shells evolved over the nets. Hobby auctions are accessible around the world for remote participation.

Smart bars are an increasingly popular form of indoor entertainment. People can order generic smart drugs or use their health smart cards for tailored pharmaceuticals to boost cognitive capacity. People can also experience pharmaceuticals with effects similar to illegal drugs of the past. This practice is closely regulated. Although many still resist legalized intoxicating experiences, it is surely an improvement over the drunkenness and debauchery common to many bars and nightclubs last century. Alcohol and illegal drug use are way down from record levels back in the 1960s, 1970s, and 1980s.

Changes in outdoor activities

Sustainability principles have pervaded people's approach to outdoor recreation. Any activity that is detrimental to the environment has come under scrutiny and has typically been revised or eliminated. Hunting animals such as duck or deer has been banned for almost 10 years. Speedboating and snowmobiling have met similar fates. Less disruptive activities like sailing and cross-country skiing have surged in place of them. In many cases, outdoor activities are designed to improve nature along with simply enjoying it. Eco-restoration vacations have become popular.

Information technology has enhanced the outdoor experience much as it has the indoor one. Remote and in situ sensing networks provide ready information about parks, woods, hiking, canoeing, or fishing conditions.

Anthropology or archaeology expeditions resemble Outward Bound expeditions. Participants can expect to get their hands dirty or swim with the whales. These day or weekend trips have been popular since the turn of the century.

People's vital health functions are monitored while they participate in activities with heavy physical exertion. Participants can plug their health smart cards into kiosks to check whether the day's planned activities fall within their health limits.

Information technology dominates entertainment

People still watch television today, but they demand far greater input into programming. Interactive television, in which viewers become participants in the program, has become the norm. Flat screens, which became widely available around 2010, led to today's video walls, or for the very affluent, four-wall screens.

There are fewer megafilms, but a proliferation of lower-budget niche films. The United States remains the unparalleled leader in exporting films. Theaters to suit a wide range of tastes exist. A key development has been theater owners' attention to the social side of going to the movies. Sixty-two percent show interactive films (on large 3-D IMAX screens) in which members of the audience influence the plot and choose the ending. Thirty-eight percent show integrated, single stories. A certain snob appeal keeps theaters showing two-dimensional small screen films. Three-dimension virtual reality films are the choice of the young.

Editors have come back in vogue as indicators of quality for people sorting through infoglut in their reading. Hypertext stories break the bounds of linear plots. The reader directs the story line, and the text is annotated with images. Of course, many still prefer to be led by the author.

Entertainment under the sea

Undersea recreation has been a booming industry over the last 15 years. Undersea tours are popular. Thousands of undersea tours in glass-bottom boats, submarines, and semisubmersibles, which have deep hulls configured to look like submarines, go on each day. The Great Barrier Reef in Australia is the world's most popular underwater tourist attraction.

Aquariums and marine theme parks are proliferating, along the lines of, but much more sophisticated than, the old Sea Worlds. They provide displays to accurately depict marine creatures in their natural environments and in some cases allow customers right into the exhibit. In other cases, virtual reality supplements the live exhibits.

Floating marine entertainment structures began operating at the turn of the century in the Bahamas, the Virgin Islands, and Israel. They are free-floating structures with exhibits above and below the water. Underwater habitats and hotels, long on the drawing board, are now under construction in the Caribbean and Japan.

Images are integrated into computer information systems, mingling video, graphics, text, sound, and voice. They are essential ingredients in entertainment such as holography, Virtual Reality, and interactive video.

Games are piped in over the Net for the individual or as part of local national, or global interactive games. There have been nostalgic, almost cultish movements springing up around the early games like Pong, Space Invaders, and Mutant Death Racers, similar to the nostalgia clubs for old radio programs.

The Nintendo generation has been succeeded by the virtual generation. Virtual reality games invaded the arcades in the 2000s and the home by the 2010s. The spillover or technology transfer from military applications has spawned many games. Virtual War is the number one game in the world today.

Hide and seek via satellite

Global positioning games are the base of many modern hide and seek and tracking games. Entertainment companies lease transponders and provide access to the eager hunters who compete in leagues. They use mobile video technology, specially equipped indoor or outdoor sites, and virtual reality to enhance the chase.

Cybersuits for heightened sensation still cost too much for most families. Some parents and other critics feel that virtual reality is no more than a new hallucinogenic drug, as it puts users into trances, or intoxication. Survey data supports their contention that children exiting a virtual reality experience have a difficult time distinguishing what is real.

Changes in vacations

Tourism is the number one vacation activity. Growing affluence has translated into growing travel. Tourists are more sophisticated, seeking to go beyond pre-cooked tours. Video tourism has spurred, rather than supplanted, travel. Interacting with sites on video has motivated people to physically visit them. It improves trip satisfaction, because people can try before they buy. In eco- and anthro-tourism, for example, people participate in the culture, rather than visiting pre-designated sites. Vacations to the Pacific Northwest for people to work for a week or two as forest rangers have long been popular. Video tours are popular with older folks.

Participating [not seeing] is believing

People increasingly want to experience what life is like in the cultures they visit. This has led to a niche tourist market, in which the traveler poses as a resident for a day, week, or month. The travel agent equips the traveler with the appropriate dress, hairstyle, cosmetics, and may even chemically alter physical appearance. The traveler is also equipped with language translation hearing aids, or even speech synthesis devices virtually indistinguishable from human speech. This has led to a few scary situations, when tourists were jailed in misunderstandings, but the vast majority of experiences have been safe and valuable for learning.

Travelplantm provides access to databases for any kind of transportation mode. It enables one to communicate by IVHS on rail, ship, or train. It is the essential piece of equipment for the cross-country, cross-continental, or trans-global traveler. Access to the Network enables the traveler to learn more about interesting sites and provides information about critical questions like where food, lodging, or the next virtual reality club are located.

Daily or weekend excursions often include new and expanded forms of gambling. Casino gaming is now a \$50 billion a year industry.

Amusement and theme parks are showcases of technological prowess. They have the volume of business to support heavy R&D and the competition for the latest advances is fierce. Virtual reality simulations, animation, imaging, and holography combine with actors and sets to create or recreate almost any scene one can dream up. Dinoland has been a huge hit, especially with children. Science fiction sets, such as *Star Trek: This Generation*, have been a favorite of older people. Simulated space exploration, which uses actual footage, is also a big hit.

The growth of leisure industries and communities

Leisure has become the primary economic base of many cities, similar to the retirement community model of last century. Once-moribund economies turned around to become spectacular successes. Gaming locations have been among the most successful of these communities, although the competition has often been ruthless and many have not survived.

U.S. companies have had great success in tapping huge mass markets in World 2. Foreign markets are critical to the entertainment industry. In film, for example, U.S. distribution has not been enough to cover production costs since last century. The ripple effects from selling to overseas markets spill over into equipment providers and information and service industries.

Leisure and entertainment consulting is a growth business. The biggest market is among the estimated two million people who are having difficulty making the transition from less work to more leisure. They often feel adrift and directionless. Leisure and entertainment consultants help their clients balance goals, time, and money.

WORK, LEISURE, AND ENTERTAINMENT IN WORLD 2—Gathering the fruits of growing affluence

The middle-income countries have mixed economic and social success. Some are ascendant, with growing economies and industries and stable governments. Others are fighting to stay in the middle ranks and stand in danger of falling into destitution. The mixed story extends to work, leisure, and entertainment, varying according to how far each World 2 society developed.

Worklife bridges the old and the new

In some World 2 societies, work is much as it was 30 or 50 years ago, with traditional industries and crafts done by low-skilled workers for large state or commercial employers. These workers are often an expendable resource, with limited power and rights.

In other World 2 countries, global commercial interests and more modern national corporations have brought the latest workplace technologies and strategies and a growing emphasis on workers' rights and responsibilities. There industrial workers toil in modern plants assisted by automation, and service and professional workers are at work in modern offices providing financial and other services to national and international markets.

Leisure and entertainment in middle-income countries vary from traditional to global popular culture

Leisure and entertainment are in part a global industry and in part a local one. The share of local content depends on the society. Some more-traditional societies prefer and even aggressively promote local origination

television programming, sporting events, music, art, and theater. Others, a growing majority, are dominated by global popular culture, fueled in large part by arts and entertainment imported from the United States or modeled on U.S. popular culture.

English is the lingua franca of international television, and more and more people around the world speak English in part because of television, radio, and movie entertainment. However, other languages can be instantly dubbed today.

People in World 2 countries typically can afford entertainment in the home including television (color, noninteractive), radio, and electronic games. Fewer households, about one quarter, can afford interactive television and other electronic entertainment devices for home use.

About a fifth of middle-country people can also travel for leisure, at least every few years. Resort vacations at beaches, religious shrines, cultural landmarks, and visits to family members overseas are all affordable.

A CASE STUDY: Turkey works to build a modern, western society

Turkey is a World 2 country with good chances of making it at least to the bottom of the World 1 ranks within several decades. Turkey is strategically located for lucrative trade—where the largely fundamentalist Muslim Middle East meets secular Eastern and Western Europe. The country is uniquely capable of serving the two markets.



Turkey is among the most developed and affluent countries in the Middle East, and dominates the Turkic-speaking Muslim countries of central Asia economically and culturally. Though most of those central Asian countries are destitute, since the early 1990s they have been a growing market for Turkey as consumers of food, water, raw materials, cement, energy, and entertainment.

Turkey: on the path to success

Turkey's economy has grown an average 3.2% over the past 30 years, while its population has averaged under 2% growth. That has brought it from an uncertain status as a middle-income country to a country high in the economic ranks of the middle countries.

Western Europe and the United States encouraged Turkey's development through the end of the last century and into the first 20 years of this century. Their purpose was in part to hold it out as an example to its less stable, less peaceful, and less successful Middle Eastern neighbors.

No other Middle Eastern country, nor any majority Muslim country has the successful, heterogeneous economy that Turkey has. That has made Turkey the industrial center of its Muslim world, while it also serves markets to the north, northeast, and west.

Though Turkey failed to meet EC requirements for associate membership through the early part of this century, it has a better chance within the next 10 years, if it keeps its relations with Greece peaceful, and avoids unstable government.

In Turkey's favor, it has a relatively stable population and low birth rates. Though the country grew from 56 million in 1990 to 88 million today, it has made the demographic transition from a high-birth-rate country to a low-birth-rate country, and so stabilized its population at what most believe are sustainable levels. Today, the only demographic threats the country faces are international refugees from war-torn Muslim central Asian republics to the northeast, and periodic waves of migrants and refugees from elsewhere in the Middle East.

Turkey benefits from being a nexus of global trade between several distinct regions. That status drives Turkish society to be open to diversity, cosmopolitan, and highly mobile. This goes on in a context of basic Muslim values and a 17% share of the population being fundamentalist Muslim. The Turkish government, however, has remained secular and committed to modern development.

Turkish work life grows steadily more European

Turkey used to be a state-industry-dominated economy. In the 2000s and 2010s, the country privatized one after another of its state enterprises and loosened the grip of the state on the private sector. The same pattern happened in dozens of other World 2 countries, with varying success. Privatization led to national and international commercial interests setting up factories and service industries in Turkey. As a result, today the majority of Turks work at private-sector jobs.

Turkey supplied guest workers to labor-short northern Europe in the 1980s and 1990s. By 2000 or so, Turkey could provide good jobs at home for many who might formerly have traveled abroad for work. Working overseas is now a choice of only about 0.2% or about 300,000 Turks. Greater educational achievement in Turkey means that a greater share, nearly 40%, of those overseas workers are professionals and experts, whereas in 1990, most were low-skilled menial workers.

The slow pace of modernization and globalization in the Turkish workplace

Turkey has a workplace power imbalance reminiscent of that in the United States in the 1990s. Employers, especially in manufacturing, hire and fire workers according to demand for their firms' products. This practice was illegal during the Social Democratic regimes of the '00s, and '10s. Today's probusiness government has deregulated the workplace, and industrial development takes place on the backs of the working population.

Global corporations are slowly changing work in Turkey. Working directly for global corporations is a coveted status. But more people work for the domestic suppliers and contractors that support the Turkish operations of global corporations.

Increasingly, the local operations of international organizations come under international agreements that govern workplace conditions, working hours, compensation, hiring, and firing. For example, the International Compact on Workplace Rights (2017), is voluntarily supported by most *Cumhuriyei Merkez 100* businesses in Turkey.

Work life in Turkey approximates that of World 1 30 years ago. Workers go to workplaces away from home in proportions much higher than workers in World 1 do today. With few exceptions, work-at-home and distributed work are rare, though the information technologies required are becoming available to more Turkish service and professional workers.

Technological literacy is the key to the modernization of Turkish industry. The Turkish education system is trying to respond to greater demands placed on it by employers. Turkish businesses and global interests in Turkey established a network of community colleges in 2018-2022, which people can attend in person or electronically. The curriculum covers automation, network management, quality, and other essential topics for business. Interactive learning consoles in workplaces give workers after-hours access to the training.

The Turkish education system, as has been true of systems in World 1, is evolving to serve lifelong learning. The emphasis in Turkey is on training and retraining workers for the shifting demands of the workplace.

Leisure and entertainment for an increasingly middle-class population

Turks fill their leisure time with a mix of traditional and imported activities. Like any increasingly urban, middle-class society, Turkey is undergoing a flowering of leisure and entertainment activities, fueled by migration, growing affluence, the globalization of world culture, and the long reach of the telecommunications network.

Five most popular leisure activities in Turkey

- Television and interactive television
- Watching professional soccer
- Going to the beach
- Playing soccer, speed tag, basketball
- Shopping

More Turks today than ever before can afford to travel. Travel patterns for the population show the ironies of modern Turkey. Fundamentalist and conservative Muslims save to travel to Mecca and other shrines in the Muslim world. More secular Muslim and non-Muslim Turks typically travel west to Europe or the United States or take holidays on the Mediterranean or Black Sea. Disney Mediterranean, which opened on Cyprus in 2019, attracts 1.8 million visitors a year, and hundreds of thousands of them are from Turkey. The trip is a two-hour hovercraft ride from Adana, which is in turn linked to Ankara and Istanbul by bullet train.

Part of Turkey's growing interest in leisure travel stems from its success as an international tourist destination. Celebrating its tourist resources—ancient and Byzantine heritage, Black Sea beaches, rugged mountains, and even the semi-mythical status of Turkey as the resting place of Noah's Ark—has made the country a global tourist destination. Today, tourism is 22% of the country's GDP.

More time spent in leisure involves the professional sports that have pervaded Turkish life in the past 15 years. Istanbul hosted the 2012 Olympics, spurring heightened interest in televised sports competition and amateur sports participation. Fueled by the growth of televised sports in Turkey, organized amateur and professional sports took off as entertainment events. Wrestling, weight lifting, competitive martial arts, soccer, speed tag, and basketball dominate sports on television. The biggest celebrity in Turkey today is Sulayman Ugur, nicknamed Sulayman the Invincible for his soccer prowess. Virtual-reality-enhanced martial arts and fencing competitions are also runaway hits on television.

Manipulating the mind for leisure and escape

Turks turn to drugs for leisure and to escape boredom and poverty. The growing use of cannabis-derived recreational narcotics exemplifies this practice. Turkey historically produced and traded hashish and other narcotics, so their use fits with traditional customs while it also suits the modern stressful urban lifestyle. At first, the Turkish government reacted to the rise in narcotics use as a problem. But by 2018, the practice was legal and accommodated by social innovations to prevent it from affecting workplace safety and productivity. But though they are legal, most drugs are sold in the informal sector and evade government regulations and taxes.

Peasant migrants from rural Turkey are swelling the populations of the largest cities. The arriving migrants bring traditional values and thus leisure and entertainment customs to the centers of population. Commercial entertainment in Ankara, Istanbul, and other large cities has begun to serve these migrants more effectively. *Anatolia Hour* on Turkish television, and traditional dance and music shows and radio and television entertainment are growing increasingly popular.

Consumption as entertainment

Today's grand bazaars in Istanbul and Ankara, and the bazaars of other large cities, are thriving indoor shopping malls, the center of leisure for millions of Turks. They combine shopping with 3-D movie entertainment, virtual reality games, hashish parlors, fine dining and fast food, and socializing. Traditional ways of barter and bargaining still linger in some shops, while others conform to the standards of internationally franchised retailing, with set prices and standard products.

The arts

Ethnicity and nationalism have grown important to the increasingly Europeanized Turkey. This raises interest in traditional Islamic art and music and modern interpretations of them. Many among the wealthy have become avid art collectors, while the average Turk can afford to see musical events live and on television or order concerts for home viewing. Affordable, portable music synthesizers make traditional and modern Turkish or globally popular music available in almost any household. Wealthier urban Turks go to classes to learn traditional ethnic crafts such as rug weaving.

Food as entertainment

Turkish cuisine has long suffered from competition by more refined ethnic foods from Europe, Africa, and Asia. People who were affluent enough to enjoy eating out during the past 30 years could rarely find gourmet Turkish food to enjoy. They usually opted instead for French and other European foods, or international fast food from franchises. By 2000, the ethnic food available in the largest cities included choices from all over the world. Over the decades since then, the food choices and habits of Turks have grown more diverse. At the same time, new approaches to traditional Turkish cuisine and the rediscovery of regional dishes from the countryside have led to a renaissance in food.

Home entertainment

The ever-popular computer games played in many Turkish households are driving more families to get television units with which they can play

more games and interact remotely with other players. Most Turks cannot afford the flat screens and video walls popular in the United States, Japan, and Europe.

Television dominates most Turkish homes. Ninety-eight percent of homes have a television, though most are noninteractive sets. Only 46% have interactive TV capabilities. Half of programming is Turkish-produced. The Turkish programming is broadcast to the Turkic-speaking countries of Central Asia, further cementing their growing bonds to Turkey as a regional leader. Turkish TV entertainment competes with translated programming from Greece, Europe, the United States, and occasionally, other Muslim countries.

The poorest urban Turks, living in the *gecekondu* squatter settlements, fill their leisure time with coffeehouse entertainment, television, radio, or visiting a nearby mosque. These settlements are not the ramshackle, bleak slums of Brazil or North Africa. They are made up of sturdy if modest houses in orderly neighborhoods. Social Democratic governments have made the support of these settlements a policy. In most cases, people are given title to their houses and the property they are on.

WORK, LEISURE, AND ENTERTAINMENT IN WORLD 3—The struggle of the destitute makes leisure and entertainment secondary

Destitute families struggle to feed, clothe, shelter, and warm themselves. For some, that struggle means long hours of work in factory or menial service jobs. For others, it means days of scavenging for food, fuel, and goods. When destitute people are not working at their survival, most have little energy and almost no money for leisure and entertainment.

Liquor, drugs, and television soak up the intense boredom of the world's poorest people. Many of the traditional cultural outlets for leisure and entertainment, sports, music, theater, games, and dance, have been lost in the migrations and urbanization that have characterized the development of the world's poor. Mass popular culture from Europe and the United States takes its place mostly in television, movies, and radio, and does not serve everyone well.

The world of work

Destitute people often suffer poor conditions at their workplaces. Most large industries are raw materials producers, make second-rate merchandise for regional consumption, or make components for goods assembled elsewhere. Workers are poorly skilled, poorly paid, and are not very productive.

Smaller-scale industries and home workshops offer varying conditions for workers. Skill levels may be much higher for these craft-driven enterprises, but pay and safety conditions vary. In a World 3 version of work-at-home, millions in the poor countries make their living as independent craft and service people, serving their surrounding neighborhoods.

Technology plays only a limited role in work in World 3. Where big business has built factories, there may be high levels of automation supported by some skilled workers. Telecommunications plays a role for even some of the smallest enterprises—those that trade goods across cities or regions, or that offer a transportation or message carrying service. They are usually equipped with cellular telephones or PCS units. Bartering done through such communications devices extends and improves the market for small-time traders just as it does for national and international enterprises.

Women work in industry and services in higher proportions than they did 20 years ago in the industrializing poor countries. Many have long been displaced from traditional work in crafts, agriculture, and trade. For example, West African women once produced goods and sold them in their own trading businesses, largely out of their homes and small shops. Today, 55% of industry workers in Nigeria are women, compared with far fewer in the 1990s. Women have benefitted from intensive programs to improve their education and financial prospects in Latin America, Africa, and southern Asia since the 1990s.

Leisure and entertainment

The destitute do not have the wide choices in leisure and entertainment that the affluent societies and even the middle-income societies offer. Most destitute people must settle for escape through liquor and other drugs, mass broadcast radio and television entertainment, religious activities, sports, and socializing.

Through national and international efforts, there is a movement today to make entertainment in World 3 countries a vehicle for education for people of all ages. National and international television broadcasters, such as those supported by UNESCO, are altering programming to instruct people on things like agricultural techniques, health practices, automobile repair, and sanitation. Programs also include literacy and civic lessons. The education programming is sometimes built into entertainment shows directly, such as with the long-popular soap opera saga *Jambo Jambo* shown in West Africa, which promote better health and sanitation practices in urban areas.

The prospects for improved life in World 3, and with it greater choice in leisure and entertainment, are poor. Fast population growth and poor government policymaking pervade the destitute world. Few countries have much chance to raise themselves to World 2 in the next few decades.

Critical Developments, 1990-2025

| Year | Development | Effect |
|-------------|---|---|
| 1990 | Work and leisure time roughly equal at 40 hours a week. | People consistently report feeling rushed. |
| 1999 | Productivity growth under 2%. | Last year of flat productivity growth. |
| 2000 | Reduced Time Act passed. | Mandates full-time workweek of 36 hours. |
| 2001 | Virtual reality industry surpasses \$2 billion in annual sales. | Combination of entertainment, military, simulation, and business training sales. |
| 2003 | Productivity measures changed to accommodate knowledge economy. | Productivity found to be above 3% per year. |
| 2005 | Census Bureau and Bureau of Labor Statistics adopt Smith-Garcia work categories. | Reflects shift to knowledge economy. |
| 2005 | IRS issues revised rules on contract work. | Practice of shifting workers to contract work involuntarily is prohibited. |
| 2007 | 50% of homes have access to net communications and games. | Penetration of information technology continues. |
| 2010 | Reduced Time Act Amendments passed. | Mandatory full-time work week reduced to 34 hours. |
| 2018 | Smith and Garcia receive Nobel Prize in economics. | Recognizes their earlier work in reorganizing work categories. |
| 2019 | 75% of workers now categorized as Class I knowledge workers in the Smith-Garcia classification. | Knowledge economy firmly established. |
| 2020 | 37% of workers engaged in distributed work part of the week. | Growing comfort with information technology established distributed work as a preferred format. |
| 2025 | Executive boards are now 35% women and 29% minorities. | Slow but steady progress through glass ceilings. |

Unrealized Hopes and Fears

| Event | Potential Effects |
|---|---|
| Unemployment at depression levels above 12% in World 1. | General strikes or violent political revolution. |
| Machines continue to put people out of work; low-skill, low-wage service jobs are predominant. | Antitechnology campaigns to stop new machine technology; rise of voluntary simplicity movements. |
| Lessons from entertainment industry in capturing people's interest are adopted by educators and trainers and lead to more educated and skilled workforce. | Workers meet and exceed requirements of knowledge economy, leading to productivity boom of rates above 5% annually. |