

DEMOGRAPHIC PILLARS OF CIVILIZATION

Human Accomplishment: The Pursuit of Excellence in the Arts and Sciences, 800 B.C. to 1950

Charles Murray

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Reviewed by Leslie Jones

The peoples of Europe and North America enjoy unprecedented wealth. They generally live in freedom, peace, and security. Yet in Charles Murray's estimation the West's cultural supremacy is over. In *Human Accomplishment*, he addresses this paradox of a civilization that can generate ever rising living standards but can no longer produce great art and literature.

It is instructive to compare *Human Accomplishment* with *IQ and the Wealth of Nations*, by Richard Lynn and Tatu Vanhanen (2002). Lynn and Vanhanen posit a correlation between national differences in average intelligence on the one hand, and national differences in economic growth and per capita income on the other. As they point out, the number of geniuses produced by any given population depends on its mean IQ. They also believe that differences in national IQ are contingent on racial differences in intelligence, and that the latter are partly genetic. Yet, as Murray observes, there have been geographic concentrations of human accomplishment within particular parts of Europe, notwithstanding its common racial heritage. Thus, from 1400–1950, accomplishment was concentrated in Britain, France, Germany, and Italy. There have also been historical fluctuations in the rate of accomplishment in the West. The period 1800–1950 was particularly intense. Murray infers that cultural factors are an important variable in creativity.

ON HEROES

Like Carlyle (1888), Murray has “a heroic view of mankind and its destiny.” By this, Murray means that outstanding achievement in the arts and sciences has always depended on a relatively small group of individuals. Indeed, Friedrich Nietzsche maintained that high culture depends on a subjection of the majority that sets the creative minority free.

Human Accomplishment is a celebration of our “magnificent inequality.” Its author identifies fourteen adventitious meta-inventions that provided man with new cognitive tools and demonstrate the importance of individual genius. Consider, for example, Aristotle’s discovery of formal logic. Murray emphasizes that nobody in the civilizations of the preceding five millennia had discovered it. Nor did any non-Western thinker do so in the ensuing two millennia.

Appendix five of *Human Accomplishment* is a set of inventories of significant figures in twelve different domains across the arts and the hard sciences. Along with the lists of central events in these domains, these inventories constitute the core of the book. Inclusion in the inventories required a mention in 50 percent of authoritative sources, and index scores were given to the significant figures according to the amount of attention they received. This “human résumé of the species” consists of 4002 men and women. Within this elite group, a handful is pre-eminent, Murray’s “giants.”

Whereas talents such as IQ are normally distributed (i.e., take the form of a bell curve) the distribution of eminence is a hyperbolic, or Lotka, curve. Such a distribution is highly skewed, with most of the significant figures located in the lower index scores. Murray agrees with Simonton that the skewed distribution of eminence is a fundamental “law of historiometry” (the science of measuring eminence). Francis Galton provided an explanation of this law. He suggested that eminence depends on several traits in combination, namely intelligence, zeal, and perseverance (Galton, 1869). Similarly, Simonton (1999) has suggested that creativity is an “emergenic” trait consisting of multiple genetic components.

Significantly, Lotka curves are also found in divergent fields that have objective measures of excellence, such as chess, golf, and tennis. In Murray’s view, the parsimonious explanation for a Lotka curve in any given field is the inherent difficulty of becoming preeminent therein.

THE VALIDITY OF THE INVENTORIES

Galton’s *Hereditary Genius* (1869) was a pioneering work in the field of historiometry. Galton regarded reputation, “the opinion of contemporaries revised by posterity,” as a useful index of a person’s importance. One premise of historiometry is that experts who compile biographical dictionaries devote page space to their subjects according to their importance.

For Murray, eminence is much more than mere celebrity. He contends that in the sciences, eminence is conferred on those who discover or apply objective truths about the natural world. As he pithily observes, those who deny the existence of objective truth “get on airplanes without a second thought.”

The theory that human accomplishment in the arts can be objectively graded presupposes that judgment can be distinguished from opinion. David Hume, for one, contended that despite the changes in taste over time and between different cultures, some works endure and are universally admired. He distinguished between

two elements in taste, namely sentiment (subjective) and judgment (objective). In Hume's view, judgment pertains to the qualities inherent in a work and is dependent on expertise. As Murray observes, knowledgeable people are able to admire works of art they dislike.

In science, thanks to the principles of falsification, replication of results, and prediction, false findings fail to survive. These principles cannot be applied within aesthetics. Nevertheless, Murray maintains that consistency of judgment between critics and the emerging consensus over time provides an operational measurement of high aesthetic quality.

He concedes, however, that the theory that there can be objective judgments in the arts remains problematic. Consider the vicissitudes in the reputation of Shakespeare. He is the highest ranked figure in Murray's Western Literature Inventory. Yet Shakespeare was considered vulgar in certain periods, notably in the nineteenth century, when Thomas Bowdler provided a sanitized version of his plays. Arguably, then, the author's use of sources over several decades and from different countries cannot entirely eliminate the influence of fashion over artistic judgment.

Nor is the objectivity of Murray's scientific inventories beyond question. Whereas the great artist creates something unique, in the sciences eminence is dependent on the importance of the discovery. Furthermore, fame sometimes bestows her gifts capriciously.

Why, for example, does Darwin eclipse Wallace? Why is Copernicus famous whereas William Herschel is obscure?

By using sources from a variety of countries, Murray avoids the potential methodological pitfalls of parochialism and chauvinism. And by ending his inventories in 1950, he reduces what Simonton calls "epochcentric bias," that is the tendency of recent events or figures to loom too large. As to the paucity of black names in the inventories, Murray contends that before 1950, discrimination held back nonwhites in Europe and the United States. But in recent decades, he discerns a compensating tendency to overemphasize the contribution of nonwhites.

EUROCENTRISM?

Between 1400 and 1950, global accomplishment in both the arts and sciences was concentrated in Europe. Murray agrees with David Landes that the vast bulk of modern science is attributable to Europe. Ninety-seven percent of the accomplishment in the scientific inventories, whether measured in events or important figures, occurred in Europe and North America.

Does this European predominance merely reflect Eurocentrism? Unquestionably not, since Murray elaborated separate inventories for non-European traditions (Chinese Art, Arabic Literature, etc.) and thereby *inflated* the overall number of non-Western significant figures. The latter only had to compete with their co-nationals for inclusion. Nor, he insists, do his inventories bespeak ignorance on the part of

Western historians as to non-European science and technology. He shows that the latter have been painstakingly explored.

Nicolai Danilevsky and Oswald Spengler criticized the Eurocentric bias of Western historians. As a corrective, both upheld what Spengler called the Copernican view of history (Sorokin, 1966). Such a view emphasizes the distinctive contributions of the different "High Cultures" to the common treasure of humanity. For, as Alfred Kroeber observed, all the great civilizations were culturally deficient in certain areas (Sorokin, 1966). The Romans, for example, made important contributions to law but not to science or philosophy.

The Copernican view of history also informs *Human Accomplishment*. Murray refutes the pre-Copernican view that European civilization is synonymous with universal civilization. Thus, he credits the Hindu Indian civilization with the development of meditation, a new cognitive tool by means of which man can gain control of his chaotic stream of consciousness. And he praises the aesthetic sensibility of the Chinese and acknowledges their technological and administrative capacity. Murray also reminds us that the period 800 B.C.-1400 A.D. was particularly rich in giants (notably Buddha and Confucius) and that "much of that genius came from outside Europe."

JEWISH HYPER-ACHIEVEMENT

One variety of anti-Semitism posits Jewish racial inferiority. Another variety, articulated by Hitler, asserts the innate ability of the Jews and is "fuelled by resentment and envy over Jewish achievements and power" (Lynn, 2001). For as Magee (1972) has demonstrated, the intellectual and artistic output of the Jews in the twentieth century relative to their population was only matched by that of ancient Athenians.

Murray likewise notes the disproportionate role of the Ashkenazi Jews in every field of the inventories between 1870 and 1950, despite the fact that the Jewish population of Europe and the U. S. is estimated to have been only 2.2 percent. Relative to population, 28 of the 1,277 significant figures added to the Western inventories from this period should be Jewish. The actual figure is 158! In contrast, for the period when the Jews were legally and socially excluded (roughly speaking from 800-1800) there are only 11 Jews in his inventories of significant figures.

Magee (1972) discerns no evidence that the Jews are genetically gifted. He offers a purely cultural explanation of the post-1800 Jewish renaissance, to wit, the breakdown of the closed Jewish religious and intellectual tradition, contingent on emancipation. Murray, however, notes the superior average IQ (at least 107) of Ashkenazi Jews. Terman, likewise, found in the 1920s that 10.5 percent of children in California with IQs of 135 or more were Jewish. Murray speculates that the Diaspora and anti-Semitism may have created selection pressures for resourcefulness. These selection pressures were arguably compounded by sexual selection. In the traditional Jewish community, devotion to learning was emphasized and the learned, including

rabbis, had their pick of the women. For Murray, then, Jewish accomplishment is attributable to both cultural/religious and genetic factors.

FEMALE UNDERACHIEVEMENT

Only 2 percent of the significant figures are women, a paltry 88 of the 4002 people represented. Women's underrepresentation is even more marked among the giants. The author accepts that for much of the period 800 B.C. to 1950 this paucity of women can be explained in terms of legal and social exclusion. Yet, unlike the Jews, women have continued to lag behind men despite the removal of legal and cultural obstacles to their participation. Women make up only 5 percent of the significant figures in the hard sciences from 1900–1950. Yet during these decades women had gained increasing access to the scientific professions. Indeed, if Nobel Prize winners in literature and the sciences are aggregated, the number of female prize-winners in the second half of the twentieth century goes down marginally.

Lynn (1999) maintains that the larger average brain size of men, even when allowance is made for weight, gives adult men an average general intelligence advantage of four IQ points. This cognitive advantage is most noticeable for visual-spatial abilities. But although Murray accepts that men and women have different mean brain sizes, he agrees with Jensen (1998) that there is no evidence of sex differences in the mean level of *g*.

Murray speculates that the fact that men on average do better in mathematical and visual-spatial skills may explain their extra brain cells. Women, on the other hand, perform better than men in verbal skills. The author infers that the differences in male-female cognitive repertoires may partly account for the disparities of male-female accomplishment. Indicatively, the superior representation of men in the artistic inventories is most marked within the most abstract domains, notably musical composition. In the arts, the largest numbers of significant female figures are found in the Western literature inventory. Likewise, in the sciences, most of the significant female figures achieved prominence dealing with relatively concrete matters. Murray also suspects that because of the maternal instinct, women are less likely to develop the tunnel vision of the creative genius.

WHENCE HUMAN ACCOMPLISHMENT?

According to Aristotle, the exercise of the intellect possesses a pleasure peculiar to itself, which intensifies its activity. Abraham Maslow, in similar vein, placed self-actualization at the summit of a hierarchy of human needs. And the psychologist Mihaly Csikszentmihalyi has studied people who devote considerable time to absorbing activities that primarily confer intrinsic rewards. Murray infers that humans have an inborn impulse to strive for excellence. But this impulse is encouraged by some cultural factors and inhibited by others.

Kroeber identified "configurations of culture growth," alternatively, "high value culture patterns" (Sorokin, 1966). Murray employs the term "streams of

accomplishment" to describe these concentrations of creativity in relatively brief periods of time, as measured by the quantity and quality of geniuses. Both Kroeber and Murray note that the accomplishment rate in philosophy in Ionia during the fifth and fourth centuries B.C. eclipses all subsequent endeavors.

PEACE, POPULATION, PROSPERITY

World population and accomplishment rose exponentially after 1400. Yet accomplishment, in the author's view, cannot be the result of growth of population per se. The free population of Attica in the golden age of philosophy, according to Galton's estimate, was a mere 90,000. Murray agrees with Galton (1869) that the intellectual and artistic achievements of the ancient Greeks have never been surpassed.

Nor does peace seem to be essential for the arts and science to flourish. The Golden Age of Athens from 479 B.C. to 322 B.C. was a period of civil and military strife. Renaissance Florence furnishes a comparable example.

What of prosperity? Like Buckle (1936), Murray regards the accumulation of wealth as the prerequisite of civilization, creating a surplus from which an intellectual class can be supported. Since the discovery of the New World, the European economies have experienced a sustained expansion of wealth and an unprecedented acceleration of human accomplishment. Evidently, this expansion of wealth created a growing market for artistic artifacts and generated a demand for new technology. It provided money to build universities, thereby providing more positions for scholars. Note, however, that Kroeber has demonstrated the nonsynchronicity of economic progress and scientific-literary creativity in certain civilizations (Sorokin, 1966).

FURTHER FUNDAMENTS OF ACCOMPLISHMENT

1) **Models.** The author contends that the celebrity of significant figures encourages streams of achievement amongst artists and scientists who seek to emulate them. This could explain why, in ancient Greece, the giants of philosophy were crammed into a brief epoch. Between 1050 and 1200 A.D., there were further creative pulses in philosophy in China, in the West, and in the Arabic empire. Significantly, Simonton has found that the creativity of any given generation is correlated with the creativity of preceding generations.

2) **Elite cities, that is, cities where talent can form.** Examples are cities with top universities or financial centers (sometimes both). Such cities dominate the production of significant figures, even when population is controlled for. They tended to attract the ambitious and industrious. And they provided more educational opportunities and the more culturally diverse environment that fosters creativity (Simonton, 1999).

3) **Freedom of action.** Since most human cultural achievement occurred under nondemocratic regimes, liberal democracy cannot be its pre-requisite. What matters, according to Murray, is de facto freedom. Totalitarianism, in his judgment, is manifestly inimical to creativity. Indicatively, the underrepresentation of signifi-

cant figures from Russia predates the revolution of 1917. Murray thinks that this dearth of Russian significant figures is partly attributable to a sustained tradition of despotism.

4) **Religion.** The author is convinced that religion has been a critical factor in creativity. Indeed, he describes religion as “indispensable in igniting great accomplishment in the arts.”

In *The Protestant Ethic and the Spirit of Capitalism*, Max Weber elaborated a psychological theory of economic development. Weber maintained that modern capitalism is distinguished by the idea of work/acquisition as an end in itself. The main source of this distinctive spirit of modern capitalism, for Weber, was ascetic Protestantism, in particular Calvinism, with its highly developed notion of the calling. Weber also emphasized the influence of the Calvinist doctrine of predestination. This forbidding doctrine denied the possibility of salvation through the church and the sacraments. Weber suggested that because of the psychological burden of this *decretum horribile*, work became a psychological device for allaying anxiety about election, a sign that salvation had been attained.

Murray applies this theory of the links between ascetic Protestantism and modern capitalism to creativity. As he observes, great achievement in the arts and sciences requires single-minded effort. Such achievement bespeaks an ascetic mindset. For the author, those religions that promised eternal rewards and punishments (notably Christianity and Islam) were uniquely fitted to imbue the creative individual with the self-discipline and the sense of vocation that are the prerequisites of human accomplishment. Conversely, it seems intuitively obvious to Murray that nihilism and atheism are inimical to creative effort.

How, according to Murray, do the great world religions compare as catalysts of accomplishment? Buddhism taught redemption through extinction of the will. As Murray remarks, Buddhism hardly seems well suited to energize people to pursue earthly goals. Ditto Taoism, since Taoism stressed the virtue of passive acceptance of the universe. As to Confucianism, the author acknowledges its manifest compatibility with great art and scientific inquiry. However, he observes that the Confucian outlook upheld consensus, hierarchy, and a reverence for the past. Confucianism also imposed familial constraints and thereby discouraged autonomy. In the arts, such an outlook inclined artists to be part of high tradition. In the sciences, knowledge accumulates through competition and argument and by individuals insisting that they are right. For Murray, the pivotal influence of the Confucian outlook helps explain why Chinese science was erratic. He concludes that science requires individualism along Western lines.

Islam, like Christianity, provided compelling incentives for disciplined effort. But despite a relatively brief efflorescence of philosophy and the sciences under Islam, it ultimately proved incompatible with the autonomy and free inquiry that are indispensable for philosophy and science. In Murray’s estimation, only Christianity was able to accommodate fully the rationalism and humanism bequeathed by the

ancient Greeks. Thomas Aquinas, a key figure here, held that faith and reason are complementary and that human intelligence is a gift from God.

Like Weber, Murray suggests that because Protestantism dispensed with penances and confession to the priest, it represented an enhancement of both individualism and spirituality. The philosopher G.W.F. Hegel (1857), the sociologist Benjamin Kidd (1894), and the economist Alfred Marshall (1890) anticipated this idea of the inestimable social significance of the Reformation.

SCIENCE VS. RELIGION?

As Murray concedes, his theory of the outstanding contribution of religion to human accomplishment is highly contentious, although less so in relation to the arts. (Note, however, that atheists composed some of the musical masterpieces ostensibly inspired by religion.) The theory lacks what Murray elsewhere calls face validity. Indeed, a quite contrary view of the relationship between religion and science, in particular, is possible. According to the biologist Ernst Haeckel, a leading champion of Darwinism in nineteenth century Germany, Christianity and science have been locked in a life and death struggle, since Catholicism, in particular, was bent on the suppression of freedom of thought and research (Haeckel, 1894). Haeckel (1894) claimed that nine-tenths of all living scientists rejected the irrational dogmas of Christianity. One of his key sources was J. W. Draper, author of the aptly titled *History of the Conflict between Religion and Science*.

The author treats atheism and nihilism as synonymous. But in *L'Avenir de la science*, Ernest Renan, author of *The Life of Jesus*, convincingly argued that devotion to scientific truth and service to humanity can inspire and motivate the artist or scholar. Galton, another freethinker, also thought that mankind elicits sentiments of devotion and obligations of duty. Galton regarded eugenics as a secular religion as defined by John Stuart Mill, to wit, "the strong and earnest direction of the emotions and desires towards an ideal object" (Galton, 1894). Note also that the author concedes that many scientists have regarded the pursuit of truth as a sufficient inspiration for their endeavors. And that the classical Greek thought that he so admires was "essentially secular."

THE DECLINE OF THE WEST

Referring to both the arts and sciences, Murray opines "the West has been on a downhill slide since the end of the Renaissance." The higher forms of literature and music are exhibiting signs of exhaustion, while the mass media are dissipating much of the West's intellect. Here, Murray's thinking was anticipated by the historian and statesman Charles H. Pearson, author of *National Life and Character: A Forecast*, published in 1893. Like Murray, Pearson emphasized the deleterious effect on national character of secularism. Although Pearson regarded Christian beliefs as irrational, he conceded that they had once provided man with an invaluable moral discipline and sense of purpose that transcended supplying the day's needs (Anon. 1893).

By means of some compelling graphs Murray shows that when increase of population is taken into account, the rate of artistic and scientific accomplishment started to decline in the West in the nineteenth century. In other words, there was a decline in the number of significant figures in the arts and sciences per unit of population.

Indeed, because of the influence of epochcentric bias, this decline in the accomplishment rate was probably even greater than Murray's graphs suggest. Published lists of the hundred best-ever novels, etc. invariably contain a disproportionate number of ephemera. Moreover, in the nineteenth century, the total de facto population from which significant figures could emerge increased much more rapidly than population as a whole. Urbanization, mass education, and the development of the railways greatly increased the chances of creative people fulfilling their potential. In the period 1900–1950, for example, the university population of France rose forty-eight times faster than the increase of population.

From the early 1800s the rate of accomplishment in science declined despite a rapid increase in the number of scientists. Gunther Stent has suggested that since the subject matter studied by science is bounded/finite, progress in science must eventually come to an end. As early as the 1890s, Pearson likewise claimed that science had done its greatest work (Pearson, 1893). Murray is more sanguine. He agrees with Kroeber (Sorokin, 1966) that whereas the Western arts are exhausted, Western science remains relatively productive. The scientific community retains its allegiance to truth and may find new areas to explore.

How many recently produced works of art or literature will endure? Paradoxically, in the period between 1950 and 2000, whereas the supply of human capital to the arts increased more than population, the spiritual conditions for great art had ceased to exist, in Murray's judgment. According to the author, the artistic and literary elites of the West have been emasculated by secularism, Freudian irrationalism, and cultural relativism.

CONCLUSION

Sir Francis Galton regarded the ancient Athenians as the ablest race known to history. He attributed their intellectual superiority to an unplanned system of selection. He maintained that slavery had protected the purity of the race and that Athens' abundant opportunities had attracted gifted foreigners (Galton, 1869). Somewhat surprisingly, in view of *The Bell Curve*, Murray only briefly refers in his new book to the links between eugenics and creativity. This significant omission aside, *Human Accomplishment* is an erudite and thought-provoking work.

Leslie Jones, a free-lance writer based in London, holds a Ph.D. in history from the London School of Economics and is a fellow of the Galton Society.

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