

Medical Police and the Nanny State: Public Health versus Private Autonomy

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Abstract

Rome tried to increase both the numbers of its people and their well-being, and hence their wealth, but it was not until the 16th century that European rulers were urged to achieve these aims by the power of the state to enforce public health. By the 17th century, absolutist states such as France, Austria and especially Germany had created an administrative profession of enlightened despotism, with “medical police” to encourage healthy and thus wealth-producing citizens. Johann Peter Frank (1745–1821) was the profession’s exemplar with his 6,262 page *System einer vollständigen medicinischen Polizey*, leading to comprehensive public health legislation in German-speaking states, followed by more libertarian countries such as Britain and the United States. However, controversy continues on the role of government in trying to save its citizens, and especially their children, from harming themselves and/or others by their actions and omissions.

Key Words: Public health, Europe, US, Johann Peter Frank, immunization, alcohol, autonomy.

ADVANCES IN clinical science and technology make it possible for most of us to live long and healthy lives. However, some people may not wish to seek or take advice for healthy living, so for thousands of years states have made laws to protect (or enhance) the health of individual citizens and of society as a whole.

Lawrence Gostin has written about the conflict between individual rights and social well-being in the U.S., and has questioned the primacy of individual freedom (1). I therefore present here the historical background of compulsory public health, both in Europe and North America, and explain why, in health-related controversies involving the state and the individual, I lean towards individual autonomy.

Welfare of the State

In ancient Rome, Cicero expressed his populist sympathies when he stated that “*salus populi*

suprema lex” (the well-being of the people is the most important rule) (2). George Rosen has analyzed in detail how, beginning in the sixteenth century, several European countries decided that the welfare of the state as a whole was equivalent to the welfare of its people: the more numerous and the healthier its population, the greater the power and wealth of the monarch and the state (3–6). For simplicity, individual citations have not been provided in the next seven paragraphs because they are available in Rosen’s texts (3–6).

France

Louis XIV of France was one of the first monarchs to attempt practical measures to increase public welfare. To increase Canada’s population, Louis’ finance minister Colbert ordered its governor in 1668 to produce an additional 200 families annually, by a law exempting early marriages from taxes, and fining fathers whose girls were still single by 16, or whose sons were still single by 20.

The military engineer Sebastien Vaubin organized detailed censuses of the parishes of France in 1697, and in 1711 the Abbé Fleury used the term “medical police.” But in spite of many proposals in the eighteenth century to reorganize French medical and social care, attempts at implementation had to wait until the Revolution (3, 4).

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Great Britain

In 1648, Dr. William Petty proposed a Council of Health and a 1,000-bed teaching hospital; he also created the “science of political arithmetic” and recommended the “multiplication of mankind.” He analyzed the Dublin bills of mortality and calculated that if a quarter of the 360,000 annual British deaths could be prevented, “the King will gain and save 200,000 subjects per annum, which valued at 20 £ per head, the lowest price of slaves, will make 4 million per annum benefit to the Commonwealth.” Queen Anne was advised in 1707 of “the Means of Multiplying Your Majesties People,” and in 1714 that “regularly laboring people are the Kingdom’s greatest Treasure,” or in Defoe’s even simpler axiom, “The more mouths, the more wealth.” None of these proposals came to fruition in decentralized Britain until the 19th century.

Germany

In 1556 the Elector of Saxony was advised to promote good, godly government by the judiciary and police. The German *Polizey* (or *Polizei*, etc.) comes from the Greek *politeia*, administration of a state. Similarly, in English “police” in the 18th century meant civil administration, and only in the 19th century was it used, as today, for the constabulary. *Medicinische Polizei* is inevitably, but confusingly, translated literally as “medical police,” conjuring up a sinister world of physicians acting as policemen, and/or uniformed policemen acting as health inspectors. But the term “medical police” originally meant public health administration, and in 1610 a 1,350-page text recommended that public health be controlled by a “Christian police.” In 1617 Emperor Rudolf II was advised on *Policey-Ordnung und Constitution* (that is, constitutional arrangements), including population statistics, and the state of Gotha was advised to provide complete medical and social care by public health administrative, *Polizey Wissenschaft*. A German physician in 1668 suggested a bureau of public health to increase population and wealth, as did his Austrian brother-in-law. Leibniz in 1678 followed Petty in recommending political topography (the natural resources and population of each district and its health statistics) to the Duke of Hanover, and in 1680 advised the Emperor to set up a medical authority. As in Britain, the governments of these states implemented few of these proposals.

However, in 1685 Prussia set up a *Collegium sanitatis* in 1685, and in 1688 began to issue health statistics; in 1727 it created two professorships to train civil servants in the political and economic

sciences as an administrative profession for enlightened despotism including improving public health. The Ulm municipal physician found health education difficult because “no one reads anything,” and suggested advising the people in the popular almanacs.

Austria

Austria followed Germany’s example in 1750, when Empress Maria Theresa adopted a system in which public health became part of the policing of her peoples as an arm of the state. In 1763 she created a chair for Joseph von Sonnenfels, who wrote the two-volume *Grundsätze der Polizey, Handlung und Finanz* (fundamentals of public administration, commerce and finance), published in 1765. He advised Maria Theresa and her successors Joseph II and Leopold II, that authoritarian prosperity could also be humanitarian. The subject of public health soon was taught at many universities and was the subject of dissertations by medical students.

The Empress influenced the health of her people by a *Protomedicus*, or director of public health, who from 1745 was Gerard van Swieten, her personal physician. He persuaded the Empress that the Faculty of Medicine needed a new, university-controlled general hospital in Vienna, to be the finest hospital in the world for the best teaching, research and patient care. He also persuaded her that patients would be admitted to this *Allgemeine Krankenhaus* only if they agreed to accept the medical treatment or surgery recommended for them, and that if they died a *post mortem* examination would be done.

Johann Peter Frank—Father of Public Health

Frank was born near Lake Constance in 1745. His grandfather was French, his father a trader and his mother a mayor’s daughter. He obtained a doctorate of philosophy in France, and his medical doctorate in Heidelberg in 1766. At age 21, the new doctor told Dean Oberkamp, a pupil of Boerhaave, that his ambition in life was to study, prevent and/or treat those diseases that affected most people, and that these diseases were mostly preventable because they were rooted in social conditions. Frank, who named his brainchild *medizinische Polizey*, has been considered the father of public health precisely because he tried “to prevent evils through wise ordinances.” (More detailed information and source materials on Frank and his life’s work can be found in references 7 and 8.)

Few physicians have ever made such bold claims, at so young an age, and then lived to see

their plans accepted internationally. Frank began as a country doctor for two years and then became a district medical officer in Baden in 1768, from where he sent the first volume of his *Medical Police* to a publisher in Karlsruhe. Frank's manuscript was rejected, and he was said to have burnt it and waited 11 years before trying again. In 1769 he became physician to the Prince-Bishop of Speyer and was able to study the ills of the serfs. He saw that peasants froze because they were forbidden to cut wood from forests to warm themselves; and that they were forced to neglect their fields to act as beaters for hunting by their masters. Children were crippled by hard labor, and then taken as soldiers at 16, leading to decrease in population. Mothers had to work in the fields at harvest, neglecting their babies (who were sometimes eaten by pigs). Frank knew that a mare had twelve weeks' rest in pregnancy, and he wondered why a woman should not have a similar benefit. He established two hospitals and schools of surgery and midwifery.

In 1779 he asked many experts the practice and laws of public health in their own states and published in Frankfurt the first volume of his magnum opus, *A System of Complete Medical Police (System einer vollständigen medicinischen Polizey)* (8), covering marriages, dowries, fertility, pregnancy and child-bearing. Fertility was to be enhanced by the physical education of young women, who were not to be mistreated, nor beaten when pregnant, but cared for by trained, salaried midwives. Children were to be cherished and breast-fed by their mother or a licensed wet-nurse. Frank proposed a ban on corsets because "the thoracic cavity was not created by the Creator to the taste of us Europeans." Frank promoted public amusements, but plays were to avoid a stage full of murders (as in England, leading to melancholia), or heroes and heroines killing themselves (as in France, encouraging suicide).

Frank's second volume, in 1780, described intercourse, venereal diseases, abortion and prostitution. The third volume, in 1783, discussed air pollution; nutrition (control of food, water and alcohol); public paving and cleansing; unhealthy and dangerous trades; clothing, sumptuary laws and housing; and drainage and latrines. Frank admired Moses for his public health laws, including his provision for quarantine for diseases thought to be infectious (Lev. 13.1–45) and his rule that every Israelite relieving himself outside the camp should have a little shovel to cover his excrement with soil (Deut. 23.13–14).

In 1784 Frank became professor of clinical medicine in Göttingen, and then in 1785 moved to

Pavia as *Protophysicus*, directing public health for Lombardy and Mantua, as well as revising the curriculum for doctors, midwives and apothecaries. His fourth volume, in 1788, on public safety, proposed laws on preventing people being crushed by crowds; on unsafe buildings and scaffolding; on fires and road injuries; and for police inspection of carts and hackney carriages. He also published the first of a six-volume textbook in Latin of medical treatment, *De curandis humanum morbis epitome*.

In 1795 Frank succeeded van Swieten as professor of clinical medicine in Vienna. He took all the medical beds for teaching and research and revised the curriculum. His fifth volume, in 1812, dealt with resuscitation and funerals. In 1799 a public health officer in lower Austria vaccinated his three children with Jenner's cowpox, so Frank arranged a public vaccination test in his unit in 1801. The trial was successful, leading to Austria's Vaccination Law of 1808. However, Frank never became Protomedicus, because in 1804 the faculty ousted him for unfolding to his students a whole complex of scientific problems and allowing them to form their own opinions rather than following the orthodox textbooks. Frank did not endear himself to colleagues by statements such as the following:

The greatest art of the teacher of medicine is to protect his students in time from the dangerous delusion that merely speculative statements are certain, to teach them to doubt everything that is not confirmed by mature experience, and to acquaint them with the gaps, with the known limits of the art, as well as with the best sources from which they can obtain truth in the future also (9).

Frank then worked in Vilna, St Petersburg and Frankfurt, before returning to Vienna in 1811 to write more volumes and new editions of his *Medical Police*, to a total of 6262 pages. The sixth volume, in 1816, covered medical affairs, and was followed by supplementary volumes on hospitals and administration. Frank died in 1821 with no illusions about the unpopularity of his ideas. In the 1783 revision of volume 1, he noted that

it is incomprehensible to me how anyone can hope to retain natural freedom in political life without curbs. And it seems to me that is philosophizing à la Rousseau.... I understand the objections well, people want fewer laws, and with the few laws they want to retain their complete freedom—but is this not a complete contradiction? ... The common people, as long as they lack the necessary enlightenment, ulti-

mately cooperate in the public health arrangements prescribed by the state only under duress, and as soon as they can evade state supervision (faithful to their old, though, obviously deleterious habits) they thwart them (8).

After Frank

Frank's published master plans certainly encouraged comprehensive public health legislation in German-speaking countries and neighboring Switzerland and Italy, and eventually led to the social insurance reforms of the 1880s in Austria and Bismarckian Germany (10).

Great Britain

Frank's authoritarian, planned public health did not export easily to more libertarian countries. Thus, although the new voluntary hospitals and public dispensaries helped the sick "respectable poor," and although the Gin Acts of 1751 did license places for sale and consumption of alcohol, communal public health legislation had difficulties in passage through Parliament. In 1802 Peel's Law restricted children's work in cotton mills, but it was not until the Factory Act of 1833 that children under 9 were forbidden in factories, and for the first time there were inspectors to enforce such regulations, with medical inspectors for the Poor Law Commission in 1838 (11). The 1842 Mines Bill banned women, and children under 10 years old, from working in the mines. Liverpool in 1846 passed the first Sanitary Act and employed a medical officer of health, a borough engineer and an inspector of nuisances to enforce anti-nuisance, sanitary and zoning laws. The 1848 Public Health Act did create a national General Board of Health, but that was discontinued in 1874.

England's general *laissez-faire* attitude persisted, with *The Times* boasting in 1851 that "Aesculapius and Chiron...have been deposed, and we prefer to take our chance of cholera and the rest than be bullied into health." As late as 1897, after a series of typhoid epidemics causing 40 deaths in King's Lynn, it was reported that "the people of Lynn have little taste for pure water. They evidently prefer sewerage and they like it neat" (12).

Although the concept of medical police never reached England's two universities, it quickly took root in Scotland, where Edinburgh had lectures on forensic medicine and medical police at least from 1795, a professorship there in 1807, and then a similar chair in Glasgow.

The United States

The U.S. preceded Great Britain in establishing a Board of Health in New York City in 1805. However, health legislation was opposed by American libertarians such as Mark Twain, who in 1867 warned that

the mania for giving the Government power to meddle with the private affairs of cities or citizens is likely to cause endless trouble... and there is great danger that our people will lose that independence of thought and action which is the cause of much of our greatness, and sink unto the helplessness of the Frenchman or German who expects his government to feed him when hungry, clothe him when naked, to prescribe when his child may be born and when he may die, and, in fine, to regulate every act of humanity from the cradle to the tomb, including the manner in which he may seek future admission to paradise (13).

In 1866 the New York Academy of Medicine led a campaign to establish the Metropolitan Board of Health, but a national board was not formed until 1879, and it lasted only four years. However, when public health laws were eventually codified in 1892, the U.S. legitimized compulsion with statements that Frank would have approved of: "It needs no argument to prove that the highest welfare of the State is subserved by protecting the life and health of its citizens by laws which will compel the ignorant, the selfish, the careless and the vicious, to so regulate their lives and use their property, as not to be a source of danger to others" (14). By the beginning of the twentieth century, New York boasted the finest public health of any city in the world, and its Board of Health's motto was "Public Health is purchasable. Within natural limitations every community can determine its own death rate" (15).

Public Health Laws

Cities and nations need laws to protect their citizens from dangers. Causing death by unsafe building was a capital offense in the Code of Hammurabi. Exodus 21:33–34 calls for monetary compensation "when a man opens a pit or digs a pit and does not cover it." Deuteronomy 22:8 requires that "when you build a new house, you shall make a parapet for your roof; otherwise you might have bloodguilt on your house, if anyone should fall from it." Cicero listed the Roman republic's laws and noted that they were not self-enforcing. The

consuls appointed public officials called aediles to control baths and taverns, gambling, fire precautions, quality of provisions, sewers and aqueducts, street cleaning and paving, sumptuary laws, traffic and dangerous buildings and animals (16). Almost all developed states have similar laws, but not all appoint inspectors.

Driving

The public accepts many health regulations, but has been particularly reluctant to obey laws against dangerous driving and dangerous vehicles. In his day Frank commented that “any fop... may consider himself entitled to grandly run down any creature who is lowly to him.” In his Vienna, the four-lane bridge to the Prater (a public park) had the outer two reserved for pedestrians, and the middle two for carriages going and returning. Husars with drawn sabers controlled the traffic. Even aristocrats were liable to fines, house arrest and a permanent ban on driving within the Austrian states.

It took decades to persuade legislators to compel manufacturers to fit cars with fixtures for seatbelts, then for all cars to be sold with belts in both front and back seats, and finally for them to be worn, with special restraints for babies and children. Too few countries have such laws, and in many countries they are ignored. Passengers who refuse to wear seatbelts (“It’s my funeral”) are unaware that belted occupants are at an increased risk of injuries and deaths from unbelted passengers in the event of a collision (17). Fortunately, motorcyclists who are not wearing a helmet are more easily detected and prosecuted. Regulations on child safety, such as helmets for bicyclists and skateboarders, are opposed by those who “saw this law chipping away at civil liberties and parents’ rights to raise their children the way they want to” (18). Riding schools may require horse riders to wear approved helmets, but legislation is unlikely in Britain, because its monarch rides hatless.

Citizens and Their Children

I can accept the view that people are entitled to risk harm to their own health and shorten their lives by ignoring governments’ warnings on excess alcohol, cigarettes and unhealthy foods. To me the principal bioethical problem is the state’s choice of interventions on behalf of their children. Most bioethicists today follow John Stuart Mill, who asserted that “Power can rightfully be exercised over any member of a civilized society against his will [only] to prevent harm to others”

(he excluded the immature). Governments override Jehovah’s Witness parents denying life-saving blood transfusions for their children.

Several European countries even protect children’s mental welfare by preventing their being given silly or preposterous names that might ridicule them in childhood and lifelong; Denmark’s Law on Personal Names is one of the strictest, with only 3,000 names authorized for boys and 4,000 for girls (19).

Immunization. Tests for genetic disorders and multiple courses of immunization of babies and children require parental cooperation and consent, so that complex protocols and timetables can be followed. When an infant misses one or more of its injections, not only is the child at high risk of catching, and even dying from, the particular microbial disease, but the whole community is more susceptible unless the percentage of those immunized is almost complete. Yet the Dutch government accepted religious objections to poliomyelitis immunization, resulting in outbreaks of this disease in the village of Staphorst in 1971 and 1978 (20).

Vaccination by compulsion in Austria (from 1808) was copied by many states in the 19th century, and although it was generally accepted as preventing and controlling outbreaks of smallpox, there were inevitably complications and deaths, especially from tetanus, and mostly from poor technique. A sophisticated public rightly demands evidence for the efficacy and safety of immunization campaigns.

Vaccination with live cowpox against smallpox came to America in 1801, and by 1809 Massachusetts made it compulsory for all adults, for infants, again at entry to public school, and again for all adults during an epidemic (21). Few states had such sweeping powers. However, at the end of the 19th century, in Brooklyn (then a separate city from New York), coercive measures included putting a yellow flag outside an infected house, with police officers preventing anyone from entering or leaving, together with nocturnal sweeps by immunizing teams of police-guarded vaccinators (22). Legal challenges in the United States were frequent, but were finally squashed by the Supreme Court in 1905 (23). Justice Harlan may not have read Johann Peter Frank’s books, but he used the identical argument: “There are manifold restraints to which every person is necessarily subject for the common good. On any other basis organized society could not exist with safety to its members. Society based on the rule that each one is a law unto himself would soon be confronted with disorder and anarchy” (23).

Since then there have been several worrisome immunization campaigns in the U.S. In 1976 President Ford, on the advice of the Department of Health, obtained \$135 million from Congress for a national immunization program with a swine influenza strain, chosen to resemble the strain responsible for the 1918 pandemic. The program was suspended because of a ninefold increase in Guillain-Barré syndrome. A live oral poliomyelitis campaign produced paralysis in 1 of 2.6 million doses (and 1 of 750,000 initial doses), so that only inactivated poliovirus is now used for children in the U.S. (24).

In such controversial situations even the experts may change sides. Thus, in 1914 Hermann Biggs, an important figure in public health in New York City and State, was faced with a smallpox outbreak in the city of Niagara Falls, an area opposed to vaccination by the state law (which was not universally obeyed throughout the state). Biggs ordered vaccination of many schoolchildren in the state, resulting in several deaths, including the child of a prominent legislator. These deaths led to a bill to remove compulsion from vaccination programs. Most medical experts opposed such a bill. Biggs surprised everyone by not opposing that legislation. He argued that smallpox had become so rare that (rural) routine vaccination was unnecessary except when faced with an epidemic. Moreover, he had decided that “the keynote of modern public health work is public education—not compulsion. Success comes from leading and teaching, not from driving people” (25). Compulsory immunization of everyone is impossible, but Colombia and Mexico have tried to transfer money to poor families only if their children receive preventive health care, enroll in school and attend classes.

Sex Education. Sex education in British schools is rare and ineffective, perhaps one factor in the teenage pregnancy rate of 20 per thousand being the highest in Europe, and five times the rate for Dutch children, who are taught about condoms for boys and contraceptive pills for girls (26).

Alcohol and Cigarettes in Britain

There are laws to prevent children from buying alcohol and cigarettes, but the problem for volitional adults is unsolved. States can control each of these health risks by fixing the price through taxation, and controlling the number of sites of consumption by licensing laws. Britain was once particularly successful with these problems, but no longer.

Alcohol. In World War I the British Central Control Board of Liquor Traffic halved spirit con-

sumption and reduced beer intake from 25 to 10 gallons per capita, with convictions for drunkenness falling from 136,000 to 39,000 annually (27). In the last half-century alcohol, especially spirits, has become relatively cheap through tax reduction, beers are now stronger, points of purchase have multiplied, and licensing hours of pubs have been extended (up to 24 hours per day). Britain is as will with alcohol and its many disease complications. Speeding by young men, and older men wanting to feel young, in ever-heavier and more powerful cars and motorcycles, often after alcohol, or distracted by handling mobile telephones, is common and lethal. Speed limits are disobeyed because “I can drive safely at any speed.” Police traps, video cameras and breathalyzers are condemned as spying, even though speed cameras are effective in reducing road traffic collisions and their associated injuries and deaths (28). Motorists, after their arrest and trial, are too often acquitted by motoring magistrates and jurors.

The 1961 Road Traffic Bill set the safe blood alcohol level at 160 mg per 100 ml, perhaps equivalent to drinking two-thirds of a bottle of whisky. This level was cut to 80 mg in 1965; it should be 50 or less. Recent British governments have ignored warnings of the dangers of alcohol. In 1979 the Cabinet’s own Central Policy Review Staff gave so bleak a picture of the harm to the country from alcohol, and how urgently action needed to be taken to prevent the situation from worsening, that the government, mindful of the alcohol industry, its half million employees, and its tax revenues, banned publication of the draft report. Fortunately, a copy was leaked to Sweden, and copies smuggled into Britain from there (29). The Government’s published document, *Drinking Sensibly*, simply recommended education (30), and the latest White Paper (31), some 23 years later, promises little to cut alcohol consumption (32).

Cigarettes. Cigarettes are still advertised in England, and its government has yet to follow California, New York City, Cuba, Ireland and Scotland in banning smoking in all public places, to at least lessen passive smoke damage to non-smokers (33).

Food and Water

Fortification of public water and food ingredients has been hotly contested. Most local authorities in the U.S., and many other countries, chlorinate reservoir water to destroy pathogens, and this practice has gradually been accepted by the public. Fluoridation of water to prevent dental caries in children is so violently opposed in Britain that its

use is subject to local option. Countries with high incidences of iodine-deficiency goiter have solved this problem by fortifying all salt with iodine. Rickets can be prevented by fortification with vitamin D. Britain fortified flour with iron to prevent iron-deficiency anemia, but I have never been convinced that the added inorganic iron is actually absorbed. Spina bifida and other neural tube defects in babies are mostly due to folic acid deficiency in pregnant mothers, and could be prevented if mothers took tablets of this vitamin regularly, probably an unreachable goal. Canada, but not Britain, fortifies white flour, pasta and cornmeal with folic acid and has almost eliminated these neurological defects (34). General laxity has been the response of governments and educational authorities to the alarming increase in adult and childhood obesity from excess eating of high-fat foods and sugary drinks. No ban on their advertising is likely, merely a plea to food manufacturers to reduce promotion of unhealthy foods at times when children view television. Schools should provide plenty of drinking water fountains, and not be allowed to make money by selling sugary drinks or “junk food.”

Emergency Health Powers in the U.S.

Lawrence Gostin, professor of law at Georgetown University, Washington, and professor of public health at Johns Hopkins, a former head of the British National Council of Civil Liberties in the 1970s, and of the Privacy Committee of the American Civil Liberties Union, wrote in the preface to his 2000 text, “Despite my background as a civil libertarian, in this book I question the primacy of individual freedom (and its associated concepts—autonomy, privacy and liberty) as the prevailing social norms” (35).

I suspect that the staff of the U.S. Centers for Disease Control and Prevention (CDC) were familiar with these revised opinions of Gostin when, in Spring 2001, they chose the Georgetown-Hopkins Center for Law and the Public Health to draft a Model State Emergency Health Powers Act that “gave governors or health officers additional authority to compel action by patients, potential patients, professionals or providers” (36). After the 9/11 attacks and the anthrax cases in October of 2001, the CDC posted a draft on the Web and revised it in December; it was then endorsed by the Secretary of Health and Human Resources. By 2002 more than 34 states had introduced legislation inspired by this draft model. Civil libertarians have denounced these acts for “blatant disregard for personal privacy and individual liberties” (36).

Conclusion

In the debates over public health and individual liberties, I have reached my own conclusions. Although there are few despotic developed countries, I did spend two years in the British army, where soldiers, irrespective of their own opinions, are compelled to protect themselves from diseases by undergoing immunization, using prophylactic condoms and ingesting tablets. I ordered soldiers to be admitted to the hospital, where they stayed until I ordered them out, to be ordered to return to my clinic for follow-up. If an officer was given two weeks’ convalescence leave, and he told me he needed to get back to his men in the jungle, I simply explained that my recommendation was an order, not a suggestion. Soldiers were ordered to take their anti-malaria tablets, and if they did catch malaria, I had to recommend disciplinary action, because it was assumed they had not swallowed the tablets administered each morning by their sergeant. When I was sent to cope with cases of smallpox, I could easily prevent an epidemic by immediately cordoning the site with a fence and armed sentries, and by revaccinating all the contacts, including myself.

However, an educated and informed population increasingly resists the enforcement of public health mandates. Recently, American soldiers disobeyed military orders and even successfully appealed to civilian courts against their having been disciplined, for refusing injections of an anthrax vaccine. They won their case because this old vaccine had been designed, prepared and tested against skin anthrax, and perhaps had never been tested for efficacy against the lethal inhaled pulmonary anthrax (37, 38).

The battle between those who would improve public and private well-being by medical police, against those who regard a “nanny state” as a harbinger of a police state has raged, still rages and always will.

I certainly see, and have personally used, all the advantages of medical police, and understand Gostin’s querying of individuals’ freedom to refuse safe and effective vaccines. Nevertheless, I am far more concerned, both in my winters in the U.S. and in my summers in Britain, that our nanny states might turn into police states, and on balance I therefore choose education, however inefficient, rather than compulsion, to prevent private ill-health and promote public well-being.

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