Chapter 14

The Old and the New Health Economics

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14.1 Introduction

A popular view of health economic scholarship is that the discipline dates back to Arrow’s seminal contribution of 1963.¹ The basic paradigm of the modern science of health economics is mostly neoclassical and this led to the development of a theoretical and rigorous science. Yet, as has been shown in the preceding chapters, since five hundred years, scholars have been interested in economic issues of health including the social and political sphere. Their contributions are typically ignored in modern health economics. In this final chapter, the question arises how the old generation of health economics differs in perspective from the new health economics.

A. Culyer has defined health economics as the “application of economic theory to phenomena and problems associated with health.”² This definition includes the contributions of the historical authors, but does not consider the social and political aspects discussed by the German and Austrian authors writing on health issues.³ As has been shown in chapter thirteen, the common themes, culture, the principle of subsidiarity, and the role of the state, are embedded in the theoretical context of the state sciences and give a glimpse of what is missing.

From a methodological point of view, a theory or an argument needs to be first reconstructed and then appreciated in the context and in the terms in which it had been proposed. Historical authors should not be judged according to terms, which have not been present at the time when they were writing (whig history of economic thought).⁴ In order to fulfil this requirement, the following terms have been derived from the preceding chapters: demand, supply, information, optimal contracts, the market for pharmaceuticals, insurance, technology, institutions (hospitals/nursing homes), evaluation of life and injuries, social insurance, and policy and future issues.⁵ Most of

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³ Compare, for instance, Erik Grimmer-Solem. 2003. *The Rise of Historical Economics and Social Reform in Germany 1864-1894*. Oxford: Clarendon Press. He wrote on pp. 9-10: “Because Gustav Schmoller and the ‘younger Historical school’ were tackling problems that were never only economic but also social and political, Schmoller and historical economics also have a considerable broader relevance to the history of Imperial Germany.”


⁵ These terms are also addressed in the following textbooks: Friedrich Breyer, Peter Zweifel. 1999 (3). *Gesundheitsökonomie*. (Health Economics). Berlin:
these terms can also be found in the present textbook literature in modern health economics. In part 14.2, these terms are squared with my substantive chapters (2 – 12). The chapter ends with a summary and conclusions.

14.2 Overview by Chapters

In the following matrix, the entries on the vertical axis show the major terms according to which the overview is presented. On the horizontal axis, though, I present the authors discussed in the preceding chapters.

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Paracelsus, Theophrast von Hohenheim (1493-1541)

In his social-economic writings, Paracelsus, Theophrast von Hohenheim (1493-1541) made early contributions to health economics, which can be summarized with respect to the terms on the vertical axis as follows:

(A / 2) Demand

The demand for health is distinguished from the demand for health services, which is partly dependent on the demand for health. Paracelsus emphasized both, demand for therapies and demand for health. He identified the conditions of live and work with the causes of disease. Therefore, he emphasized that the cure can only be found in the immediate environment of the condition. An example is his work on the causal relationships between economic conditions and practices and resulting medical conditions such as in the case of miners’ diseases in the silver mines in Tirol.

In contrast to this approach, in contemporary health economics the local aspect is not mentioned as an important factor for the demand for health or health services.

(B / 2) Supply

Paracelsus discussed medical supply in his critique of physicians’ behavior. In addition, he described monopolistic tendencies within the organizations of physicians and pharmacists and delineated welfare consequences; for instance, it was difficult for new talent to gain access; poor care at excessive prices resulted. In the second chapter, Paracelsus’ analysis has been related to the phenomenon of rent seeking in health care.

The relevance of Paracelsus’ approach lies in the recognition of all kinds of barriers that prevented medicine then to be effective - and still do now. Although he was not an academic outsider, having earned his doctorates in both, internal and external medicine, at the University of Ferrarra, he noticed that the use of the Latin language was a barrier to exclude newcomers. Paracelsus also was upset about local monopolies such as local doctors and pharmacists. For instance, he accused some of the local doctors to concentrate on diagnosis and on making money, instead of therapy and human dignity. This relates to the modern hypothesis that doctors may create more patient demand than there would be if they acted purely in the interest of the patient. Paracelsus has provided early evidence in favor of the hypothesis of supplier-induced demand, but clearly goes beyond. For instance, a patient's trust in the physician offers the possibility of fraud by the health care provider. He described all kinds of fraudulent behavior by health care providers. Further, he showed how legal

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7 Compare the entry “supplier-induced demand” in *The Dictionary of Health Economics*, op. cit., p. 333.
protection of the pharmacists makes it possible that the effective medicine is provided at an artificially high price. This, however, sometimes meets with the interest of patients, who – provided that the substance is effective in both cases - might prefer the more expensive medicine over the inexpensive version.

(C / 2) Information

Paracelsus recognized information asymmetries. For instance, he explained the phenomenon that some patients prefer the more expensive medicine over the cheaper one as arising from a lack of information on the side of the patients. He sometimes added gold or other precious metals to the effective substance in order to make his medicine more acceptable to such a patient. Another information asymmetry mentioned by Paracelsus was the lack of knowledge on the side of patients on how much effort it took a physician to learn about available cures and to gain the experience needed. He therefore suggested charging income related prices.

In the modern discussion on health economics different positions with respect to information asymmetries prevail. Culyer has noted that in health care, information asymmetries “have deep-reaching consequences for its organization, regulation and financing, mainly in order that the lay person (patient, potential patient, carer) is not exploited.” (op. cit., p. 175). Goodman and Musgrave take the contrary position. According to their view, health care is no different from other markets, where complicated products are sold; consequently, the consumer (patient) does not need special protection.\(^8\)

Paracelsus’ time was far less specialized; markets hardly existed. He combined the search for the “just” price for medical care with discourses on professional ethics and stood for income-based fees in medicine. He took into account that only highly trained, experienced professionals could provide reliable health services.

(D / 2) Optimal Contracts

Optimal contracts are characterized by incentives leading towards efficient behavior (compare the discussion of incentive compatible structures in chapter ten). In the case of Paracelsus, we find that he insisted on patents for his medicine and medical authors’ copyrights, clearly understanding the incentive for effective propagation of knowledge. Patents and copyrights serve two functions: first, they provide an incentive to gain knowledge, and second, they allow for authenticity. In the case of Paracelsus, his writings were often copied, and in many cases errors were added in the process which he sought to prevent by a medical author’s copyright. In modern medicine, plagiarism is still a concern, even on a global scale.

Paracelsus is the founder of pharmaceutical medicine. When he did research in the mines of the Fuggers in Tirol, he criticized them for charging too high prices and, in one instance, even for providing ineffective medicine. In Basel, he criticized local pharmacists for overcharging patients. Paracelsus oftentimes provided inexpensive medicine to his patients, which he prepared himself. He noted that the effective substance was inexpensive to acquire or to make. He further demanded patents and copyrights, because he wanted to remove barriers to medical progress.

In the context of innovations, Schumpeter has made this argument later in a refined form. Schumpeter’s protective argument applies to the pharmaceutical industry (compare footnote 15 in chapter ten). In the case of high costs for R&D, a monopoly might be preferred to a competitive market, where these expenditures might not take place. The argument has to be put in a broader context when a licensing procedure is involved. Successful innovations require three parts: first, the process of discovery may lead to an invention. The invention needs to be perfected so as to arrive at a product. The prototype can be patented. The patent, however, is not sufficient for marketing the product. The licensing requires repeated tests for safety and effectiveness. In many cases now, in the pharmaceutical industry, but also in car parts, the time required for licensing the product by far exceeds the time for research and development (death valley). Obviously, this detracts from the duration of the patent protection and thereby reduces the patent rent, which in turn is the incentive for developing the product in the first place.

Current health policy is also directed at the pharmaceutical market beyond the stage of patenting and licensing. For instance, a variety of cost-containment measures are directed to offset some consequences of third-payer reimbursement. Schemes of own contributions, listings of medicine to be reimbursed, and incentives to pharmacists for providing generic medicine instead of the more expensive brands raise awareness and responsibility with respect to the use of medicine among patients, physicians, and pharmacists.

In this highly regulated political environment of pharmaceutical markets, the question arises, where does the economic contribution of Paracelsus consist in? Paracelsus shows an efficient solution for the pharmaceutical market by demanding patents and medical authors’ copyrights. On this point, his view can be seen as a precedent of what is presently current in health economics, but his perspective is broader. Paracelsus is the founder of pharmaceutical research. To him it is a matter of finding the effective agent and to overcome the Aristotelian medicine. In modern health policy discussions the view prevails as if the effective agents are known. In contrast, Paracelsus was always in search of the effective medicine and demanded patents and copyrights, because he did not want to hinder medical progress.

In the absence of health insurance, Paracelsus’ patients paid for the cure out of
pocket. Health care spending was constrained by market prices, but the resulting market prices were not always perceived as just by Paracelsus. As has been shown in chapter two, several causes played a role: the presence of monopolies, fraud by physicians, information deficits on the side of the patients and poverty of patients. Paracelsus proposed to provide health care for free to patients, who could not afford it, and to charge income-related fees otherwise.

How to deal with the uninsured is still a challenge to health economic policy. Paracelsus’ example has been discussed by Epstein, who has shown that the voluntary provision of health care services by physicians and hospitals for free to those uninsured patients, who needed it, is preferred to the mandatory provision of health care. As has been shown in the discussion in chapter eight, if physicians and clinics are required by law to provide health care for free to the needy and to people without health insurance, it is well likely that some physicians and in particular small hospitals will have to close their practice, because they cannot afford the amount of free care they have to provide. The result is that less health care is being supplied than before. For this reason, Epstein, a supporter of free markets in health care, concluded that the decision for the supply of free health services has to be a voluntary one by the single physician and hospital rather than a mandatory decision by the state.

(G / 2) Technology

According to Paracelsus, nature does not provide us with goods ready to use. Men have to work in order to develop those goods. While God has given us iron, he has not told us, what could be made of it. God wants men to develop crafts and sciences.

(H / 2) Institutions (Hospitals, Nursing Homes)

Paracelsus urged people to help each other. He noted the danger of infection when the sick are at one location, notably at battlefields, but did not make similar remarks with respect to hospitals and nursing homes. In his time, charities, in particular churches ran hospitals.

(J / 2) Evaluation of Life

Paracelsus asked, who can tell the value of a life? And related, who can tell the value of physicians’ services? The roots of early life insurance based on evaluation of life

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reach back into his time.

(K / 2) Social Insurance

Paracelsus demanded that people should not have more income than they needed. If they have more, then they should give it to those, who are in need of income.

(L / 2) Policy and Future Issues

Paracelsus’ extensive writings contain visions of policy and future health issues.

In conclusion, we can state that Paracelsus wanted physicians, pharmacists and other health care suppliers to compete with each other in order to meet patients’ needs with high-quality services. He combined the idea of competition with ethical considerations. His basic economic concern was to remove all kinds of barriers that prevented the medical marketplace from working. Herein lays the main difference from what we observe currently, namely an increase in the regulations surrounding health and health care. The regulation of medical practice today is at odds with what Paracelsus stood for. Although he would make the case for undistorted markets in health care and a reduction of bureaucracy, he would not forget the needs of the poor. A modern health policy proposal on the basis of Paracelsus’ work would call for an integration of the science of medicine into the broader context of social sciences. It would call for less regulation of medical practice.

Christian Freiherr von Wolff (1679-1754)

In Paracelsus’ writings, the definition of a science was not yet given explicitly. More than a century later, Christian Freiherr von Wolff (1679-1754) formulated the conditions, which disciplines have to fulfil in order to become a science.

(A / 3) Demand

Central in the third chapter stood Wolff’s perspective of the order of society and its implications for health and health care. According to Wolff, society is not based on individuals, but on social units such as families, which form the basic unit of decision making. In the families, a division of labor takes place according to individual skills and endowments. Wolff introduced the principle of subsidiarity. Extended families should only receive help, if they cannot shoulder a task themselves. In the case of health care this means that the state or any other entity should not automatically intervene. According to Wolff, optimal medical care is based in the extended family, “the house.” This is an environment that in the time of Wolff included the sphere of production.
(B / 3) Supply

Quality considerations stood central in Wolff’s analysis of supply of health care. For the field of medicine, he provided clear definitions and demanded more rigorous methods for medicine to become a scientific discipline. For instance, he recommended the use of protocols in order to evaluate different healing methods, which should be applied repeatedly under similar conditions. Over time, medicine became a more rigorous, scientific discipline, which made rapid strides, but the basic economic problem has not been solved: how to pay for it? With the principle of subsidiarity, a principle of natural law, Wolff laid the basis for an answer.

(C / 3) Information

Wolff contributed to the flow of information by systematizing the knowledge of his time.

(D / 3) Optimal Contracts

When Wolff developed the principle of subsidiarity, one could hardly speak of free markets, because the influence of the church was still dominating public life. Nevertheless, it can be presumed that Wolff had the vision of a free market.

As has been shown in chapter three, on the one hand the subsidiarity principle is a safeguard against the inefficient incentives that would result from a system of positive rights to health care each individual can claim from the state; on the other hand it implies a restriction to what can be left to the free market. Herein lays the modern relevance of this contribution.

Both, a free market approach to health care, as well as a national health care system could gain from Wolff’s thought.11 In proposals, which are in favor of a free market in health care, a restriction to the workings of the free market is typically missing. Similarly, if we look at the other extreme, in a national health care system, there is provision of health care by the state and the result is a shift of care provided from the family or other social entity to hospitals, nursing homes, etc. The question arises whether the state is the more efficient provider of health care. (Compare the discussion of economies of scale in chapter six, in particular footnote 13). This question is addressed by Victor Fuchs, but he does not mention the subsidiarity principle. Fuchs wrote: “Whether a dependency relationship with the state will prove less burdensome [than intrafamily dependency relationships, my add., U.B.] remains to be seen. There is also the question of whether the efficient provision of impersonal ‘caring’ is feasible.”12 As has been discussed in chapter thirteen, the subsidiarity

11 A national health care service can either be financed by taxes or by compulsory health insurance.
12 Victor R. Fuchs. 1986. The Health Economy. Cambridge, Massachusetts:
principle concerns a basic organizing principle of society, which goes beyond what is now discussed as optimal medical care.

(E / 3) The Market for Pharmaceuticals

Wolff was concerned with the quality of medicine including pharmaceuticals, which he wanted to improve by raising the scientific standards of production and development. He did not deal with economic aspects of the subject.

(F / 3) Insurance

Wolff deductively dealt with the conditions that are at the basis of insurance, but followed a different route. He studied these conditions and devised the principle of subsidiarity accordingly.

(G / 3) Technology

With respect to technology, Wolff described the state-of-the art of all crafts and sciences of his time. He did not deal with economic aspects of technology.

(H / 3) Institutions (Hospitals, Nursing Homes)

Except for his description of measures of hygiene within hospitals and other institutions, Wolff did not focus on the subject. As has been shown in the second chapter, Wolff relied on deductive reasoning, and in his argument there was little room left for Christian mission. At his time, institutions were mainly charities run by the church. His main political adversaries were the Pietists, Francke and Lange. Francke is the founder of a major charity, the so-called Franckeschen Stiftungen.

(J / 3) Evaluation of Life

In Wolff’s time, early life insurance was present, but Wolff did not attempt to mathematically deduct the value of life.

(K / 3) Social Insurance

An important theme by Wolff was the provision of care to the elderly and the elderly ill.

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The answer he derived within the framework of the principle of subsidiarity is both effective and efficient.

(L / 3) Policy and Future Issues

Wolff studied all sciences and provided a systematic overview. On this basis, he also discussed policy and future issues. When he described the Chinese system as an admirable example, mainly for its philosophy and ethics (Confucianism), but also for its educational system and methods of health care, he had to leave the University of Marburg, as well as the city of Marburg. Behind these measures stood the Pietists, his political adversaries.

Johann Heinrich Gottlob von Justi (1717 - 1771)

Wolff followed the mathematical-deductive method and a priori reasoning, an approach he does not share with the Cameralists (compare chapter four). Wolff has in common with the Cameralists the pursuit of basic values, which he considered as contributing to the happiness of people. The Cameralists valued health, education, and virtues such as a good work attitude as factors contributing to the wealth of a state, which they wanted to increase. The focus of the third chapter was on the contributions with respect to health and health care by Johann Heinrich Gottlob von Justi (1717 - 1771), the most prolific writer of the Cameralists.

(A / 4) Demand

The Cameralists recognized the importance of higher productivity from a work force, whose health could be maintained or restored beyond what was possible during or right after the Thirty Years' War (1618-1648). They considered a healthy population the basis for wealth creation. Health is thus seen as part of a state's capital endowment. By focusing on so-called population measures, Cameralists tried to improve the health, education and work attitude of the population in order to increase the wealth of the country. Since the happiness of the people is the focus of Justi's analysis, their health is his central concern and he considers every conceivable aspect in which the state through policy and administration can improve the health state of the populace. For instance, he focused on agricultural policy in order to prevent starvation and starvation-related diseases. He tried to improve sanitary conditions and initiated public health laws. He suggested that war should not be led in wintertime in order to minimize human losses.

In conclusion, we find that the perspective of the Cameralists differs substantially from the current mainstream, where demand of health and health services does mean a personal investment in health when interpreted as stock and not as flow. (Culyer, op.
This interpretation does not take into account a country's higher productivity from a work force, whose health can be maintained or restored beyond what was possible before. Cameralists have interpreted the stock of people's individual health not only as a personal investment, but as part of the wealth of a country.

(B / 4) Supply

Justi recommended measures to improve the quality of health care provision, for instance by the introduction of local supervisory committees composed of professional health care providers and by setting up statistical databases on illnesses and deaths in order to study the causes of diseases.

(C / 4) Information

In order to reduce mortality and morbidity, the Cameralists gathered information on illnesses and the causes of deaths. They set up statistical databases in order to improve the effectiveness of the health care system. The resources saved by keeping in check the threat of epidemics could be accounted for. The emphasis was different. In current statistics, there is little emphasis on health benefit accounting. The resources saved by health care measures do not enter national budgets on the benefit side.

The Cameralists' concern for quality of health care services provided is also a concern in a time of cost-containment in health care. By introducing more efficient procedures some hospitals are able to improve the quality of health care provided.\textsuperscript{14} Other examples point in the opposite direction. Control and monitoring of the quality of medical procedures and of pharmaceutical products often increase bureaucratic requirements, leaving less time for the physician to spend with the patients. This might negatively affect the quality of individual care. The quality of a nation's health care system might be affected, if certain therapies were excluded from reimbursement, or if treatment options are not made available in that country.

(D / 4) Optimal Contracts

As has been shown in chapter four, the policies proposed by Justi and other Cameralists contain incentives in order to achieve the desired goals; a healthier, better nourished, basically educated and more stable population leads to higher economic growth.

\textsuperscript{14} Compare Wolfgang Pföhler. 2005. „Wir wollen jedes zehnte Krankenhaus in Deutschland.“ (We Want Every Tenth Hospital in Germany). \textit{Frankfurter Allgemeine Sonntagszeitung}. October 23, 2005, p. 39.
Cameralists believed that professional councils should take a bigger role in the regulation of production and sale of pharmaceuticals. Their main concern was to improve the quality of medicine.

Following the tradition of Wolff, Justi developed a catalog of duties of men. These are partly in response to the conditions, under which insurances would arise otherwise.

The Cameralists furthered technolocal research and use of technology. They introduced the Cameralist sciences at Universities. The question how to finance technology was a central question of Cameralism. To Roscher, who firmly stood in the tradition of Cameralism, the financing and development of technology was the key issue to cultural and economic development of a nation. (Compare chapter five).

Cameralists addressed institutional care and measures of hygiene within institutions. For instance, the encyclopedic work by Johann Peter Frank, a physician and cameralist, appeared in nine volumes and contains detailed instructions of hygienic measures with respect to medical procedures, care of patients, and the environment, hospital rooms and homes. (Compare footnote 25 in chapter four). The work is considered basic to the science of hygiene.

To Cameralists, the value of life was high. For instance, Justi undertook efforts to abolish the death penalty and to facilitate jail sentences. He was concerned about the loss of human lives during warfare.

The duty of men included to work as long as possible, only the elderly ill should be housed and cared for in nursing homes.
By creating a statistical basis of socio-economic data, the Cameralists created the basis to devise and implement policy measures. They combined practical experience with the study of Cameralism, which they established and developed.

**Wilhelm Roscher (1817-1894)**

Wilhelm Roscher continued in the tradition of the Cameralists (compare chapter five). He is generally recognized for the introduction of the historic method in economics. Based on Aristotle, he saw the family unit as the beginning of a nation’s economy, the basis for his social-political and economic approach to health and health care.

**(A / 5) Demand**

Roscher has called attention to negative health effects of the work in factories. He held that overtime work, work by children, and an extreme division of labor could lead to illness, both physical and mental, and eventually to cultural regress. He was an advocate of factory inspectors in order to remedy the inhumane conditions in factories.

As pointed out in chapter five, the changes brought about by the industrial revolution were affecting individual and family responsibilities and led to profound changes in society, such as an increase in the specialization of labor over time, which can lead to negative health effects. As a relief from the one-sidedness of the work performed, Roscher has recommended that professionals serve time at their local communities. They could serve as mentors to the members of the lower classes. This would also be a contribution towards closing the gap between the employed and the unemployed. Society could eventually achieve a higher cultural level, which Roscher considered the prerequisite for better health and better education.

**(B / 5) Supply**

Roscher noted that the freedom to run a business has to be restricted in the case of physicians and pharmacists, where harm can be done to the patient or consumer. He feared that in the case of freedom of concession, some physicians would start mixing poison and produce medicine for abortion as evidence from North America and Imperial Rome has shown. He predicted that in the case of freedom of concession, specialists would not be affected severely, but that family doctors, whom he considered the most useful part of the profession, would sink deeply. Therefore, he advocated for restricted access to the profession and in the tradition of the Cameralists for state control of the science of medicine.

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Roscher has also noted that professional help could not arbitrarily be replaced by motivated, but unprofessional volunteers as this would lead to a loss in the quality of health services provided. This was in particular relevant for charities.

(C / 5) Information

According to Roscher, a follower of Christian ethical principles, providing information is not sufficient to make Adam Smith' “invisible hand” of the market work. In the example of medicine, laws of concession, professional ethics, regulation with respect to consumer and worker security, and a healthy morale of the people are also required.\(^\text{16}\) The main task of the factory inspector is to gain information from within the factory. The factory inspector has to get the information from the “factory population” and provide it to the state with the goal to initiate state regulation (Roscher, op. cit., § 60a., p 339). Roscher does not consider the local level as the appropriate level, because communities were too dependent on local industries (Roscher, op. cit., § 60a., p 340).

(D / 5) Optimal Contracts

Roscher thought about how Christian ethic could be applied in the mid-nineteenth century. He “paid due tribute to the social achievements of the massive, well-organized Roman Catholic charities of his time, but preferred the more discriminating Protestant institutions.” (H. R. C. Wright, op. cit., p. 151) Roscher was not in favor of services that would help the able-bodied in general, such as soup kitchens. He considered them as too tempting for many people to participate. He preferred a more selective charity where only deserving people should receive help sufficient to the case.

(E / 5) The Market for Pharmaceuticals

For apothecaries Roscher demanded concessions like those described for physicians. His concern was that under free competition, pharmaceuticals were not available on Sundays and at night. He also thought that many of the seldom used medical products, which were nevertheless indispensable, would not be offered anymore (Roscher, op. cit., § 57., p 305, fn. 4).

(F / 5) Insurance

With respect to accident insurance, Roscher has suggested that the factory owner as the employer should carry the costs of an accident when an employee is involved, independent of who caused the accident. The victim and his dependents should receive reimbursement. Therefore, a factory owner has to take out accident insurance, which should then become part of the price of the product and thereby is shifted onto the consumer (Roscher, op. cit., §63, p. 380).

(G / 5) Technology

Roscher was critical of state regulations concerning technology. In principle, he wanted to leave the initiative to introduce technical changes and to develop new products to the free forces of the market (compare Roscher, op. cit., § 58, pp. 318-324).

(H / 5) Institutions (Hospitals/ Nursing Homes)

Roscher was in favor of an open society. For instance, in the case of health care he opposed locking up the mentally ill and suggested to integrate them in society, as far as this was feasible. The mentally ill pose a burden on society and Roscher demanded tolerance from society.

In current health economics, we also find evidence in support of integration of the mentally ill in society (compare footnote 11, chapter one). The modern evidence is based on a comparison of costs and benefits of inpatient and outpatient treatment programs. Roscher’s argument was driven by ethical considerations.

(J / 5) Evaluation of Life

An important part of Roscher’s methodological efforts was to put attention to the statistical methods of economic investigation. The statistical methods to evaluate life in early life insurance schedules were part of these efforts. “Although his approach to statistics was far different from today’s, his attempts brought widespread recognition of both the value and the problems of the use of mathematics in economics.” 17

(K / 5) Social Insurance

Based on Aristotle, Roscher saw the family unit as the beginning of a nation’s

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economy, the basis for his social-political and economic approach to health and health care including social insurance. This was also consistent with his religious views and the experience of the time in which he lived.

(L / 5) Policy and Future Issues

Roscher’s main point discussed in the fifth chapter, to look into the work environment in order to prevent negative health effects, has a place in any modern health economic program. The one-sidedness of labor, even for high-standing professionals, and the deep division between those employed and those unemployed could lead to negative health effects such as depression and emotion-related diseases on both sides. Roscher’s idea to overcome this division between the employed and the unemployed could become part of any modern employment concept.

Adolph Wagner (1835-1917)

Adolph Wagner followed the deductive method, but was politically engaged in the same sense as Roscher and Schmoller. As has been shown in the sixth chapter, his social-political and economic contributions considered are both positive and normative.

(A / 6) Demand

An implication of Wagner’s Law is that preventive measures in medicine (and other fields such as jurisprudence) will become more important in the future than curative measures. This affects demand of health services, but how precisely demand will be affected Wagner left open.

(B / 6) Supply

The implication of Wagner’s Law that preventive measures in medicine will become more important in the future than curative measures also affects supply of health services; presumably in the direction of more sophisticated and complex health care provision, but this was not described by Wagner.

(C / 6) Information

Information is crucial to a highly developed society as referred to by Wagner. He predicted that the state will become more influential over time with an increase in the amount and quality of information by cultural and technical development and the general sophistication and interconnectedness of a complex society. This prediction
is referred to as Wagner’s Law or the law of increasing state purposes. It does not necessarily follow from Wagner’s Law that public expenditures will grow over time, but that the influence of the state will grow. It is derived under the provision that only the state, an efficient provider of goods and services, could provide sufficient capital to finance expensive technologies. Of course, this was formulated before the emergence of national and global capital markets. As has been shown in the sixth chapter, Baumol and Bowen have refined Wagner’s reasoning by including national and global capital markets.

(D / 6) Optimal Contracts

Wagner provided an early formulation of the public goods theory by formulating the conditions under which the state can and should play a role in the provision and finance of goods and services. For instance, private investment can be highly volatile. If continuous funding is required for finishing a long-term research project, then this would according to Wagner be a reason for public funding or state intervention in order to secure private funding. With these systematic normative conditions for a role of the state in the provision of services Wagner created a basis for legislation.

(E / 6) The Market for Pharmaceuticals

There is broad evidence that Wagner’s prediction with respect to a major focus on preventive medicine is right. In recent years, medicine’s focus has indeed been shifting from palliative to preventive measures for curing major diseases and developing regenerative therapies. Research in the development of pharmaceutical products, medical technology, biotechnology and related fields requires a high amount of capital for funding, but the prospect of potential cures and regeneration might improve the rate of return on investment. In terms of human capital and productivity, especially among older, experienced workers, medicine is becoming a more justifiable expense so that private investment might take place. In case of high volatility of private investment, Wagner suggested public funding.

(F / 6) Insurance

A health policy program following the tradition of Wagner would consider the capacity of the medical industry to be an engine for the economy, both incorporating and supplanting much of current high-tech industrial developments. This would have to be combined with an insurance system providing a minimum social safety net as proposed by Wagner and later postulated by Baumol and Bowen. The insurance system would take care of basic needs, but would not be restrictive to those patients, who wanted to purchase health care beyond what is paid for by insurance. This way, new technology can continuously be developed and refined. New economies of scale and scope could be realized by further automation. Eventually, the technology
would be affordable by those who have to rely on insurance payments. As Baumol and Bowen have shown, a factor limiting the introduction of technology in medicine would then be the minimum of individual care required.

(G / 6) Technology

Wagner’s point of departure was the recognition that there is an increase in the cultural and technological complexity of society over time. His basic conclusion should be kept in mind that the cultural and technical development of a society leads to an increase in the influence of the state, for instance in the legal and health environment, where preventive measures become more important over time. In an effort of cost-containment, modern health economic policy proposals are often directed towards a restriction of the introduction of medical technology, a shortsightedness from Wagner’s point of view.

(H / 6) Institutions (Hospitals, Nursing Homes)

The altruistic and help motive was central to Wagner. He wanted private initiative and the churches to set up hospitals and nursing homes. For the state, he foresaw only a supervisory role.

(J / 6) Evaluation of Life

As a protestant Pietist, Wagner did not consider evaluation of life as an economic topic, and therefore did not make contributions.

(K / 6) Social Insurance

To Wagner, the help and altruistic motive was strong. With respect to social insurance, he requested help by close family members and the circle within the church, in contrast to Schmoller, to whom the actuarial principle was central.

(L / 6) Policy and Future Issues

Wagner contributed to both, positive and normative health economics. With his systematic normative conditions for a role of the state in the provision of services he created a basis for legislation.

The current so-called explosion of health care expenditures is partly due to factors identified by Wagner, such as a shift toward preventive services and technological advance, but partly also to deficiencies in the health care organization, such as bureaucratization and generous reimbursement payments by health insurances.
Policy relevance requires a distinction between these two sets of causes. Meanwhile, his analysis has been refined in many ways. For instance, public choice economists focused on the aspect of bureaucratization, and Baumol and Bowen studied productivity differences among various sectors of the economy in order to explain the development of the public influence over time. These refinements have led to a more realistic explanation of what we currently observe.

**Carl Menger (1840-1921)**

Carl Menger focused like Roscher, Schmoller, and Wagner on the role of education and economic development in order to raise the culture of a nation.

(A / 7) Demand

Menger showed that the behavior of those people who plan ahead for the future is wealth-enhancing, and their life-style is healthier than that of others. They are more likely to make investments which will raise the culture of a nation.

(B / 7) Supply

Menger was a proponent of low state influence. He described the medical market as a competitive market, where in the absence of health insurance patients pay out of pocket for medicine and treatment.

Today, the option that patients pay for the desired treatment and medicine out of their pockets is not always available. Moreover, for reasons of cost-containment, in some countries certain treatments and drugs are withheld from the market by state regulation. Health economists are often seen as professionals who help to draw the lines between wasteful expenditures of health insurances and expenditures for what is considered legitimate patient demands. In a country, where this advice is politically binding, the therapies excluded will no longer be available, not even to the patients who would be willing and have the means to pay for them. If we apply Menger’s analysis, there is no such role of the health economist that would lie in the exclusion of effective therapies and treatments. Menger would never accept a state appointed and paid health economist. Patients would have to find a consultant in the private market and they would have to pay for this service.

(C / 7) Information

In a low-standing culture, where the amount and quality of information is at a low level, individual time-horizons tend to be short and people are more prone to make errors with respect to the recognition of their state of illness and the effectiveness of medicine than in a higher developed culture. The higher the culture, the longer will be the individual time-horizon, and the less likely people are to make errors. The
argument that people make errors was later criticized as paternalistic by Ludwig von Mises, another proponent of the Austrian School.

Menger’s point of errors is relevant in current health care. Information about health-related topics is widely available; as the Internet and the media flood consumers with medical data, some patients have started demanding specific drugs and treatments from their physicians. They might be wrong in what they consider the proper treatment, and their hopes might be unrealistic. Not only patients can be wrong, physicians are also likely to make errors. Danzon, Pauly and Kington (1990) have shown the effects of medical malpractice costs on the costs of health care. Evidence from the study suggests that higher costs of medical malpractice, which are reflected in higher costs for physician’s liability insurance, are passed on to patients’ fees.¹⁸

In contrast to Menger’s point of errors, which did not receive much attention, the impact of time preferences on health became one of the main pillars of health economics. Individual time preferences are important in cost-effectiveness studies, which involve the modelling of health effects; for instance, the improvements in health brought about by an intervention (compare the discussion in the seventh chapter). Subsequently, health effects can be translated into estimates of capacity to work and ability to function. Time preferences also play a role in the explanation of addictive behavior of persons, who discount or ignore future consequences of their behavior; and time preferences are an important factor in the decision to buy insurance coverage.

(D / 7) Optimal Contracts

Menger never made institutional arrangements a subject of his analysis. He did not see the problem of incentive compatibility.

(E / 7) The Market for Pharmaceuticals

Menger did not discuss the market for pharmaceuticals.

(F / 7) Insurance

Individual time preferences are likely to influence the decision to buy health insurance coverage. Under a scheme, where health insurance is voluntary, a preference for present consumption can lead to unmet health care needs in the future.¹⁹ Those people, who evaluate the benefit of a present consumption as higher

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¹⁹ Compare Friedrich Breyer and Peter Zweifel. 1999 (3). Gesundheitsökonomie.
than that of a future consumption, are likely not to take out sufficient insurance or do not save enough as a provision for old age, and politicians, interested in being re-elected, typically represent the same, short-sighted preferences. Therefore, interference by politicians would not solve the problem.

(G / 7) Technology

Menger did not explicitly discuss issues of medical technology.

(H / 7) Institutions (Hospitals, Nursing Homes)

Menger did not give applications with respect to hospitals and nursing homes.

(J / 7) Evaluation of Life

The “evaluation of life” issues did not belong to Menger’s topics.

(K / 7) Social Insurance

Menger did not treat social insurance as a topic.

(L / 7) Policy and Future Issues

In chapter seven, the connections between individual time preferences and human capital investments have been shown. Human capital investments are determined by outside conditions and opportunities, but driven by individual decisions reflecting individual abilities, dispositions, knowledge, and experience. These economic and psychological insights are often overlooked in modern health policy proposals. From the point of view of health policy, one has to distinguish between innate factors or those otherwise immutable, i.e. not subject to choice, and those that are subject to choice. Only those that are subject to choice can be influenced so as to change health related behavior.

(Health Economics). Berlin: Springer, p. 158.
Gustav von Schmoller (1838-1917)

His scholarly counterpart in the question of method, Gustav von Schmoller (1838-1917), agreed with Menger, in line with Roscher and Wagner, on the purpose of political economy to raise the cultural level of the population with health being an important aspect of culture. Schmoller focused on the creation of markets as the basis of the economy. He considered insurances based on actuarial principles as an important part of the economy.

(A / 8) Demand

Schmoller investigated the life and work environment with respect to the causes of illness and accidents. He saw demand for health services not as an isolated cause, but in relation to poverty and the social question.

(B / 8) Supply

According to Schmoller, the supply of basic health care services had to be provided through the market.

(C / 8) Information

Insurance companies based on actuarial principles need information about the probabilities and impact of an event occurring in order to set the premium in relation to the real experience of a population. Schmoller proposed to set up company based insurances and insurances based on other small groups of society so that sufficient information on probability and impact of risks would be available (compare the discussion in chapter eight).

(D / 8) Optimal Contracts

Schmoller discussed optimal contracts in the context of his industry and guild studies. He described incentive compatible contracts.

\[ \begin{align*}
\text{(A / 8) Demand} \\
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\[ \begin{align*}
\text{(D / 8) Optimal Contracts} \\
\text{Schmoller discussed optimal contracts in the context of his industry and guild studies. He described incentive compatible contracts.}
\end{align*} \]

\[ \text{Schmoller proposed the cooperative solution: small groups would form their own group insurance companies. This solution minimizes negative consequences stemming from moral hazard and avoids adverse selection. Compare Kenneth Arrow. 1963. “Uncertainty and the Welfare Economics of Medical Care.” American Economic Review. 53 (5), pp. 941-973.} \]

\[ \text{Compare the separate issue by Richter: Zeitschrift für die gesamte Staatswissenschaft. Jürgen Backhaus: Schmoller als Rechtsökonom, The Elgar Companion of Law and Economics} \]
Schmoller did not discuss the market for pharmaceuticals.

Schmoller investigated insurance solutions for preventing hardship for families. He laid the basis for an insurance system based on actuarial and, by implication, market principles, but guaranteed by the state. He wanted to introduce catastrophic health insurance, which would be obligatory, and beyond that open up the market so that people could buy additional health insurance for more encompassing coverage.

Questions of technology are central factors of explanation in Schmoller’s work.

Schmoller discussed questions of institutions (hospitals and nursing homes) in the context of the so-called “New Social Institutions.”

In his study on the costs of war, Schmoller took up early questions of the evaluation of life.

Schmoller was the architect of social insurance, but had reservations about unemployment insurance. In the case of basic sickness, old-age, and accident insurance he was in favor of general, compulsory insurance-based compensation through a variety of independent insurance funds at the local level, run jointly by workers and employers and with scope for choice between different schemes. Schmoller was not in favor of a large bureaucracy, for instance in order to administer the accident insurance, but of policies which can be abolished when the market grows.  

International comparative studies of liability law and worker compensation had shown that in many cases damages could not be claimed, because proof of
Modern discussions about such issues as care for the elderly, catastrophic illnesses and epidemics, although in principle open to an insurance based approach, are often dealt with by specific tailored programs. For instance, in Germany the old age care insurance system (Pflegeversicherung) is a political solution to what, in principle, is a problem that any insurance market could readily handle. This specific political solution, designed by Dr. Blüm to garner the vote of the elderly, is laden with disincentives and hence inefficiency and predictably has produced a large deficit; this deficit has to be counted under the Maastricht criteria. Had a market based approach been opted for, the political electoral effect could not have been attained, but the deficit, if one had occurred, would not be a mortgage on current fiscal policy. The insurance based approach has the advantage of creating incentives to reduce risks and losses. This is not true for most program based projects.

(L / 8) Policy and Future Issues

In contrast to Roscher, who excluded many issues due to his religious beliefs, Schmoller included those issues and founded an encompassing social science. While Schmoller has propagated insurance solutions to be provided by the market, he also saw the need of state provision of catastrophic health insurance which he wanted to make obligatory. While current health economics emphasizes market failure and uses market failure as an argument for state intervention, Schmoller took the opposite approach and argued for political intervention in order to support and trigger market forces so as to provide market solutions for social policy objectives. Instead of emphasizing market failure, Schmoller tried to create the conditions under which markets can evolve.

Karl Bücher (1847-1930)

Karl Bücher recognized that the market could not solve the problems of the time (compare chapter nine). Instead of demanding political interference, he took a different route. He has contributed an organizing principle, which affects both, supply and demand of health and health care services.

(A / 9) Demand

By focusing on the nonmarket elements in health care, Bücher has shown that next to provision of health care through the market and/or the state, nonmarket exchange is an alternative method of organization. By pointing out the characteristics of nonmarket exchange, Bücher has shown how high quality goods and services such negligence was not possible. For this reason, Schmoller opted for compulsory industrial accident insurance. Grimmer-Solem, 2003, op. cit., p. 211.
as health care can be provided outside the market. Reciprocity, as it occurs in gift exchange, borrowing and lending, and the voluntary exchange of labor, is a precondition for the provision of high quality.

As has been shown in chapter nine, a focus of the current discussion in health economics is on altruistic behavior on the one hand, and market solutions on the other. Under a system relying heavily on altruism, not enough health care services might be provided and often not in the quality required. While market solutions in health care tend to provide sufficient quantity of supply, they are loaded with ethical problems and require a close control of quality. If Bücher’s concept is compared to these alternatives, then the added value of his contribution becomes clear: his concept assures the provision of high quality services. Bücher’s principle could be introduced as a supplement to any existing system in health care. From this chapter the suggestion follows that state policy towards health issues should focus on fostering such reciprocal relations instead of providing services directly.

(B / 9) Supply

Bücher emphasized the cooperation between physician and patient in a non-standardized relationship. He was not in favor of regulation, for instance through standardization of treatment, because valuable information pertaining to the individual case can get lost.

(C / 9) Information

Bücher described very specific information that was for instance at the basis of gift exchange.

(D / 9) Optimal Contracts

Bücher studied cultural and political institutions in order to see how economies worked. He did not describe standardized relationships, but very specific circumstances.

(E / 9) The Market for Pharmaceuticals

Bücher did not study the market for pharmaceuticals.

(F / 9) Insurance

Bücher’s estate at Osaka shows that a focus of his interest was on banking and insurance, in particular with respect to asymmetric information.
Bücher did not study technology as a factor of explanation.

Bücher studied different examples of institutions in order to identify those that have been successful.

Evaluation of life was not a topic studied by Bücher.

Bücher looked for alternative arrangements in the family circle and beyond.

For policy issues, he referred in particular to historical studies. He searched for those policies that have been successful in the past.

Friedrich Althoff (1839-1908)

Friedrich Althoff, the legendary Prussian administrator in the Ministry of Culture and Science, showed how to set up a university system by the state in a meaningful way. Through his skillfully designed science policy, he created an institutional environment in which science and scholarship could thrive. The focus in chapter ten was on medical science and scholarship.

In the field of public health and the introduction of public health legislation, Althoff’s influence was visible. He tried to take effective measures to control and eliminate tuberculosis and other infectious diseases. If one would follow Althoff, then one would investigate the value of the latent, but continuing, benefits of averting outbreaks of epidemics caused by temporarily vanquished diseases and count them as a real product in the national health economy. Medical-economic issues would not be ignored by governments in arriving at health care budgets.
(B / 10) Supply

The promotion of excellent medical researchers, whom Althoff provided with an adequate working environment, led to more innovations and generally an improvement of the quality of health care services supplied.

(C / 10) Information

Althoff’s science policy included a network of scholars who gathered relevant information on science and scholarship. This network was an important pillar of the Althoff System.

(D / 10) Optimal Contracts

It has been shown for medicine and public health that an innovative push was brought about through a change in the incentive structures of research related institutions such as polytechnic institutes, universities, and hospitals. Several measures taken by Althoff led to this change. For example, he improved the informational basis by setting up a statistical database and subsequently an informal network, through which he discovered talented scholars. He supported them and created new positions by founding research institutes and hospitals to further experimental and diagnostic research in health care. By offering chances to outsiders and opening the borders, Althoff contributed to a system of science and scholarship that was excellent.

(E / 10) The Market for Pharmaceuticals

The example of Behring shows that Althoff took advantage of the willingness of the pharmaceutical industry to provide funding for pharmaceutical research. As has been shown in the chapter, Althoff combined a public good, basic research, with a private good, in this case patents resulting as a by-product, and was thus able to gain funding for the public good.

(F / 10) Insurance

Schmoller’s work on insurance was well-known to Althoff, who supported Schmoller’s research program and the appointments Schmoller proposed.
(G / 10) Technology

Althoff is particularly relevant on issues of medical innovation and technology. Currently, health policy initiatives are largely focused on cost-containment. In contrast, Althoff emphasized the performance aspect pushing for research innovation and technological improvement. At the same time, as has been shown in chapter ten, he developed innovative methods of finance for the new research and development.

(H / 10) Institutions (hospitals/ nursing homes)

Althoff’s projects concerning foundation of new hospitals and modernization projects have been described in the chapter. Althoff tried to represent the different groups of society. For instance, he gave funds for the development of a Protestant institute for tropical medicine, but then also supported the foundation of a Catholic one.

(J / 10) Evaluation of Life

His fight against tuberculosis shows that Althoff was aware of the value of life as an economic category. The value of life could be increased if the disease could be prevented and the life could be extended for those tuberculosis patients who could be healed. Althoff made the fight against tuberculosis a government policy.

(K / 10) Social Insurance

In his appointment policies, Althoff favored those who stood behind Schmoller’s social insurance system.

(L / 10) Policy and Future Issues

From chapter ten the conclusion follows that the structure of the organization matters. Althoff’s approach focuses on innovative funding and the promotion of excellent researchers, whom he discovered and for whom he created an appropriate work environment. His science policy with respect to medicine has no equivalent in modern health policy.

Franz Oppenheimer (1864-1943)

The contribution by the physician Franz Oppenheimer, who looked for a solution that leads to a decline in morbidity and mortality of the population, lies largely outside of the account of modern health economics (compare chapter eleven).
(A / 11) Demand

After Oppenheimer had recognized that the main sources of mortality and diseases are to be found in the social environment, he turned to the social sciences and developed his vision of a new order of society. Central to his vision were individual freedom and a healthy social and productive environment.

Oppenheimer wanted to create a healthy social environment of work and production. In order to reach this goal, he proposed a land reform and the establishment of cooperative settlements. Confronted with massive unemployment in the industrial quarters of Berlin, crowded living conditions and illness, he devised a scheme that would bring industrial laborers back to the land by buying defaulted estates and turn them into small agro-industrial farms. With respect to health, he tried to achieve both, a reduction in exposure to infection and an improvement in the individual resistance to infection. Sufficient nutrition and rest, as well as adequate housing and sanitary conditions are factors that increase the individual resistance to disease and make it thus less likely to become ill or die of a disease, but central to Oppenheimer was individual freedom. He expected that people who live in freedom in a cooperative settlement are healthier than those who live in crowded industrial quarters or those who live under fiefdom at the countryside.

(B / 11) Supply

As a physician, Oppenheimer, the son of a reformist Rabbi, was rather unprivileged. He had to work in the proletarian quarters of Berlin, where he witnessed urban housing problems. In this environment he had the thought that economics is the medicine of society.

(C / 11) Information

Oppenheimer noted that medicine requires information on social conditions.

(D /11) Optimal Contracts

Oppenheimer did not make contributions with respect to optimal contracts.

(E /11) The Market for Pharmaceuticals

Oppenheimer is more interested in the therapeutical side, including social therapy, than in the market for pharmaceuticals.
(F / 11) Insurance

After his emeritation in 1917, Schmoller insisted that Oppenheimer became professor and continued giving the introductory lecture to students, where insurance was a central topic.

(G / 11) Technology

Technology did not belong to the central explanatory variables by Oppenheimer.

(H / 11) Institutions (Hospitals, Nursing Homes)

According to Oppenheimer, institutions make medical success possible. The cooperatives he created on estates east side of the Elbe were financed with the proceeds from the unemployment insurance and should create conditions that would never lead to unemployment again.

(J / 11) Evaluation of Life

Oppenheimer did not consider evaluation of life as an economic topic.

(K / 11) Social Insurance

Oppenheimer saw self-sufficiency as a criterion of social insurance.

(L / 11) Policy and Future Issues

Oppenheimer’s proposal adds to what is currently discussed in health economics and goes beyond in providing a realistic political perspective in developing the underpopulated countryside of, for instance, parts of Germany with undervalued real estate for whatever historical reasons. As has been shown in chapter eleven, Oppenheimer’s proposal centers on land rent; land is meant in the sense of natural resources in general. As has been shown in chapter thirteen, the implications of Oppenheimer’s, Althoff’s and Schumpeter’s work go beyond what is represented in the matrix, which serves as the guideline for this chapter.

Joseph Schumpeter (1883 - 1950)

In his early works, Schumpeter tried to integrate the discipline of economics in a larger social-economic context (compare chapter twelve).
(A / 12) Demand

Based on Schmoller’s empirical (historical) approach, Schumpeter looked for one and the same theory that could explain both, economic development and its cultural consequences. In the omitted “Seventh Chapter” of *The Theory of Economic Development*²³ he also sketched the broader picture of health in economic development containing important implications for health policy. The entrepreneur, although explicitly not the last cause, is a driving force in his explanation of development. Schumpeter has pointed out that demand for health services, as well as supply, occur both in the same social and cultural context. A medical supply structure has first to be in place, before demand can be met.

(B / 12) Supply

In his early work of 1912, Schumpeter defined the entrepreneur as any entity developing new combinations. He described the example of the physician as entrepreneur, which has implications for both, demand and supply of health services as the physician partly determines demand. Patients have entrepreneurial potential, too. People can do much themselves to improve their health. We can observe an increasing interest in nutritional supplements or exercise into late life, thus providing fertile markets for spas, health-related tourism, and other sectors of the economy. Schumpeter also saw the possibility of a public entity acting as an entrepreneur. Althoff is an example of a state bureaucratic entrepreneur in a Schumpeterian sense who devised an efficient state system, in this case for education. The implications of Althoff’s actions in particular for medicine have been shown in chapter ten.

(C / 12) Information

Schumpeter has described information as a cultural condition, for instance, a common language and common ideas about treatment are required in the relationship between patient and physician.

(D / 12) Optimal Contracts

A situation and the state of development are dependent on culture. Schumpeter described behavior as being optimal in one situation, but not in another, dependent on the cultural context.

²³ Leipzig, Verlag von Duncker & Humblot. 1912.
(E / 12) The Market for Pharmaceuticals

In his early work on development and the cultural context, Schumpeter was not so specific as to include the market for pharmaceuticals. His later argument concerning the justification of a monopoly in the presence of high costs of R&D stems from his more mature work and is now a central argument in the literature on the market for pharmaceuticals.

(F / 12) Insurance

Schumpeter was not specifically interested in questions of insurance.

(G / 12) Technology

Basic research in medicine can lead to effects on applications developed in the commercial sector such as the cosmetics industry. These applications widen the scope of the economy. We could think of medicine as an engine driving technological change. New applications might be possible because of secondary and tertiary benefits of certain drugs and therapies and there are interrelations to other sectors of the economy. Progress in medicine could transform the entire economy, leading towards a better economic performance. This consideration is clearly outside the scope of current health economics.

(H / 12) Institutions (Hospitals, Nursing Homes)

Institutions are central in Schumpeter’s work.

(J / 12) Evaluation of Life

Evaluation of life was too narrow a concept to Schumpeter.

(K / 12) Social Insurance

Depending on the cultural context, problems of social insurance can be very different, but the basic problems are the same. Schumpeter was interested in interrelationships in general and repercussions.

(L / 12) Policy and Future Issues

As Schumpeter has pointed out, dependent on the cultural context one cannot choose one and the same political program for every country. In practice, this means that
dependent on the cultural context different health policies have to be implemented by the World Health Organization.

14.3 Summary and Conclusions

By pursuing a thought to its origin “that which seemed dogmatic, objective, ideal or fixed” can be brought into motion.\textsuperscript{24} Grimmer- Solem has compared the different sciences and found that “in the social sciences, and particularly in economics, this process is still in its infancy.” (op. cit., 2003, p. 1). For health economics, such an attempt has been made in this book. This defines one of the purposes of this study. In this chapter, the old perspective has been documented and related to what is available now.

A recurrent theme among the demand issues is the importance of social and economic conditions as determinants of health and through this of the demand for health care. Paracelsus points to the life threatening work conditions in the silver mines. Roscher has focused on unhealthy factory work and makes a pledge for factory inspectors. Oppenheimer witnessed the terrible housing and sanitary conditions as a major threat to health and saw the connection to unemployment. He advocated a return to the country side and agriculture. Schumpeter explained how structural economic decline can undermine the psychic health of the populations dependent of the declining industry.

Prevention is a second thread of thought. Justi and other Cameralists proposed a broad policy, ranging from agricultural development to improving provision with food and sanitary measures. Wagner predicted that prevention would be of increasing importance in the future and involve a larger role for the state. Althoff provided a practical example. His policy in health care research was geared to prevention by eliminating infectious diseases, such as tuberculosis.

The impact of living conditions and prevention belong both to the fringe of modern health economics, but in a far less specialized age the perspective of the historical authors was broader. Through their efforts, Paracelsus, Wolff, and the Cameralists tried to improve the science of medicine. Althoff promoted research and looked for talents to help reach his goal. By changing university structures, he wanted to achieve excellence. His idea was that excellent researchers were better able to achieve progress, not only with respect to prevention, but also with respect to social, cultural, economic, and scientific goals, for instance functional architecture, efficient organizational structures, or the development of new products as a by-product of chemistry and physics. Wagner wanted the state to pay for state-of-the-art technology in order to promote better results.

In the discussions of supply side issues the authors show a keen eye for the absence of markets, and in addition to market imperfections, when early markets were present. Paracelsus did know from his own experience about supplier-induced demand and about the opportunities to exploit the patient for the benefit of the doctor and perhaps also for the benefit of the patient. Centuries later, Menger was much more critical about doctors who give in to the misplaced demands of patients who are in error. Another source of the absence of markets and market imperfection is lack of competition between suppliers of health care. The barriers to entry can be erected by the group of suppliers, such as the requirement to speak Latin, mentioned by Paracelsus; or barriers are erected with the support of the (local) public authority such as the legal monopolies or cartels for pharmacists. There was also discussion of policies against such medical market imperfections and about the proper role of public authorities with regard to the supply side. Public supervisory committees proposed by Justi should be of help in fighting malpractice by professionals who exploit the absence of markets or market imperfections. As Roscher pointed out there is no easy way out by opening the field for non-professionals, even if they have a good general education and perform well. Imperfect capital markets can be another obstacle to development of medicine. In the nineteenth century, capital began to play a role at the supply side, in particular in pharmaceuticals. Wagner suggested that the state might come up with finance if capital does not come forward from the private sector due to underdeveloped capital markets. Althoff showed the way how the state can force development of medical technology through a well designed research policy - supported by state investments in research.

Absence of markets, market imperfections, and public intervention to counter them, had been part of the main repertoire of health economics from its beginnings on. This history emphasizes health economics before Arrow identified market imperfections.

Information problems can show up at the individual, group and national level. Paracelsus highlighted information asymmetries at the individual level of the patient and his doctor. At the group level lack of information can thwart actuarial calculations which are necessary to set efficient insurance premiums. Therefore Schmoller proposed insurance geared to small, homogenous groups expecting that for such groups it would be possible to build up the necessary information. Data gathering with respect to relevant health related issues at the collective level of the state was one of the concerns of the Cameralists. Two hundred years later Althoff improved and extended that type of collecting statistical information. He also did solve the information problem in searching for top research talent by building up and exploiting a network of experts in the field of science and medicine. In modern health economics, the notion of a fully-informed and price-taking consumer deciding upon what quantity of health care services to purchase has been modified in order to meet the characteristics of this field. (Compare Ellis, McGuire, 1993, op. cit., p. 137). The issues that have been described under the category of information are diverse and more complex than what we typically discuss in modern health economics.

The category ‘optimal contract’ in the matrix concerns the discussions of incentive
structures leading to efficient behaviour. They are quite diverse. Paracelsus
demanded that there should be patents for medicine and copyrights for medical
authors. In today’s textbooks such property rights are presented as incentives to
innovation by enabling the innovator to appropriate the market value of his creation.
What for Paracelsus mattered in the first place was the recognition for the innovator
and even more the guarantee of authenticity and quality of the product. Wolff
described the house as an integrated production and consumption unit which can
largely support itself. The demarcation between the houses and public institutions
creates on the one hand incentives that discourage free riding on public services, on
the other hand the demarcation also implies incentives for the house to rely on the
market for medical relief only when incapable to help itself. By offering opportunity
and finance, Althoff’s policy created incentives for institutes involved in research and
for ambitious individual researchers to undertake pathbreaking research. Incentives
are discussed here in a context quite different from the analysis of incentive
structures in modern health economics.

In Paracelsus’ time health care insurance did not exist and from his own experience
he knew that poor patients had not the means to pay the doctor. As a solution he
proposed that the doctor should treat the poor free of charge. Those who could
afford to pay more should contribute more according to the value they ascribed to
health care services. It was not Paracelsus’ intention that the doctor was entitled to
cross subsidize the treatment of the poor by charging higher prices to his well-to-do
patients. Health policy as a means of redistribution is a more recent idea.

The roots of early life insurance went back into the time of Paracelsus, but local
accident and health insurances in the form of mutual funds for people connected by
profession, trade union or otherwise developed much later during the nineteenth
century. Schmoller, who was concerned with the development of markets,
investigated actuarial principles of insurances. He saw that large parts of the working
population remained without coverage and pointed to the necessity of intervention of
the state, in particular by making catastrophic health insurance a legal obligation for
wage dependent workers. His ideas on insurance are embedded in the system on
social insurance, which he stood for.

Wagner predicted that the growing cultural complexity of society would require the
state to play an increasingly large role, not only in financing the necessary
investments, but also with respect to regulation. In particular, he predicted more
preventive measures such as better quality of water, housing, working conditions,
health and sanitary policies. Althoff showed how the state could speed up technical
progress in medicine by entering in public-private partnership, funding basic
research with the revenues from its commercial application through patents. How
crucial basic research is as a source of inventions and their spin-off in innovation and
economic development was brought to light by Schumpeter one hundred years ago.
It suggests that one can investigate the potential of the medical sector and its basic
research as an engine driving economic growth. It is a perspective quite different
from the conventional focus of health economics on the economic expenditures of
the medical sector. Baumol and Bowen divided the health care sector into a
technically advanced part, where private initiative can be found. Here, they see what Schumpeter described, but they also pointed towards another part of health care: when labor cannot be substituted by capital, they characterized it as a stagnating sector. This phenomenon can be observed in health care. For instance, long-term care of the elderly can be characterized as a stagnating sector.

Paracelsus frequently struggled with questions of the value of life and related to it, the value of medical art. He asked who can pay a physician, if life is so valuable. The Cameralists, Justi included, were among the first to view an improvement in the general health of the population as an increase in human capital, not only because of the higher productivity of healthy workers, but also because of other intangibles. In contrast to Adam Smith's "wealth", Justi was writing about "happiness of the states," which requires both, a healthy and happy population as a prerequisite. Benefit analysis today is narrower, using wages or added value per worker for evaluating gains in person years. The Austrian concept of time preference, introduced by Eugen von Böhm-Bawerk, is also of importance for the evaluation of life.

The roots of social insurance go back to Wolff who identified the extended family as the basic provider of support for the member in need of help. Important is here the notion of subsidiarity: within the family those who are fit have the obligation to lend a helping hand. He viewed them as an institution of mutual support. Later, the role of reciprocity in networks of mutual exchange was made explicit in the work of Bücher. He basically viewed them as systems of exchange without the use of money. Hundred fifty years after Wolff in the nineteenth century Roscher still did see the family as the economic basic unit. However, he had an eye for the social context in which families live, in particular the social situation. Remember his suggestion to let the mentally ill within their families and place of residence and also his thoughts about the moral obligation of the well educated and capable citizen to serve the local community. In the early twentieth century Oppenheimer's agricultural cooperatives were supposed to create not only a healthy physical and social environment for the workers and their families but also to provide support to its needy members in case of unemployment, illness, disability and old age: basically an integrated system of social security based on the same principles of cooperation as Wolff's house.

Finally one should keep in mind that the first ideas on mandatory insurance against catastrophic risks of ill health that were brought forward in the nineteenth century by Wagner and von Schmoller reflect their awareness of a deep seated social problem of a national scale that had to be addressed. It was an alternative insurance based concept of the welfare state which has been replaced by the British concept of the welfare state (Beveridge report, "Full Employment for a Free Society") almost throughout Europe.

The overview provided in this chapter underscores the thesis that the old health economics is different in perspective than what is currently available in the professional literature in health economics. This chapter contains only flashpoints of what is back in the dissertation, but serves the purpose: to show that the old perspective is much broader than what we have today. It was a far less specialized age, and to a large
part, it was concerned with the development of markets. It was concerned with how
to make markets work, and thereby assigned a minimum role to the state.

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