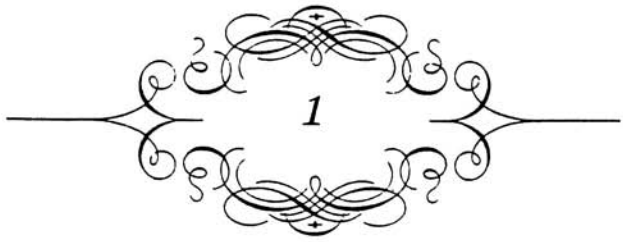

1

The Degeneracy Question

Circumstances of Life

In the period after Waterloo the major characteristic of British society was the stress of the transition from a wartime economy to one of peace. A depression took place and with it came social tensions leading to the Six Acts of 1819, designed to suppress disorder without attending to the underlying causes. At the time, the causes were ill grasped, and solutions were less evident in an era of laissez-faire economics and minuscule government. The hero of the age was the Duke of Wellington and the villain was the Corn Law, which kept out cheap, imported grain.

Although it is true that there was a substantial degree of unrest it is clear that upheavals on the scale of the French experience in 1789 were improbable. However, there were calls for reform of government and extension of the vote. Such steps came slowly, starting with the Benthamite agenda of describing by numbers the scope of problems; the first example was the examination of the Poor Laws and their amendment in 1834 by a quite different philosopy, which emphasized low costs and moral entitlement to public relief, although at the price of immurement and derogation. This stream of thought ran for several decades and set precedents for the welfare state of the mid-twentieth century.

Politically, stability was the rule, and Princess Victoria began her long reign in 1837. A series of prime ministers served her well across the decades to 1901. In the House of Commons and within the

Whitehall bureaucracy it was slowly becoming apparent that the population as a whole was as much the victim as the beneficiary of the factory system. By the 1840s reform was in the air, and a series of acts led to reduced hours for child and adult workers; for example, Fielden's Ten Hours Act (1847). Such reform came none too soon because long hours and dangerous conditions made factory work stressful. There emerged in the period a series of reform-minded bureaucrats and factory commissioners and inspectors. In concert with like-minded physicians the "condition of England" was examined in detail. However, reform came slowly because the privileged yielded control slowly. However, galvanized by the oratory of, for example, Lord Shaftesbury, hearts and minds softened toward the working class and also toward those of the poor who seemed deserving—as opposed to the disorganized, nasty, and so undeserving. Equally slow to evolve was public education, due to conservatism and squabbling between Anglicans and Nonconformists.

In the last half of the century, Britain's internal evolution into the workshop of the world reached its zenith. With wealth came relaxation of social tensions and enjoyment of the Long Peace begun at Waterloo. There were military escapades in the Crimea and later in Africa, followed by quiet until the fiasco of the Boer War, which demonstrated the poor health of the nation's young men. Ireland came close to Home Rule, but did not quite achieve it. Two other countries, Germany and the United States, evolved into successful industrial competitors, while Canada and Australia became targets for placing a surplus population.

In the same period, the public philosophy continued to accept more responsibility for children and the poor. By 1880, public discourse had reached a level of debate fairly recognizable to present-day thinkers; for example, immorality and disorganization were construed as consequences of poverty, rather than its cause. Journalists and orators saw that alcoholism, disease, and bad housing were all heads of the same hydra. Acts bringing government into peoples' lives were passed; for example, education and housing bills. There were a few advances in medicine, such as anaesthesia and antisepsis, but therapy remained palliative for most conditions. Hospitals grew in number, and health generally improved as a consequence of the rising standard of living. Oddy (1982) noted that the late Victorian concept of health consisted of the absence of ill-health; in the 1880s emerged the idea of good health as a normal state, with a decline in the romantic notion of suffering associated with infection by the tuberculosis bacillus.

With the advent of the Edwardian era, social philosophy became more obviously German, and Lloyd George put a social net under the elderly and unemployed. Ameliorism rather than revolution distinguished public philosophy even when Fabian and capitalist collided. Although not a golden age, the years immediately before Sarajevo were not without enviable aspects. Respectability (Thompson, 1988) replaced survival as the leitmotif. Reform was in the air benefitting young and old, although the motives ranged from altruism to imperialism. However, fiscal conservatism prevailed, as the twentieth century opened. The Speech from the Throne in 1900 set forth on behalf of the government the axiom that, "the time is not propitious for any domestic reforms which involve large expenditures" (Masterman, 1901).

The nineteenth century had opened with the British nation engaging two elements of social change. The first was the war with the French in a period of struggle which saw maritime supremacy at Trafalgar in 1805 yield to the ferocity of the Peninsular War. The second was the maturing stage of incorporating the urban population into the emerging factory economy. The social change set afoot sent agricultural workers migrating to nearby factories and, in the case of the Clark family, migrating from Norfolk to Leeds concluding that, on the whole, they were much better off (Springall, 1936). Also migrating, but involuntarily, were orphans "apprenticed" to small manufacturers in the industrial cities of the Midlands and the North, but constituting so much cheap labor (Emmison, 1944). At the mill operated by the enlightened Belfast family, the Gregs, at Styal in Cheshire, the cost of maintaining apprentices was carefully recorded. Costs per week per apprentice were as follows: 1822 = 5 shillings; 1830 = 5 shillings and a halfpenny; 1835 = 4s. 2d; 1840 = 4 s. 5d; 1846 = 9s. 2d; and 1847 (when the last apprenticeship ended) = 13s. 4d. Clearly, it was the 1840s, the Hungry Forties, when the cost of maintaining apprentices soared. In London, according to *The Times* of January 9, 1847, a Mr. Drouet was paid by the Board of Guardians of St. Luke's, Chelsea, to board orphans at a fee. He put some of the boys out to work at five shillings profit per boy per week. Also subject to change were the handloom weavers of various fabrics. Woolens, cottons, and linens were woven in the North, and Spitalfields had its exile Hugenot community of silk weavers. They are noteworthy because there are contemporary references to them as a group reduced in stature since former times and frequently the object of popular philanthropy (Reports from the Assistant Hand-Loom Weavers' Commissioners, 1839).

TABLE 1.1 POPULATION GROWTH IN SCOTLAND, ENGLAND AND WALES, 1801–1911[1]

Year	Scotland Population in Millions	England & Wales Population in Millions	Persons/ Sq. Miles U.K.	Percent of Population Urban	Rural	Percent of London Increase	Percent of[2] Manchester Increase
1801		8.89					
1811		10.16				10	20
1821	2.09	12.00	173			21	35
1831	2.36	13.89	199			20	41
1841	2.62	15.91	221			18	29
1851	2.88	17.92	227	50.20	49.80	21	30
1861	3.06	20.06	240	54.60	45.40	19	18
1871	3.36	22.71	261	61.80	38.20	16	16
1881	3.73	25.97	289	67.90	32.10	17	22
1891	4.02	29.00	313	72.00	28.00		
1901	4.47	32.52	343	77.00	23.00		
1911	4.76	36.07	375	78.10	21.90		

[1]Aggregated from tables in, *Census of England and Wales 1911* (1917)
[2]Baker (1882)

For Great Britain as a whole, the stresses experienced by the population were enormous. The population of England and Wales in 1801 was 8.89 million and it increased four-fold in the course of the century, reaching 36.07 million in 1901; see Table 1.1. The acreage of an island does not alter however great the intensity of social change. The density of population rose from 173 persons per square mile in ninety years. It had doubled by the turn of the century, 1901, and then rose once more from 343 persons to the end of our period, approximately, in the census year of 1911. From the rural context of "Sweet Auburn" framed by Oliver Goldsmith the population balance shifted to the "Dark Satanic Mills" of William Blake. At mid-century, the period sometimes known as High Victorian, the population was almost in balance at 50.20 percent urban and 49.80 rural. By 1881 the ratio was 2:1 urban to rural, and by 1910 four out of every five Britons (78.10 percent) were city dwellers. According to Williamson's (1990) analysis of census data for major cities in the decade beginning in 1841 just over one-half of the growth in population was due to immigration from the country; natural increase accounted for the remainder. In the two decades beginning in 1851 the proportion of the increases in population created by country folk was much smaller, and occurred within smaller overall rates of growth in population. For major northern cities population increases in the three decades beginning in 1841 were 2.44, 1.75, and 1.62 percent. For major cities in the south of England, comparable figures were 1.92, 1.73, and 1.45 percent. By age, the peak for young adults becoming a major segment of town populations was in the period 1821–1841. Radical shifts in a population previously undisturbed, demographically speaking, since the Norman Conquest wrought devastation on the health and welfare of the population.

The Degeneracy Problem

Pick (1989) has pointed out that the term *degeneration* pervaded the lexicon of British and continental thought, arising in conjunction with social problems such as crime and mental health; in France and Italy it acquired the trappings of intellectualism with prime movers such as Benedict Morel and Cesare Lombroso. In contrast, British usage was less conceptually broad, although the term was applied at a practical level to a variety of problems. In this work, the term is pursued in the context of biosocial problems, especially those involving the young.

In 1875 F. Ferguson had been "certifying surgeon" for the factory children of Bolton in Lancashire for fourteen years. He was empowered to authorize thirteen-year-old boys and girls to work in factories and mills when they presented "ordinary strength and appearance." Dr. Ferguson reported that, "for nine years I have closely observed, and am certain that each year the proportion of physically feeble children presented to me has gone on increasing. . . . I am constantly meeting with young persons, aged from fifteen to nineteen years, of not more than the average weight of a healthy factory child of thirteen" (1987, p. 211).

The dismay recorded by Dr. Ferguson was an echo in a provincial factory town of a theme that had dismayed thoughtful observers throughout Britain for a number of years. Floud and Wachter (1982) analyzed the height records of Marine Society Boys in the period 1770–1870. They concluded that those London street children who were thirteen years old in the years 1753–1780 averaged 51.4 inches (130.55 cm.) in height, 10 inches below the height of thirteen-year-old London boys in the 1960s. That height is also approximately that of today's eight-year-old boy (see Table 1.2). In 1835, an Edinburgh physician, J. Harrison, had cautioned that a child had to be 47 inches tall (119.38 cm.) to be judged at a twelve-year-level of maturity, and 48 inches tall (121.92 cm.) to be judged at least thirteen years old, and so eligible for factory work. These minimum heights describe average six and a half and seven year olds today (see Table 1.2). In 1870, the great anthropologist, John Beddoe reported a mean height of 64.90 inches (164.85 cm.) for thirty Bristol shoemakers. He ended his treatise by concluding that "the facts are best explained by the theory of a hereditary and progressive physical degeneration in certain classes of the inhabitants of towns." The concern about shrunken bodies would reach a crescendo of alarm when the Boer War, at the end of the century, documented the poor physical condition of young volunteers. By that time, the problem had several aspects ranging from high infant mortality to poor teeth (Pickering, 1901) and represented the cumulative stress of urbanization and the factory system on the population in their years of growth and development. The process was complex and consisted of several historical processes occurring simultaneously, frequently interacting, and usually operating at different velocities. In this chapter we examine the events of the nineteenth century which created the "degeneracy crisis," a problem not fully addressed until the twentieth century.

With the opening of the nineteenth century thoughtful men had achieved the insight that the developing centers of population were

TABLE 1.2 MEDIAN (P_{50}) VALUES OF HEIGHT AND WEIGHT IN THREE POPULATIONS[1]

Weight (kg.)						Age	Height (mm.)					
Boys			Girls				Boys			Girls		
Holland	United States	New Zealand	Holland	United States	New Zealand		Holland	United States	New Zealand	Holland	United States	New Zealand
3.5	3.5	3.4	3.4	3.2	3.4	Birth	518	533	524	518	490	516
15.6	14.8	15.0	14.9	13.5	14.5	Three Years	975	973	952	965	914	944
						Four Years[2]		1044				
20.9	12.9	18.6	18.9	18.0	18.3	Five Years	1114	1115	1085	1109	1053	1080
						Six Years[2]		1173				
25.6	22.7	23.2	23.2	22.2	22.9	Seven Years	1238	1231	1215	1233	1232	1207
						Eight Years[2]		1288				
31.5	29.3	28.4	28.5	29.2	28.2	Nine Years	1348	1346	1330	1342	1298	1317

[1]Jordan and Silva (1988)
[2]Interpolated
(Late twentieth century)

places "where wealth accumulates and men decay." The elder Robert ("Parsley") Peel addressed the House of Commons on the problem in support of the 1802 bill to protect the health and welfare of apprentices. Child workers were already showing the effects of industrialization which placed long and heavy strains on them. Mortality among the young was high, as much as one child in two dying between birth and age five, and those who made the transition from child to adult were frequently in poor health. Specific occupations had particular risks; for example, cutlers in Sheffield developed lung diseases, and young Irish workers in Bradford woolen mills died at an appalling rate when engaged in the early, rough stages of manufacture in which dust filled the air.

To thoughtful observers it was clear, by the 1830s, that there were two Englands. In that regard we cite a work of considerable interest from that decade. Peter Gaskell of Manchester wrote *The Manufacturing Population of England,* published in 1833, one year after Dr. James P. Kay's (-Shuttleworth) book *The Moral and Physical Condition of the Working Class Employed in the Cotton Manufacture in Manchester* (1832) was published. What is distinctive about Gaskell's work is the lack of reticence in discussing morality and sexuality. Equally candid is his description of the habitus, the general appearance of workers (pp. 161–162).

> Any man who has stood at twelve o'clock at the single narrow door-way, which serves as the place of exit for the hands employed in the great cotton-mills, must acknowledge, that an uglier set of men and women, of boys and girls, taken them in the mass, it would be impossible to congregate in a smaller compass. Their complexion is sallow and pallid—with a peculiar flatness of feature, caused by the want of a proper quantity of adipose substance to cushion out the cheeks.[1] Their stature low -the average height of four hundred men, measured at different times, and different places, being five feet six inches. Their limbs slender, and playing badly and ungracefully. A very general bowing of the legs. Great numbers of girls and women walking lamely or awkwardly, with raised chests and spinal flexures. Nearly all have flat feet . .

In 1845, Benjamin Disraeli, wrote his novel *Sybil,* in which he expressed in fictional form the tensions of life experienced by

[1]In 1859, the American Frederick L. Olmsted recorded the same observation in Liverpool, as did a second American twenty years later (Beard, 1879).

working-class people. In that quite bad novel Disraeli appears to have drawn on Edwin Chadwick's great report of 1842, "Report on the Sanitary Condition of the Labouring Population of Great Britain." Relevant to the degeneracy question is Chadwick's evaluation of a condition, "which causes the children to grow up an enfeebled and diminutive race of men." This is an interesting expression for several reasons. It addresses children, but notes that the health of children determines the health of the next generation of adults. The scope is evident in his reference to the race of men, and *diminutive* acknowledges that heights appeared to be dropping. Of course, the sentence quoted is a generalization; we know that rural workers who lived in areas such as Cumberland, Westmoreland, and in Scotland where oatmeal was a part of the diet remained strong. Indeed, Beddoe (1870) reported that the average Scottish farmer in the county of Berwickshire stood 71.3 inches (181.10 cm.) and weighed nearly 200 lbs (90.91 kg.).

In the 1839 report to Parliament is a commentary on the silk weavers of Spitalfields. It should be noted that handloom weaving was perhaps the best instance of an occupation threatened at all times by competition from people laid-off from other occupations. The "out of collar" carpenter could always rent a loom and use his children as helpers. When the temporary but repeated threat of intrusion from other occupations passed, it was replaced by the irreversible trend to machine-powered weaving. Under the circumstances, weavers became marginally competitive at best. Dr. Mitchell reported on the health of weavers in Spitalfields and Bethnal Green that, "the whole race of them is rapidly descending to the size of Liliputians"; he took those words from a Mr. Redfern, himself a weaver, noting that, "you could not raise a grenadier company amongst them all." Thirty years later, Beddoe (1870) reported the Bronte's fellow townsmen, the worsted weavers of Haworth, as "stunted." He thought facts "*proved* that the stature of man in the large towns of Britain is lowered considerably below the standard of the nation, and as *probable* that such degradation is hereditary and progressive." Beddoe was always impressed by the stature of the people of Galloway (Beddoe, 1870; 1911); he is probably the un-named person quoted by Beard (1879) as the author of the view that only Highland immigration provided the cities with replenishment without which, "there would be constant degeneracy." Scotland was not spared industrialization in the lowlands, but Robert Owen's mill at New Lanark near Glasgow showed that profits and health were not always incompatible. The matter of stature in Scotland had arisen many years before when Sir John Gordon introduced tall men into the

Parish of Ordiquhill to marry local girls in order to raise the stature of the population (Plackett, 1986). It did not work, and today, we use Galton's (1886) concept of "regression towards the mediocre" to explain the matter.

In Chadwick's (1842) report is the formulation of a problem which would get worse. The enfeebled people Chadwick cited had a high rate of sickness, drank excessively, and suffered the ravages of "phthisis" or tuberculosis. In our day, cancer is probably the closest we come to the pervasive threat of a fatal disease not yet understood; in contrast to cancer, syphilis, and tuberculosis turned out to be both preventable and curable in the twentieth century. As the decades passed, the statistics of enfeeblement piled up and the scope of the health problem evolved beyond challenge for urban populations. Tuberculosis appeared to run in families, a concept paralleled to a degree by our recent formulations of alcohol dependence as a genetically linked susceptibility. Since syphilis and tuberculosis were transmitted, and small adults were having small children, thoughtful people worried that a process had begun which was irreversible (Lomax, 1979). Chadwick, in the Health of Towns report (1844), addressed children. In a passage on the effects of bad drains on health he wrote of children who "have the appearance of persons not having half sufficient food—they are exceedingly pale." Many of them probably had rickets, a condition the French called *the English disease.* Addressing the National Association for the Promotion of Social Science. Henry Rumsey (1871) cited the *Pall Mall Gazette*'s report that, "Broad chests and powerful limbs are no longer the rule among labourers and artizans." Perhaps the nadir of pessimism was expressed in *Macmillan's Magazine* in 1862 with an essay reporting, "the weak state of health into which, in this age, all classes seem to be sinking" ("The History of a Hospital," 1862). The condition of pottery workers in Staffordshire, was cited by Karl Marx in *Capital.* From the third medical report of the Privy Council he quoted the words of Dr. J. T. Arlidge:

> The Potters as a class, both men and women, represent a degenerated population, both physically and morally. They are, as a rule, stunted in growth, ill-shaped, and frequently ill-formed in the chest; they become prematurely old, and are certainly short-lived . . . of all diseases they are especially prone to chest disease, to pneumonia, pthisis, bronchitis, and asthma.

In 1842, S. S. Scriven had reported the condition of boy pottery workers. Table 1.3 is extracted from data in his report to the Children's

TABLE 1.3 INFORMATION ABSTRACTED FROM SCRIVEN (REPORT, 1842) ON THE CONDITION OF BOY POTTERY WORKERS, WITH TWENTIETH CENTURY NORMS

Name	Age in Years	Height in Cm.	1966[1] Normative Height	Discrepancy	Physical Condition	Can Read	Can Write	Job	Years Worked
Samuel Lovatt	11.25	129.54	141.9	12.36	"Below par"	No	No	Mould-Runner	2.9
Wm. Pickerill	12.83	129.54	153.4	23.86	"Below par"	No	No	Mould-Runner	6.0
Emmanuel Tatler	11.16	135.89	141.9	6.08	"At par"	No	No	Jigger-Turner	2.5
Wm. Bradshaw	10.58	117.47	141.9	24.43	"At par"	No	No	Jigger-Turner	2.0
Henry Emery	12.66	130.17	153.4	23.32	"At par"	Yes	Yes	Mould-Runner	4.5
Richard Burnett	9.66	123.36	136.8	13.44	"Below par"	Yes	Yes	Mould-Runner	1.8

[1]Tanner, Whitehouse and Takaishi (1966)

Employment Commission. Additional information in the table is the mid-twentieth century norm (P_{50}) for British boys gathered by Tanner, Whitehouse, and Takaishi (1966). From those heights I have calculated how far below the 1966 averages were six boy pottery workers in 1842. The height discrepancies in Table 1.3 are in centimeters; expressed in inches they are from top to bottom, 4.86, 9.39, 2.39, 9.61, 9.18, and 5.29 inches. For three of the six boys, health is described as "Below Par," compounding low stature with poor health; also four were illiterate and innumerate. In the case of the six boys reported in Table 1.3, most had worked about two years, after starting at about nine years of age. However, William Pickarell and Henry Emery, who were the smallest, had started working in the pottery at six and eight years of age. Both were mould runners in 1842, a job constantly drawing on their strength.

Balance requires that we note that not every child was subjected to the stress of premature and excessive work. Nardinelli (1980) observed that the trend to replace child workers had begun earlier than is generally appreciated. He used the factory act of 1835 as a benchmark for a serious decline. On the other hand, part-time work in the preadolescent years was a fact into the twentieth century.

The state of health of the urban population apparently grew steadily worse. It appeared that urban life itself constituted a disease; in 1885, Dr. Cantlie lectured at the Parker Museum of Hygiene and introduced the term *urbomorbus* to describe the condition. The mechanism leading to ill health "is the presence of non-ozonized air, air that has been pre-breathed." To that Cantlie added the observation that few Londoners had London-bred grandparents, noting that twenty-seven of the last thirty lord mayors had been born in the country. To the notion that cities bred unhealthy people was added the worse possibility of no people at all, in his view; the race of city dwellers was losing the capability to reproduce themselves in a few generations. Cantlie marshalled his clinical observations beginning with

> the man with the Somersetshire grandfather, but whose folks had lived in London, commencing from the grand-parents. Height 5 feet 1 inch; age 21; chest measurement 28 inches. His head measure around above the eyebrows is 19 inches (nearly 3 inches below the average); measured across from tip of ear to tip of ear, 11 inches (1½ below the average). His aspect is pale waxy; he is very narrow between the eyes, and with a decided squint. Solemnity intense.

> I shall now describe the man with the Irish grandmother, but the others of whose predecessors have lived rigidly in London from the grand-parents downwards. Height 5 feet 3 inches. Age 19. Chest measurements 29 inches. His head measures 20 inches round (2 inches below the average). His face is mottled, pale, and pimpled. He squints rather badly. His jaws are misshapen; he cannot bring his front teeth within half an inch of each other; his upper jaw is pointed, and falls within the arch of the lower; his teeth spiculated, and must be well nigh useless to him. Solemnity great.

Three years later, addressing the British Association meeting at Bath in 1888, Dr. G. B. Barron moved to a more generalized level of analysis. He pointed to the origins of "Degeneracy of Race" in "bad air" and "bad habits of life." The former encompassed "bad sanitation and overcrowding," and the latter included "imperfect feeding and consequent malnutrition." In one rhetorical sweep, Barron set straight the course of regeneration:

> The remedies are Imperial legislation to improve the social conditions of the town dwellers. Insanitary surroundings, overcrowding, uncleanliness, impurity, intemperance, must all be swept away. The children must be educated in the pure air of the country. Make the parents sober and moral; give them pure air and plenty of it, and away fly pale faces, dyspepsia, crooked backs (generally resulting from tuberculosis), lowered vitality, stunted development, muscular attenuation, and the imperfect elimination of functional products.

The zeitgeist, or sensibility, of the last third of the nineteenth century was neither troubled by the thought of Karl Marx and Sigmund Freud nor enlightened by the contribution of Gregor Mendel. The Victorians had enough to contend with in Charles Darwin's picture of Nature: red of fang and claw, relentlessly casting aside those "unfit" to compete, let alone survive. What could be the future if the race of Britons was shrinking before one's eyes, if Londoners did not beget Londoners? How could an expanding empire, already spanning the globe, be run for the benefit of "the lesser breeds without the law," in Kipling's phrase, when the Anglo-Saxons were wilting under the heat of industrial stress and apparently implacable laws of heredity transmitted acquired defects? In 1889, Major Barrington Foote described Newcastle men seeking to enter the army after working in the mines as, "a little weedy and pale-faced" (Don, 1889). At the opening

of the new century, Rippon-Seymour (1903) noted that, "in the course of a walk through the poorer quarters of any large town in Scotland (or England) . . . may be seen the white, pinched faces, the ill-developed bodies, the all-too-prevalent and apparent signs of disease in skin and eye." In 1902, C. R. Ashbee noted "the bent shoulders, the broken lungs . . . the poor sight, the slouching gait, the slovenliness and vulgar truculence of the undergrown ill-bred mass of East London" (Rose, 1986). Four years later, in 1906, Sydney Webb emphasized the culture of the poor and proliferation of their non-middle class values: "The decline in the birthrate appears to be much greater in those sections of the population which give proofs of thrift and foresight than among the population at large."

In 1904, A. A. Mumford presented a theory of degeneracy in which the terms *nature* and *nurture* were used in apposition, and the terms *civic worth* and *energy* were emphasized. Mumford set forth in a quasi-scientific idiom the view that "energy" could be deficient and become abnormal as well as subnormal. The key concept, energy, was not presented analytically and appears analogous to George Bernard Shaw's "life force," if only in its vagueness. Mumford saw three stages of defective energy:

- deterioration, which was remediable;
- degeneration, from which normality could not be regained;
- decadence, which led to extinction.

The essential difficulty with these ideas is that they are mere verbalisms and lack a foundation or origin in empirical data. Such terms can be applied retroactively, but fail to meet the scientific requirement of predicting. That is, these and similar terms are not rooted in data that they can analyze and explain. Mumford's speculations led him to conclude that social and sanitary conditions were the true causes, to use his terminology, for the state of people's health in towns. In the same year, an unnamed London journalist (Lindsay, 1906) reported that "There has evolved in London a race distinct, unlike any other race in the British Isles, with strongly marked characteristics, with alien features and habits. It is a race stunted in size, sallow complexioned, dark-haired. Its moral sense is blunted, its mentality low. It has even evolved a speech of its own."

Not all analysts were pessimistic about the health of the laboring classes. Professor Leone Levi, addressed one of the last meetings of the Social Science Association in 1884. Reviewing the social condition of

the working class Levi examined changes since 1857, a period of a quarter-century. Drawing especially on the British association's recent anthropometric study Levi asserted that, "the physical condition of the labouring classes is better now than it ever was." However, it was not until the new century began that social commentators generally began to refute the postulate of inevitability in the decline of health. Bernard Bosanquet (1904) thought the problem of degeneration overestimated; but he thought and spoke in an era of constructive social policy, one in which Joseph Chamberlain of Birmingham would find an audience for his radical formulations of the public good, of the social order, and of mutual obligations within the community. Social Darwinism had evolved into socio-industrial "efficiency," fanned by the rising flames of European rivalries. The Physical Training Committee of 1902 and the Physical Deterioration Committee of 1904 saw that proper nourishment and exercise (Hawkins, 1895; Roberts, 1895) could do wonders for poor children. Bosanquet introduced the quality of parenting into the picture, an element which stressed what we would call the nurture side of the question. The other side of the question, heredity, was still in the shadows of pre-Mendelian genetics. A year after Bosanquet's enlightened commentary, Arthur Newsholme (1905), the conservative public health doctor at the Local Government Board, from Brighton, also resisted the proposition that degeneration was progressive. Newsholme asserted that the problem was in fact "morale," as he termed it. That is, he believed that environmental circumstances were the point of leverage for improvement. Progressive governments of the first decade were attentive, and stability of income through unemployment insurance, free school meals, and physical training did much to improve things. Progress, however, was slow; after 1916, according to Birch (1974), four of each nine conscripts to fight the Great War were wholly unfit, and only three of each nine were healthy enough for active service in the army or navy. In the case of Scotland's urban areas the problems persisted long after the Great War.

Despite Bosanquet's moderate statements the degeneracy question persisted in the twentieth century. It is epitomized in Dugdale's 1877 study of the eponymous Juke family and in Goddard's study of a family fictionalized as the Kallikaks, a term derived from Greek adjectives meaning the beautiful and the bad. To thoughtful, if less than fully informed, analysts, a major aspect of degeneration was regression of homo sapiens. Through that process, the latest and highest traits acquired phylogenetically would be the first given up when regression occurred (Gelb, 1989). By inference, moral sensibilities would be

among the first traits lost, and evidence would be the prevalence of criminal behavior. This last criterion was not distinguished from middle-class conventionality in behavior, so that there was no shortage of degenerates, prima facie. The Kallikaks had their *kalloi* (beautiful) and *kakoi* (bad) branches, and the self-evident nature of evolutionary regression was trumpeted by Goddard. Unfortunately the conclusion soared beyond the facts, as the disreputable and tipsy were attributed to the degenerate lineage because they were unconventional and disreputable; the reasoning fell in the error of begging the question.

The mischief of that social complex persisted far into the twentieth century and was summarized in Rafter (1988). Eugenics led to involuntary sterilization of the retarded (Jordan, 1976), and to development of the managerial philosophy of isolation in rural institutions. Views on the hereditability and progressive nature of physical deterioration across the nineteenth century reached their nadir in the eugenics movement. An over-reductionism in reasoning reflected the absence of information on the vectors of change within family trees (Chatterton-Hill, 1907). Lest this seem an unnecessary denseness on the part of analysts it is helpful to recall the naiveté of the 1960s that expressed itself in unrealistic expectations for programs of preschool education as a way to break up the cycle of poverty and social problems.

We can reach back to Gaskell in 1833 for a commonsense view of how to improve a population living nasty, brutish, and short lives. Gaskell noted that many successful businessmen in the early 1830s had sprung from humble origins—"the very humblest ranks of labourers."

> The force of external circumstances in modifying bodily form, is seen equally forcibly, in another and more pleasing point of view, in the manufacturing districts. Many of the masters have raised themselves from the very humblest rank of labourers—in many instances after a family had been born to them in their humility. These individuals with their families, at this period, of course, possessed all the traits distinguishing their grade, both moral and physical. Change of condition, better food, better clothing, better housing, constant cleanliness, mental cultivation, the force of example in the higher order of society in which they are now placed, have gradually converted them into respectable and even handsome families. The first remove places them still more favourably, and ceteris paribus, they become elegant and intelligent

females, and well formed and robust men. They now resemble but slightly, in their general aspect and deportment, the class from which they have risen.

Degeneracy as Theory

It is noteworthy that the concept of degeneration arose in more than the limited sphere of health and the reports of factory inspectors. Criminology, psychiatry, and ethnology, for instance, found the concept central to understanding discoveries about people and the world. Beliefs and styles of living inconsistent with a traditional view of the nineteenth century world imposed themselves on insular sensibilities (Livingstone, 1991). Such deviations from the familiar could be grasped most readily as evidence of inferiority and, in an age of optimism, reversion to a less mature stage. Thus, chronic violations of law were reversions to barbarism or, at worst, to near-simian tendencies; from angel back to ape was a demonstrable risk. For groups of people, primitivism and atavism were demonstrable and were evident in the decorations or absence of clothing demonstrated in the tropics, for example; at the same time, British women wore elaborate bustles and men cultivated mutton-chop whiskers. Racial inferiority justified slavery (Drescher, 1990) and colonialism, and in selected instances, degeneracy seemed to explain the seething urban plebs whose irruptions had shaken western Europe since 1789. Literature was not immune, and the popularity of Dorian Gray and Dr. Jekyll expressed popular acceptance of degeneracy as a hazard to human development. The most sophisticated formulations were those of Lombroso, who asserted that degeneracy existed in visible ways written in the physiognomy.

Britons generally avoided the all-embracing concepts of degeneracy prevalent on the Continent. There, degeneracy acquired theoretical proportions and became the topic for books by Benedict Morel (1857) and Cesare Lombroso (1891). As set forth in, *Traité des Dégenéréscences* . . . (1857), Morel saw a large number of conditions including crime, cretinism, and mental retardation as phenotypic reversions to primitive states of humankind. Implicitly, Europeans were held to be near the top of the Great Chain of Being, in relation to other groups (Lorimer, 1978). This presumption led New England missionaries to segregate their children from Hawaiians lest they, by association, revert to a phylogenetically primitve condition (Grimshaw, 1989). Recalling his missionary experiences, in 1836, A. Chaplin recoiled from the Hawaiians' proclivity, "to eat when they were happy, to recline in sluggish inactivity under the shadow of trees."

Morel believed that his views, based on his observations, enjoyed, "la triple sanction de la vérité révélée, dé la philosophie, et de l'histoire naturelle" (Morel, 1857, p. 2). His concept of degeneracy embraced a wide range of causes, from alcoholism to geology. Morel was quite familiar with the British situation and cited studies of towns (e.g., Wolverhampton) with attention to their juvenile populations. Morel ended his treatise on an optimistic note asserting that *traitement moral*, a term we tend to associate with Edouard Séguin (Jordan, 1976) should prevail, culminating in *la moralisation des masses* and in their regeneration (p. 693). Morel's treatise was an attempt to combine clinical observation with a larger view of the natural order in a grand exposition of human nature within the kingdom of nature.

In contrast, the problem-centered sensibility of the Victorians avoided intellectual excesses, but at the price of a fragmentary view of human development. This fragmentation has been documented by Desmond (1991), who set forth the social-political-biological context of competing agendas. The clash of scholarly armies on a darkling plain was discernable to sociomedical reformers struggling with the problems of urbanization, public health, child welfare, factory reform, and other matters in a practical manner.

Only at the beginning of the twentieth century did the Interdepartmental Committee on Physical Deterioration (1904) provide a view of the condition of the disadvantaged reviewing (e.g.) odd-job data on child health from the Johanna Street School in Southwark. Given the extent of health problems among poor children (Warner, 1893; 1896) it is perhaps as well that there had been no mass data on the growing young; had there been, a comprehensive theory of degeneracy might have plagued the human race. The Interdepartmental Committee heard testimony from distinguished to odd people and might have generalized from situational factors into the form of an unmanageable degenerate class produced by social Darwinism. The popular mind, as conveyed by the literature it absorbed, seems to have been fertile soil for such a development. Happily, the reality is that the Interdepartmental Committee (1904) chose to highlight the connection between social circumstances and health problems.

Fiction and Fact

Across the nineteenth century commentators consistently observe that the development of towns had a deleterious effect on life. In documents ranging from literature to the local statistical society's journals thoughtful people saw that town life was hard, impersonal,

and unhealthy. The novels of Frances Trollope (*The Life and Adventures of Michael Armstrong, the Factory Boy*); of Benjamin Disraeli (*Coningsby* and *Sybil*); of Dickens (*David Copperfield* and *Hard Times*); and of Elizabeth Gaskell (*Mary Barton* and *North and South*) gave middle-class readers insights into the life of the poor. Liardet (1839) conducted one of the few studies of the rural poor, in Kent. Leech (1841) combined sketches and essays in his *Portraits of Children of the Mobility* (in contrast to the nobility). Combining humor with pathos Leech sought to convey the situation of poor children to the higher orders of society (Jordan, 1991c).

Eventually, a genre emerged in which journalists such as Henry Mayhew, George Sala and Hugh Shimmin (Walton and Wilcox, 1991) and others of the same style reported the exotic and possibly dangerous way of life of the working class and the poor. Examples are "Medical Gentleman's" *An Enquiry into Destitution, Prostitution and Crime in Edinburgh* (1851), John Hollingshead's (1861) *Ragged London in 1861*, and "Journeyman Engineer's" (Thomas Wright) (1867) *Some Habits and Customs of the Working Class*. At a more technical level were the statists' analyses of town life. They were exemplified in Peter Gaskell's study of the working poor (1833), Dr. James Kay's study of Manchester life (1832), Dr. H. Baker's (1839) report on Leeds, Edwin Chadwick's Health of Towns report (1844), and Friedrich Engels's study of British workers (1842). Later, came the *Morning Chronicle*'s 1851 series of articles from, inter alia, Angus Reach and Henry Mayhew.

Beginning in 1889, Charles Booth, originally of Liverpool, reported on his series of studies of London's poor (Fried and Elman, 1969). In 1890 Salvation Army General William Booth wrote *In Darkest England, and the Way Out*, and at the turn of the century, 1901, Seebohm Rowntree provided his studies of poverty in York seven years earlier. A key work in 1901 was C. F. C. Masterman's book *The Heart of the Empire*. In nine separately authored chapters, including one by George M. Trevelyan, Masterman and his close friends analyzed urban life in London, the heart of the empire.

The Problem

From the point of view of today, questions arise about which problems commentators were addressing. At the risk of Whiggism we need to discern the nature of the questions that appear in the literature of the nineteenth century and appear to the current mind as salient. In