

# Hygiene as individual practice and as an instrument of the State

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## Abstract

This study outlines some understandings of the word "hygiene." The notion that originated in ancient Greece first began to be adopted as a system of diet and morals to prolong the lifespan. From a type of self-care, this idea transformed into a concept of governance to extend the lives of subject-citizens. The theoretical debate about what public hygiene used to be shows its eminently political side: not only was hygiene a branch of the political economy, the ideas of hygienists were also analyzed as to the degree of impact they had on policy. After political and scientific battles, certain understandings of government action emerged victorious, while others were forgotten and neglected.

Keywords: hygiene; public hygiene; longevity; political economy; biopower.



In current thinking, hygiene is synonymous with cleanliness; this was not always the case, as health experts are well aware. Today, the terms hygienism and hygienist are often used dismissively, since hygiene came to mean a centralized and authoritarian intervention, with the State wielding social control over individuals.<sup>1</sup> “Criminalization” occurs when hygiene is associated with this type of “medicalization of life” or eugenics (Guimarães, 2013, p.182). Hygiene may indeed have been close to these accusations at some points, but not always. The Greek word *hygeinos* means “healthy” (Vigarello, 1988, p.168), and Hygeia was the Greek goddess of health. From Classical times the concepts of hygiene and health have been very closely related, and for quite a long time were associated with the ideas of nutrition and sobriety, as we shall see. The first hygienist of the Modern Age, Luigi Cornaro (1467-1565), did not associated hygiene with cleanliness.

The concept of hygiene varied according to the social and political environment. This variation is one objective of this article: to understand changes in understanding during the period spanning the Renaissance to the end of the nineteenth century. Our approach to this is threefold: we shall (1) analyze what hygienists maintained was necessary for a healthy life, considering authors who described themselves as hygienists or were so labeled by the literary and/or scientific spheres; (2) present how personal hygiene was transformed into social hygiene and became government policy from the eighteenth century; (3) expose clashes between the concepts of social hygiene that implied major economic changes and those that maintained the hierarchical economic structure.

This is consequently a theoretical examination focused on the word “hygiene” and conceptual changes over time which tell us something about the societies in question. Sources include the classic texts considered seminal or used as references by Gruman (1966), Rosen (1963, 1993), and Foucault (1979, 2008a). Theorists on hygiene and public hygiene will be presented throughout the text when connections (or a lack of connection) between their thinking and the term emerge.

Comparison of changes in the word “hygiene” over space and time provides some understanding of the social, political, economic, and academic forces at play. We consequently cannot ignore the inter-relationships between the spheres of power (political, economic, and academic) seen in the reciprocal conformation of what was expected and what can be considered reprehensible in the process of legitimizing in-groups, as well as in searching for recognition by those aspiring to the leadership of each group (who Bourdieu called the profane):

The boundary between what is politically sayable or unsayable, thinkable or unthinkable, for a class of non-professionals is determined by the relation between the expressive interests of that class and the capacity to express these interests, a capacity which is secured by its position in the relations of cultural and thus political production ... moving from the implicit to the explicit, from one’s subjective impression to objective expression, to public manifestation in the form of a discourse or public act, constitutes in itself an act of institution and thereby represents a form of officialization and legitimation (Bourdieu, 2007, p.165-166).<sup>2</sup>

Also, this search for legitimacy demands internal competition so that the interests of the leadership can be satisfied in the association between the social spheres (whether artistic, religious, or academic) and politics.

It is clear that the great scientists of the past were not those who discovered truths, but rather “persuaded their peers to adopt their ideas and techniques” (Geison, 2002, p.23),<sup>3</sup> and that this persuasion depended on institutional expectations and policies. Analyzing the victory of one specific way of characterizing “hygiene” over others does not imply that it is any more true or necessarily more effective: it simply responded best to local demands. Selecting a particular vision of “what should be done according to science” is imbued with government priorities.

As we shall try to demonstrate, different foundations unite the chosen theorists. A central idea acts as a fulcrum for the term with regard to one particular aspect of hygienist thinking, but is distanced from other thinking with regard to what hygiene is (to the point of there being no common ground between the definitions). In Greece and in the Renaissance, hygiene was a set of knowledge for self-care. With the arrival of the political economy, the term came to be disputed because of internal competition that sometimes sought to satisfy the interests of leadership (based on logical deduction) and other times was firmly anchored in statistical and religious thinking.

### **From the Renaissance to the political economy**

According to the sources, concern with hygiene as a rational activity appeared in ancient Greece and reappeared during the Renaissance in the work of Luigi Cornaro<sup>4</sup> as specific knowledge about prolonging life. In modern times, hygiene became a branch of the political economy: important men of state theorized about how to maintain the new “wealth of nations,” namely labor, since that was what determined the real exchange value of goods (Smith, 2001, p.18). And when Adam Smith opened his classic text by stating that division of labor improves productive forces, it became necessary to study this phenomenon that enriched nations, understanding it through demographics, analyzing life expectancy, and observing variables that could optimize each element (the worker) in this chain, for example.

Cornaro was well known across the modern West for proposing care of oneself (or of one’s health) as a means of prolonging life. Many of his followers throughout Europe and America during subsequent centuries wrote about hygiene, including Christoph Hufeland and Bernardino Ramazzini in Europe and Benjamin Franklin in the United States. And the concept of hygiene, as mentioned above, varied in connotation from author to author: theorists had to recall that they might be heard or ignored, and obtain the backing of scientific institutions or the State itself. As a result, they also made political choices when developing their theories.

At the turn of the nineteenth century, it was theoretically established that the State should not only guarantee its own sovereignty, but also secure the “population” (Foucault, 2008a). The influence of William Petty (1623-1687) over political thinking in terms of the State’s need to take measures to increase its number of subjects was not restricted to

the British Isles, but was also taken up by theorists in continental Europe. A physician by training, Petty was a precursor of what today is known as “social science” when he suggested studying the Irish population and developing “political arithmetic,” essentially that the government should be concerned with “governing the population” and expanding it (McCormick, 2009). Because Europe had been depopulated in the 1700s, some texts observed the remaining population from a biological as well as legal-political viewpoint. From this time onward hygiene became a strategic political issue, and personal hygiene came to be considered in terms of social hygiene. It was the birth of what some authors call “social medicine” (Foucault, 1979) and others “public health” (Rosen, 1993) or even “state medicine” (Ryan, 1836).

### **The Renaissance aristocrat taking care of his own health: Luigi Cornaro**

Since, then, a man can have no better doctor than himself, and no better medicine than the temperate life, he should by all means embrace that life (Cornaro, 1917, p.58).

Gruman (1966) devoted himself to thinking on life and theoreticians who wanted to extend it to its limit, across a broad historical period. Starting from the perennially current premise that humanity’s central philosophical question is death, Gruman investigated the sources and arguments of thinkers, scientists, and writers to understand how the idea of “prolonging life” was understood during different periods of human history. His research ranged widely from the Old and New Testaments of the Christian Bible to the treatises on alchemy and the cultures of China, Greece, and other countries, yielding an expansive study on the history of these mentalities.

Cornaro was a typical Italian aristocrat during the Renaissance. He was born in 1467 in Padova, regained the wealth and prestige of his family, and was a patron of the arts and member of an important circle of thinkers. In his best-known work, *Discourses on a life of balance or temperance*, Cornaro stated that between age 35 and 40 his health had deteriorated and was precarious due to his carefree, pleasure-seeking way of life, and that after adopting a series of “hygiene” measures he not only recovered but reached age 99, healthy and lucid. Gruman indicated the writings of Cornaro as a relevant contribution to the circulation of ideas about prolonging life, attributed to a balanced diet and also avoiding excess.

Walker (1954) presented the core aspects of this author’s thought, which significantly impacted the concept of hygiene and prolonging life during his own time and afterward. He noted that for Cornaro, valuing the body and its potential autonomy was most important, in contrast with the prevailing idea of body and soul serving religious powers. This contrast was found between imbalance, excess, and abuse versus autonomy, desire, and the individual value of resilience.

After his severe physical deterioration, nutritional regulation was a central issue for Cornaro (1842, p.13), and involved both moral and physical perspectives:

Having thus recovered my health, I began seriously to consider the power of temperance, and say to myself, that if this virtue had efficacy enough to subdue such grievous disorders as mine, it must have still greater to preserve me in health, to help my bad constitution, and comfort my very weak stomach. I therefore applied myself diligently to discover what kinds of food suited me best.

Eating small and carefully controlled amounts of food (essentially bread, fruit, and a small amount of wine) was his recommendation for personal and dietary hygiene and could extend to morality, which was fundamental for a longer and better life. Personal hygiene was not yet social, and was not integrated into the “external space” or the “other.”

Although what Cornaro called hygiene during this period was related to “self-care,” mainly with regard to diet and avoiding excesses, Walker (1954) pointed out that this hygienist contributed in his later years through public improvements related to cleaning and drainage to increase the area available for cultivating food crops and in turn supply food to cities, also making the air healthier for urban dwellers. In this way, for Cornaro the idea of personal hygiene as a possibility for prolonging life moved out of the personal space and into the public realm, at least for some specific activities.

Among the other publications of this Renaissance-era hygienist is the *Treatise on a sober life*, which Cornaro wrote in 1530 at 83 years of age. In this work, which would later be translated and adapted in other treatises around Europe, he described his diet and personal hygiene for prolonging life and also indicated the three main benefits of this way of life: avoiding excesses, preserving health and happiness, and preparing individuals for a healthy and tranquil old age.

His ideas enjoyed broad circulation in both Europe and the New World. Cornaro’s followers include Leonard Lessius (1554-1632), a Belgian Jesuit; the Italian physician Bernardino Ramazzini (1633-1714); the English physician Richard Lower (1631-1691); Sir John Sinclair (1754-1835), a Scottish politician and writer; Benjamin Franklin (1706-1790), the famed American journalist, politician and diplomat; the German physician Christoph Hufeland (1762-1836); Sylvester Graham (1794-1851), an American Presbyterian minister and early proponent of vegetarianism; Piero Maroncelli (1795-1846), an Italian patriot, musician, and writer; Joseph Addison (1672-1719), the English poet and essayist who wrote for *The Guardian*; William Temple (1881-1944), an English clergyman; William Sweetser (1797-1875), an English physician who addressed mental hygiene; and Daniel Harrison Jacques (1825-1877), a specialist in the science of temperaments.

In this text we take special note of two of these figures: Franklin, with his individual code of ethics in the pursuit of personal improvement, and Hufeland, who despite also believing that ethics and a healthy personal routine could potentially extend the human lifespan to two hundred years, was involved in a broader project (religious, philosophical, anthropological, as well as political) for the German nation in line with the concerns of the ascendant bourgeoisie.

## The legacy of hygiene as self-care: Benjamin Franklin, Christoph Hufeland

Benjamin Franklin, one of the founding fathers of the United States, was a journalist, politician, diplomat, and author. His *Autobiography*, which he began in 1771, was published posthumously.

Franklin was known to be extremely disciplined in his daily life: his family was Protestant, and he had a Presbyterian education (Franklin, 1963, p.6-76). He sought to discover man's most important virtues and developed a method to pursue all of them. Initially he listed 12 virtues, but a Quaker colleague warned him of pride, and so he added a thirteenth virtue, humility. The complete list read:

1. Temperance.  
Eat not to Dulness.  
Drink not to Elevation.
2. Silence.  
Speak not but what may benefit others or your self. Avoid trifling  
Conversation.
3. Order.  
Let all your Things have their Places. Let each Part of your Business  
have its Time.
4. Resolution.  
Resolve to perform what you ought. Perform without fail what you  
resolve.
5. Frugality.  
Make no Expençe but to do good to others or yourself: i.e. Waste  
nothing.
6. Industry.  
Lose no Time. Be always employ'd in something useful. Cut  
off all unnecessary Actions.
7. Sincerity.  
Use no hurtful Deceit.  
Think innocently and justly; and, if you speak, speak accordingly.
8. Justice.  
Wrong none, by doing Injuries or omitting the Benefits that are your  
Duty.
9. Moderation.  
Avoid Extrems. Forbear resenting Injuries so much as you think they  
deserve.
10. Cleanliness  
Tolerate no Uncleanneſs in Body, Cloaths or Habitation.
11. Tranquility  
Be not disturbed at Trifles, or at Accidents common or unavoidable.
12. Chastity.  
Rarely use Venery but for Health or Offspring; Never to Dulneſs, Weakneſs, or the  
Injury of your own or another's Peace or Reputation.
13. Humility.  
Imitate Jeſus and Socrates (Franklin, 1963, p.78).<sup>5</sup>

He developed a method to practice acquiring all the virtues he considered important over the space of a week: during this time, he noted any transgressions against the week's virtue in an attempt to improve himself. He performed this exercise (which he called a course) four times each year (Franklin, 1963).

He also was highly regimented in the hours he kept: he rose at five and by seven had washed, prayed to "Powerful Goodness," organized the day's activities, and had his breakfast. He worked from eight to eleven; from noon to one he read or examined his accounts and ate lunch. From two to five he worked again, and from six to nine he put things away, ate supper, listened to music or other diversions, and examined his day in retrospect. Then he slept from ten to four in the morning.

It is not surprising that he held Cornaro in great esteem. His first virtue, temperance, was certainly inspired by the Italian hygienist. But despite sharing the same affinity for the subject with Cornaro, Franklin's overall personal organization was a cross between the everyday religiosity typical of Protestantism and the experience of self-care that came from hygiene.

Christoph Wilhelm Hufeland is one of the most frequently remembered names in medical historiography when it comes to Cornaro's disciples. As a scholar of physiology, he was able to provide an anthropological dimension for the Romantic German bourgeois plan which ran counter to the Germanic aristocracy linked to the French courts.

Elias (1994) historicized the German difference between *Kultur* (culture) and *Zivilisation* (civilization): one was the authentic virtue of cultivating oneself, while the other was the external and misleading courtesy of the court attitudes considered civilized. Johann von Goethe (1746-1832) was one of the most important German interpreters of this train of thought, which addressed the rise of the German bourgeoisie in search of the historical legitimacy it had been denied and instead given to the courtesan aristocracy. There was also a plan related to the identity of the emerging German class seeking a specific outcome for those who cultivated *Bildung* (education), *Kultur*, and *Aufklärung* (enlightenment) (Solon, 2014, p.3) as a version of Enlightenment west of the Rhine.

Hufeland was close to the idea that disease was the fruit of human free will to sin. The physical achievement of man was there to cultivate morality, thus constituting moralizing medicine in the German version, or in other words, an "ethical physiology" which was clearly inspired by Immanuel Kant (1724-1804), with whom Hufeland corresponded on old age, prolonging the lifespan, and its moral significance (Foucault, 2011, p.38-39).

The literature offered humanist ideals, and philosophy presented reason as a possibility for man to pass into adulthood, as Hufeland's physiology offered the anthropological knowledge necessary to extend human life to 200 years, thanks to knowledge acquired from nature and the individual to assist in the natural process of healing (Solon, 2014, p.10), curing immorality and consequently disease.

Hufeland was consequently an interpreter of medicine who positioned Cornaro's humanist self-care against an openly ethical, religious, and rational backdrop, consequently adding individual self-care to the plan for *Herrenvolk*, "the lords of the nation" responsible for their own fate as well as that of the collective. This would grant them supremacy as a class.

Both Franklin and Hufeland were therefore responsible for a sequence of self-care originating in Cornaro but transformed into a “social” activity because it aimed at improving group identity, either by example or through advice. The religious bias is clear in these cases, but there were still no statistics.

### **Gold is not the wealth of nations**

Machiavelli (1469-1527) is considered the father of modern political science. Foucault (2008a, p.85) added controversy to this understanding by stating that “far from thinking that Machiavelli opens up the field of political thought to modernity, I would say that he marks the end of an age.”<sup>6</sup> Concerned with the unification of Italy, Machiavelli theorized with regard to sovereignty and government rationale, and also presented a series of military and administrative measures to ensure territorial integrity. Since gold embodied a kingdom’s wealth, the king’s task was to secure his territory and its national treasury. But the importance of farming to keep the European population alive after famine and the Thirty Years’ War (1618-1648), which devastated populations in the region and only ended with the Peace of Westphalia, prompted reflections on another responsibility of the State: to govern. The need to govern emerged, related to the perception that work was more important than the treasury. The art of governing also acquired another guiding field of knowledge: economics.

Concern with economic activity also involved other types of studies and activities on the part of the king. These were no longer seen in terms of means and ends to maintain and/or conquer realms, but rather to confirm and drive production wherever possible. Legal treaties concerning the right to command and the arts of war were still important to the State, but this field of knowledge was supplemented by statistics, and a new object of study came on the scene: the population.

it is thanks to perception of the specific problems of the population, and thanks to the isolation of the level of reality that we call economy, that it was possible to think, reflect, and calculate the problem of government outside the juridical framework of sovereignty. And the same statistics, which, within the framework of mercantilism, had only ever been able to function within and, in a way, for the benefit of a monarchical administration that itself functioned according of the main technical factors, in unblocking the art of government (Foucault, 2008a, p.138).

From this time onward, the political economy was centered around studying the productive potential of men who were part of the State: a potential that could be measured by the number of subjects, their health, and morbidity and mortality rates. So, for the *splendeur de l’Etat* (splendor of the State), as the French called it, or the *oberste Gewalt* (supreme power) according to the Germans, the sovereign needed to observe the well-being of his citizens and promote “social happiness.” Foucault called this new set of knowledge, concerns, and interventions “governmentalization,” indicating State management of the population like a biological species. In other words, when government agents and theoreticians developed biopolitics and understood “hygiene” as knowledge to be managed socially, they began to understand the development of a “social hygiene” as essential.



Both Rosen (1993) and Foucault (2008a) indicate the mid-eighteenth century as the time when these government concerns and interventions related to public health began. This landmark could have extended even longer; after all, seventeenth-century theorists were the first to focus attention on the study of land, populations, and production. In England, William Petty (1623-1687), Nicolas De La Mare (1639-1723) in France, and Johann Heinrich Gottlob von Justi (1720?-1771) in Germany during the following century wrote about the new nature of governing the population. At that time, knowledge on governing people was known as “policing.” “Only in the seventeen-hundreds did the notion of policy (our modern ‘public policies’) come to be known among the historical actors involved with tasks of the State” (Pereira, 2001, p.382; emphasis ours).<sup>7</sup> Statistics consequently provided the knowledge needed for the State to exercise policy, in other words to govern in a wise and prudent manner to improve and prolong the lives of its subjects and make them more productive.

William Petty was a physician. He was the first to develop a system for collecting statistical data based on division of labor among researchers. As a result, the work he was responsible for, classifying land in Ireland, took only months, although many assumed it extended over decades. He was the first to conduct an empirical, quantitative analysis to survey natural and social resources in order to promote agriculture and the market. It is no wonder Karl Marx considered him “the founder of political economics.” Petty believed that England could obtain good economic and political outcomes if demographics were controlled, but these demographics needed to be understood in order to be controlled (McCormick, 2009, p.1-13).

Petty was interested in the mechanics of society, since he assumed that social laws existed along with natural laws. Empirical and observable science that could be tested and manipulated was possible not only in laboratories, but also in society. It was with this certainty that he was able to put his political arithmetic into practice as “political medicine for Ireland” (McCormick, 2009, p.8). Petty became the man of science responsible for statistics on the land brutally invaded by Oliver Cromwell (1599-1658): he was the technocrat in charge of surveying productive land to be seized from Irish Catholics and distributed among English soldiers. Civilizing the Irish became a central concern for both Cromwell and the Hartlib Circle, a network of intellectual correspondence across Central Europe established by London-based Samuel Hartlib (1600-1662). “Civilize” essentially meant colonizing the lands and transforming the Irish into English or workers on British possessions, since Irish labor was necessary for English prosperity. Petty’s work, called the Down Survey, comprised “the scientific instrument of a military government [that] ‘transformed’ society” (McCormick, 2009, p.102; emphasis in the original).

The expropriation of land was supported by some Irish Protestants such as Vincent Gookin (1616?-1659), who wrote a pamphlet suggesting that Irish natives be transplanted to Connaught, a province in the west of the island, an idea which Petty did not share. Instead of transplantation, he proposed transmutation; transmuting the Irish into English. Petty consequently went on to analyze the different behavior of “confederates” and “separatists,” the effect religion had on habits, and correlating them with “judicial astrology,” a science that was widely accepted at that time. Having helped John Graunt

(1620-1674) in his studies on mortality, Petty saw the population transformed in “number, weight and measure” (McCormick, 2009, p.119), and the knowledge needed for the art of governing was consequently complete. This led to the development of a social science.

According to Petty, governing required taking legal measures, establishing district and ecclesiastical divisions, streamlining the taxation system so that agriculture and manufacturing could be as profitable as possible, promoting the health of subjects by analyzing the air, land, and seasons, as well as providing the number of physicians needed in each region. It also needed a “natural” tax system that would optimize the market, which he saw as the “natural” activity of men, as well as teaching a trade to “vagabonds” who were indigent but healthy, along with the sick after they were cured. It is no coincidence that the first records of English workhouses<sup>8</sup> are from this period.

John Bellers (1654-1725), who also emphasized the need to make the lazy work and promote means of preventing diseases, suggested in 1714 that a national institute of health, hospitals, and laboratories for medical education be established, along with assistance to the sick poor (Rosen, 1963, p.21-22). According to Bellers, Great Britain had lost approximately 100 million potential workers to curable diseases (Risse, 1992, p.176).

Nicolas De La Mare (or Delamare, as quoted by Foucault) stated, in his extensive writings on the *Traité de police* in the early 1700s, that the purpose of policing was “leading man to the most perfect felicity that he can enjoy in his life” (De La Mare quoted in Foucault, 2008a, p.439). The happiness and well-being of the subjects would result in strength and splendor for the State, and policing practices would consequently more closely resemble the powers of the prince than those of the judge:

the right of police consists specifically in being able to make particular regulations for the citizens of his district and territory, which concern and bind all the people, the which exceeds the power of a simple judge who can only pronounce between the claimant and defender ... Thus this power is close to and has more of the nature of the power of the prince than that of the judge, considering that these regulations are like laws and particular ordinances, which are also properly called edicts (De La Mare quoted in Foucault, 2008a, p.485).

De La Mare listed eleven areas that would fall under the competence of the police: (1) religion; (2) moral discipline; (3) health; (4) foodstuffs; (5) public safety and tranquility; (6) roadways; (7) the sciences and liberal arts; (8) trade, manufacturing and the mechanical arts; (9) household servants; (10) workers; and (11) the poor (Foucault, 2008a, p.483).<sup>9</sup> As noted, the powers of the police are diverse and span nearly all areas of the subjects’ lives, dealing with the details of everyday life that amounted to macro-scale government policies. At the same time a certain moral pedagogy was sought, along with improving health and the quality of food consumed. They also dealt with the free flow of commodities and manufactured goods, attention to workers, and assistance to the poor. Beyond motives of state, the ruler had to deal with new government logic to manage soil productivity, agriculture, and livestock (to prevent food shortages), along with the circulation of people and security and tranquility in the cities. This attention to the minutiae of individuals and regulation of large-scale social activities in the kingdom were intended to produce what

these authors called well-being, which produced “happiness” while simultaneously making it possible for the State to grow in strength.

In the German states, Melchior von Osse (1506?-1557) and Georg Obrecht (1547-1612) are considered important precursors to what was called “cameralism,” followed by Joseph von Sonnenfels (1733-1817). Osse and Obrecht connected public health to poverty and considered tax systems, and Obrecht stated that it was in the interest of the government for subjects to receive the highest salary possible, along with insurance and savings (Backhaus, 2010, p.172). The most important figure within this tradition in the German countries for the science of governing in the eighteenth century was Gottlob von Justi.

Curiously, the thinking from this region tends to have different nomenclature. The political economy of the Germans has a unique name, “cameralism,” and similarly Germanic thought that was established at the opening of the nineteenth century in terms of public health is called “medical policing,” which differed greatly from what was produced in other parts of the continent (Rosen, 1963, 1979, 1993; La Berge, 1992). But the sources show that the differences in diagnoses and prognoses were not as antagonistic as the historiography on this subject might suggest. West of the Rhine, sanitarians did not scorn the concept of medical policing; quite to the contrary, it was widely debated (Mantovani, 2017). Similarly, the political economy produced by the Germanic states in the eighteenth century cannot be described as substantially different from other notions that emerged elsewhere on the continent. Risse (1992, p.172), when talking about the German economy and public health, refers to “German mercantilism – the so-called cameralism.” The term cameralism is derived from *Cameralwissenschaft*, i.e., “chamber science,” since the traditional councils of German rulers were replaced by “chambers” that generated administrative recommendations and proposals for these rulers (Stolleis, quoted in Foucault, 2008a, p.34). The fact that these advisory posts were called “chambers” does not seem sufficient reason for knowledge to be considered overly private.

Gottlob von Justi, who is considered the central figure of cameralism, can also be understood as a theorist of political economics, and the emphases and underestimations in his texts do not substantially differ from those developed by contemporary economists from other European regions. Justi was concerned with good government and good policy, in other words systematizing measures taken by the State to achieve social happiness in order to obtain as much political power as possible (Schmidt, 2010, p.158), or the *reipublicae splendorem*, “the splendor of the republic,” as described by Peter Carl von Hohenthal (1754-1839) (Foucault, 2008a, p.439). In his view, social happiness had to be pursued via education and health: lifespans must be prolonged and the population expanded as well as educated.

The need to increase the population took on an important role in Justi’s writings; attention to childhood was essential, and boosting fertility was another recurring point. Later, criticism of celibacy was an important issue in nearly all European treatises on medical policing (Mantovani, 2017).

In the German states, the number of subjects could also be increased by promoting immigration.

In summary, the main principles of this policy were as follows:

- improvement of the available knowledge;
- improvement of the health of the population;
- strengthening of social norms;
- educating children;
- in particular, children should be taught a work attitude and be prepared to later participate in the production process,
- weak persons should participate in the production process;
- an increase in the number of children born;
- attracting new inhabitants to the country;
- incentives for the inhabitants of the country to stay there;
- humane penalties for criminal acts;
- prevention of war;
- in case of war, minimization of the negative effects of war (Backhaus, 2010, p.174).

Justi saw a need to rationalize taxation in order to adapt productivity to the demands of the country. Following the example of England, he argued that guilds and civic organizations should determine the amount to be paid to the State each year (Schmidt, 2010, p.161).

His example for dealing with the indigent also came from England, namely establishing workhouses to force those who still insisted on begging to work. However, Justi warned that “It is really not necessary to keep the people at water and bread and to mistreat them with daily beatings, with the exception of those who do not want to follow their daily work routine” (Backhaus, 2010, p.179). The goal was to strengthen social norms, and in this case, to instill the importance of work into these subjects.

One trait that strongly connects all these authors is concern with malnutrition. Eliminating hunger was one of the pillars of enlarging the population and extending its lifespan. With the exception of the Irish case, preventing starvation deaths was known to be the basic physiological issue the government needed to address in its pursuit of “social happiness.”

We can conclude that individual care practices were appropriated as government practices during the seventeenth and eighteenth centuries. As mentioned previously, Cornaro gathered knowledge on individual self-care involving the body, and Franklin and Hufeland established the moral and religious foundations so that this self-care could become a practice to be taken on by identity groups. In the meantime, scholars began to devote themselves to statistics, establishing this field of knowledge as an important branch of government knowledge. From the marriage of statistics and hygiene (up to that point) emerged public hygiene, one of the most important tools for effective governing of the political economy.

Lemke (2012, p.3) states that Foucault’s concept of governmentality gauged power and subjectivity, and consequently “makes [it] possible to investigate how processes of domination are linked to ‘technologies of the self’ ... and how forms of political government are articulated” (emphasis in the original). Foucault (2008a, p.3) wanted to study “how, starting from the eighteenth century, modern western societies took on board the fundamental biological fact that human beings are a species:” in other words, biopolitics. Self-care was transformed into care of everyone, with political purposes in mind:

Indeed, Foucault's analysis of governmentality examined how linkages between (a) the health of the population and (b) the economic and political security of the state resulted in distinct 'biopolitical' strategies for representing and acting upon populations across liberal governmentalities (Nadesan, 2008, p.93; emphasis in the original).

By taking into account the biological aspect of the population, the State began to be concerned with governing, and, consequently, what was put into practice as a demand of the political economy was actually a biopolitical governmentalization of State strategies.

### **Scientifically preserving the wealth of the nation: statistics and public hygiene**

Statistics and policy became fundamental aspects of government. On one hand, we have Auget de Montyon (1733-1820), and on the other, Johann Peter Frank (1749-1821). Our concern is a work published in 1778 which was signed by Montyon's secretary, Moheau, but which fell under his responsibility, *Recherches et considérations sur la population de la France*. During a century in which Europe was depopulated despite no exceptionally serious epidemics, this phenomenon needed to be understood, and this was done by carrying out a detailed investigation of the entire country. Peter Frank, a physician and natural hygienist from Rodalben, used the European statistics he had access to in order to write his *System einer vollständigen medicinischen polizei*; this title was translated for international publication as *The complete system of medical policing*, but should be understood to mean "a comprehensive system of public health administration," since the term "policing" refers to public administration by the government, as mentioned above.

Both Montyon and Frank were influences across a good part of Europe in terms of the need to study the population and intervene to increase numbers of citizens as well as the years of their lives. France can be regarded as a pioneer, and was where the first public health movement took place (La Berge, 1992). The group of scholars involved in this effort included Louis-René Villermé (1782-1863) and Alexander Parent du-Châtelet (1790-1836), who established the journal *Annales d'Hygiène Publique et de Médecine Légale* in 1829, which was seen as a milestone in the history of public health (Ackerknecht, 1948; Coleman, 1982; La Berge, 1992) and consolidated the main thinking of this group.

They used the statistical tables they had at their disposal to compare data in order to understand the causes of morbidity and mortality in Paris. They noted the *arrondissements* that were drier or swamplier, closest to butchering operations, strongly affected by wind, without any wind, richer and poorer, and came to a conclusion: the only correlation that could be established with disease and mortality was poverty, as Villermé concluded in nearly all his writings published in the *Annales*. By taking these positions, they confronted the ages-old theory of miasmas, which at that time was the major problem addressed by urban administrators. This group stated that even if miasmas existed, they were not scientifically relevant (La Berge, 1992).

Consequently, it was difficult to accept that the main cause of illness and death was the economic system, since this would require structural changes in society. So despite the apparent conflict between rationality and religion, Frank and the first French sanitarians utilized those scientific methods considered the most scientific (numbers presented in

statistical tables) to affirm a Christian maxim: the need for less economic inequality. The main names in the French hygienist movement were “pious Christians” (Ackerknecht, 1948, p.145). Based on the empirical data, the father of medical policing said the following at the end of the eighteenth century:

Let the rulers, if they can, keep away from the borders the deadly contagion of threatening diseases! Let them place all over the provinces men distinguished in the science of medicine and surgery! Let them build hospitals and administer them more auspiciously! Let them pass regulations for the inspection of pharmacies and let them apply many other measures for the citizens’ health – but let them overlook only one thing, namely, the necessity of removing or of making more tolerable the richest source of diseases, ‘the extreme misery of the people,’ and you will hardly see any benefits from public health legislation (Frank, 1941, p.90; emphasis in the original).

### **A different public hygiene: rationality that imposes cleanliness**

The physician and hygienist Alexander Parent du-Châtelet published *Les chantiers d'équarrissage de la ville de Paris envisagés sous le rapport de l'Hygiène Publique* [*The equine slaughterhouses in the city of Paris included in the public hygiene report*], a study which did not find more victims of cholera among those who lived near or worked in Montfaucon (a horse slaughterhouse) compared with other locations and determined that the putrid emanations of blood, rats, stagnant water, and horrible stench consequently were not necessarily detrimental to health (La Berge, 1992, p.219-227). If the slaughterhouse were to be eliminated, it would be for aesthetic reasons, just as removing tobacco manufacture from the city would also be purely aesthetic (Coleman, 1982, p.296). However, the Health Commission (which did listen to Parent du-Châtelet because of his scientific prestige) had to respond to social outcry by eliminating these putrid emanations, miasmas, and odors which for millennia had been thought to cause disease, and consequently stated the official opinion on the slaughterhouse using the following terms: “As for us, in spite of all the reasoning of men of art, and all the logic of science, our spirit refuses to believe that establishments as infected as those at Montfaucon offer no cause for insalubrity” (La Berge, 1992, p.221-223).

First, Edwin Chadwick (1800-1890) dialogued with and accepted the “social theory of epidemiology” (as it was later known) from the French public health movement (La Berge, 1988). However, he carefully noted that it was impossible to defend those points of view, since this made any position within the state impractical; the theory of miasma was much less problematic, since it did not involve the socioeconomic makeup of society and prophylaxis only involved technical adjustments in the cities. It was a politically innocuous theory (Hamlin, 1998, p.15) of public hygiene founded on a variety of sources including Cornaro, Hufeland, Villermé, and du-Châtelet, which used rational thought to conclude that the major problem was uncleanness, and that the solution was eminently technical and involved urban engineering; this was consequently in line with the interests of the State.

Chadwick wrote a report made public in 1842 entitled *Report to Her Majesty's principal secretary of State for the home department, from the Poor Law Commissioners, on an inquiry*

*into the sanitary condition of the labouring population of Great Britain; with appendices.* It was a large-scale overview of the degrading conditions English workers were subjected to, and essentially suggested doing away with miasmas by cleaning homes and streets, drying up swampy areas, and providing clean water and a sewage system. The text was also a way to instill some discipline into workers through the hygiene regulations derived from the Poor Law Commission.

This look at the working class began in France, questioning the perverse effects of industrialization on humankind, mainly illness and death. Chadwick, who for many years was considered the father of public health, initially agreed with this view, and set England ahead of European sanitary reforms from 1848 onward after conducting a study on the working class to reinforce the need to combat miasmas. He thus succeeded in putting “urban medicine” into practice for the first time in the Modern Era.<sup>10</sup> Others followed him, pursuing the same model, for example the Paris reform by Georges-Eugène Haussmann (1809-1891) between 1850 and 1860, which was intended to block the proliferation of miasmas along with popular uprisings (such as those of 1848).

### **Final considerations**

The historical research shows that what was defended as hygiene and public hygiene practices varied greatly according to the thinking of that time and local political aspirations. They ranged from understanding hygiene as a careful diet and temperance (Cornaro, Franklin, Hufeland) to the need to alleviate the effects of poverty (Frank, Villermé, du-Châtelet) and even cleanliness (Chadwick). The notion evolved from an individual method for organizing daily life and prolonging the lifespan to serve as a concept for actions the State could take to govern society as a biological entity. This concept acquired scientific legitimacy at the turn of the nineteenth century and circulated widely among the European states, spreading an ideal of “hygienic” behavior that was legitimized by various treatises on public hygiene.

Our goal here was to demonstrate its most important interpretations and adaptations as well as what was silenced. For example, despite the important contributions by Villermé and Parent du-Châtelet in the early nineteenth century, Chadwick was enshrined as the “father of public health.” An important fact: Chadwick’s studies after 1842 did not involve socioeconomic rearrangement, and as a result were not politically threatening to the English order. This was also true for the theory espoused by John Snow (1813-1858) that cholera was transmitted by contaminated water, which similarly led to his title as the “father of modern epidemiology.”

As stated in the introduction to this article, the great scientists were those who managed to convince their peers of their ideas and techniques, and responded most to a particular social demand. Scientific suggestions about what should be done are imbued with government priorities. A modern example is the urban beautification of the city of São Paulo, which is resulting in the neglect of an entire population group. It is even possible to assume that elimination of this group is part of the beautification plan, which could indeed be understood as public hygiene, but is incompatible with several other interpretations of

this term. This public administration, together with chronic social inequality in Brazil, turns this lack of assistance into a social cleansing policy.

And yet, on the other hand, the Renaissance idea of hygiene as a kind of self-care has returned in the present day, but not under the name of hygiene. Today, it is individual responsibility, with each person responsible for his or her own decisions; it is a context in which each person is an “entrepreneur of the self” (Foucault, 2008b), and failure is interpreted as a personal moral defect.

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#### NOTES

<sup>1</sup> For example, actions taken to address crack zones in urban centers and compulsory institutionalization of individuals who “besmirch” the social order.

<sup>2</sup> T.N.: Citations in English from Bourdieu (2007) were sourced from Pierre Bourdieu, *Language and symbolic power*, Cambridge, Polity Press, 1991.

<sup>3</sup> T.N.: Citations in English from Geison (2002) were sourced from Gerald L. Geison, *The private science of Louis Pasteur*, Princeton, Princeton University Press, 1995.

<sup>4</sup> Gruman (1961, 1966) and Solon (2014) stated that Cornaro was inspired by Asian ideas. Gruman (1966, p.28, 29) argued that ideas about longevity in Europe were fragmentary until Cornaro's time, while in China this topic was the subject of entire books and drew interest from wise men and the state.

<sup>5</sup> T.N.: Citations in English from Franklin (1963) were sourced from Benjamin Franklin, *The Autobiography and other writings on politics, economics and virtue*, edited by Alan Houston, Cambridge, Cambridge University Press, 2004.

<sup>6</sup> T.N.: Citations in English from Foucault (2008a) were sourced from Michel Foucault, *Security, territory, population: lectures at the Collège de France, 1977-1978*, New York, Palgrave Macmillan, 2009.

<sup>7</sup> In this and other citations of texts from non-English languages, a free translation has been provided.

<sup>8</sup> Places for the poor to work and sleep, and where people considered indigent where taken.

<sup>9</sup> According to the editor, Foucault (2008a, p.450) is in error when he mentions 13 domains, and uses De La Mare's originals to indicate that there were in fact 11.

<sup>10</sup> We can consequently say that the visions of Rosen (1993), and Foucault (1979) do not find empirical support in their interpretations of the differences in medical knowledge and social medicine during the period.

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