

# MAX WEBER ON THE “SPIRIT OF CAPITALISM”

## ECONOMIC GROWTH AND DEVELOPMENT IN THE ANTECHAMBER OF THE INDUSTRIAL REVOLUTION<sup>1</sup>

*Heinz D. Kurz*

Graz Schumpeter Centre and Institute of Economics,

University of Graz (Austria)

E-mail: heinz.kurz@uni-graz.at

Manuscript received 8 March 2021; final version received 23 August 2021.

### ABSTRACT

The paper has a fresh look at the work of Weber. The emphasis is on his “Protestant Ethic and the ‘Spirit’ of Capitalism”, which is frequently misrepresented. It is argued that Weber’s focus of attention is the historical importance of Protestant ideas to the extent to which they shape human action; the treatise does not seek to explain capitalism since its beginnings, but concentrates exclusively on “modern capitalism”; it deals with economic growth and development in the antechamber of the Industrial Revolution; it concerns essentially what Marx had called the production of “absolute” as opposed to relative surplus value. Weber’s argument is rephrased with the help of economic theory and its limitations are pointed out.

**Keywords:** Absolute and relative surplus value, economic growth and development, power, protestant ethic, reformation, spirit of capitalism, Weber thesis.

**JEL Classification:** A12, B41, E20, L26, N13, N33, N63, P10, Z10, Z12.

---

<sup>1</sup> Paper given online in the seminar in honour of Anthony P. Thirlwall and celebrating the 80<sup>th</sup> anniversary of *Investigación Económica* on 19 May 2021. I am most grateful to Benjamín

MAX WEBER SOBRE EL “ESPÍRITU DEL CAPITALISMO”.  
CRECIMIENTO ECONÓMICO Y DESARROLLO EN LA ANTESALA  
DE LA REVOLUCIÓN INDUSTRIAL

**RESUMEN**

El artículo presenta un punto de vista nuevo sobre la obra de Max Weber. El énfasis está puesto en su “Ética Protestante y el ‘Espíritu’ del Capitalismo”, obra con frecuencia interpretada mal. La atención de Weber está en la importancia histórica de las ideas protestantes en cuanto perfilan la acción humana; no pretende explicar el capitalismo desde su origen, sino que se concentra sólo en el “capitalismo moderno”; trata del crecimiento y el desarrollo económico en la antesala de la Revolución Industrial; esencialmente de lo que Marx llamó producción de plusvalía “absoluta” por oposición a la relativa. Su argumento es reformulado aquí con la ayuda de la teoría económica y se hacen notar sus limitaciones.

**Palabras clave:** plusvalía absoluta y relativa, crecimiento y desarrollo económico, poder, ética protestante, reforma, espíritu del capitalismo, tesis Weber.

**Clasificación JEL:** A12, B41, E20, L26, N13, N33, N63, P10, Z10, Z12.

## 1. INTRODUCTION

**M**ax Weber died during a pandemic as a result of pneumonia (not connected to the pandemic) on 14 June 1920 at the age of 56. Would he have been given the opportunity to live longer, his oeuvre would in all probability have been even more impressive than it already is.

Today the vast majority of economists hardly know Weber’s work. He is widely regarded as a sociologist and historian, but not as an economist<sup>2</sup>.

---

García Páez, Ignacio Perrotini, Mohan Rao and Tony Thirlwall for interesting comments subsequent to my talk and to Harvey Gram for numerous valuable suggestions. In this paper I draw freely on Kurz (2020 and 2016b).

<sup>2</sup> Beginning in 1984, the Commission for Social and Economic History of the Bavarian Academy of Sciences and Humanities has been publishing the *Max Weber Gesamtausgabe* (MWG) (Max Weber Complete Edition), which now comprises 47 (including half-volumes

However, economics is what economists do, and this is not decided once and for all but changes as time goes by. Some of Weber's fields of research, at his time genuine parts of the subject, were later moved to the margin, only to re-enter it in more recent times. In many respects, Weber —the “weaver”— was a pioneer, expanding the social sciences into new areas, such as the economics of religion, cultural economics, institutional economics, industrial sociology and economic sociology in general. Today's contributions to methodology cannot do without reference to Weber. Economic historians are following in his footsteps in his *histoire raisonnée* of modernity, using novel quantitative and qualitative methods. Growth and development economics have rediscovered the cultural element in shaping the path society takes. In some sections of today's economics literature, there is a lot of “weaving” going on, and for good reasons. His dissection of the body of the social sciences, carried out with a sharp scalpel, identifies, on the one hand, the specific functions of its various parts and, on the other, the conditions for their fruitful interaction and cooperation. In view of the object of explanation, a seamless whole, they cannot permanently do without each other, but must complement and mutually fertilise each other in new configurations of the division of labour. Weber represents a kind of *homo universalis* in the social sciences and beyond. He sets high standards for himself and is unconditionally devoted to the principle of “objective ruthlessness” (*sachliche Rücksichtslosigkeit*) (MWG, II/6, p. 121).

Section 2 provides a brief overview of Weber's life and career. Section 3 contains prolegomena to “The Protestant Ethic and the ‘Spirit’ of Capitalism” (henceforth *PESC*). It was first published in German in two instalments in *Archiv für Sozialwissenschaft und Sozialpolitik* (henceforth *ASS*) in 1904 and 1905 (cf. Weber, 2006; MWG, I/18) and then translated into numerous languages. Talcott Parsons' English version (Weber, [1930] 2001) and then his book *The Structure of Social Action* (1937) propelled the diffusion of Weber's ideas (or rather Parsons' interpretation of them)

---

54) volumes, subdivided in five parts. In the following I refer to the MWG, followed by the part of the edition in Roman and the volume in Latin numbers and the page number. The translations from German are mine unless it is otherwise stated. Emphases in quotations from Weber's writings are his unless otherwise noted.

in the Anglo-American world<sup>3</sup>. *PESC* can be said to have advanced to one of the most popular texts in the social sciences, cultural and religious studies and history. The prolegomena focus on Weber's methodological reflections, including the famous "value judgement controversy", which made him reject aggregate magnitudes such as "labour productivity". Section 4 briefly summarizes the contents of *PESC*, which focuses attention on growth and development in the antechamber of the Industrial Revolution. A number of misinterpretations in the literature will be pointed out. Section 5 reinterprets the core of Weber's reasoning in *PESC* with the help of economic theory and draws the attention to the limitations of its argument. Section 6 comments critically on the reception of *PESC*. Section 7 looks at the relationship between Weber and Karl Marx. It will be argued that Weber's case concerns essentially what Marx had called the production of "absolute" (as opposed to "relative") surplus value. While Marx is never mentioned in *PESC*, his spirit is there just as the spirit of capitalism has remained central to society long after the heyday of Protestantism waned. Section 8 contains concluding remarks.

## 2. LIFE AND WORK

Max Weber was born on 21 April 1864 into a wealthy upper middle-class family in Erfurt, then Prussia.<sup>4</sup> At the age of two, he contracted meningitis. He had to struggle with health problems for the rest of his life. He studied law in Heidelberg and received his doctorate in 1889 at the Friedrich Wilhelm University in Berlin with a work on the history of trading companies in the Middle Ages. In 1892 he habilitated with a treatise on legal history and was appointed associate professor in 1893 in the Faculty of Law.

In 1892 Weber participated in an agrarian-economic enquiry of the *Verein für Socialpolitik*, *VfS* for short, the German Association of economists. He dealt with the situation of agricultural workers in East Elbia (*cf.* MWG,

---

<sup>3</sup> In the following I shall refer to Talcott Parsons' widely known translation of Weber's treatise into English. However, since the translation is not always faithful to what Weber had written, I take the liberty of correcting the text whenever necessary. See also the new translation by Stephen Kalberg (Weber, 2012).

<sup>4</sup> For the following, see the biography by Kaesler (2014).

I/3). His nationalistic position regarding the so-called “Polish question” met with approval amongst many economists and historians. In the same year he was co-opted into the Committee of the *VfS* and from then on belonged to the professorial progeny. He married his great-niece Marianne Schnitger, who made a name for herself as a women’s rights activist.

In 1894 Weber was appointed to a chair of Economics and Finance at the University of Freiburg. He was henceforth obliged to lecture regularly on economic theory, economic policy and public finance. The preparation cost him a lot of energy, since he first had to familiarise himself with all three areas. He noted ironically that he was now to attend the lectures for the first time – listening “to himself” (*cf.* Kaesler, 2014, p. 395).

In early 1897 he was appointed to the chair Karl Knies held before him at the University of Heidelberg. There he developed first ideas for his analysis of religion, society and economy. Alas, in 1898 he began to suffer from an increasing “inability to speak”, combined with panic attacks (see MWG, I/5, pp. 100-101). He took leave of absence, but since stays in hospitals and convalescent homes provided only temporary relief, in 1903 he asked to be released from his post. The following fifteen years he spent as an independent scholar, living off the interest incomes from his and his wife’s inheritances.

In the years 1900-1904 he worked repeatedly at the *Royal Prussian Historical Institute* in Rome, studying especially the history of monasticism in the Middle Ages. When in 1902 the first volume of *Der moderne Kapitalismus* of his friend and competitor Werner Sombart was published, Weber felt that he had better explanations of the emergence and development of “modern capitalism”. In essays published in 1903 and 1904 he emphasized the importance of certain Protestant ideas for the rise of the capitalist “spirit” (see, *e.g.*, MWG, I/7, pp. 142-234).

In 1904, Weber, Edgar Jaffé and Sombart took over the editorship of *ASS*. In the same year he published the first part of *PESC*, in the following year the second part (*cf.* MWG, I/18). In 1905, he travelled to the United States of America to study some of the protestant sects there<sup>5</sup>.

---

<sup>5</sup> The view that *PESC* was the fruit of this journey cannot be sustained because the bulk of the treatise had already been composed prior to the journey.

The conflict over the orientation of the *VfS* had been smouldering for some time. It escalated at the 1909 annual conference in Vienna<sup>6</sup>. The rebels confronted the group around Gustav Schmoller, head of the younger historical school, and advocated “freedom of value judgements” in science and the abandonment of the political orientation of the *VfS*. However, the rebels failed to conquer the citadel. As a reaction, Weber and his companions founded the *Deutsche Gesellschaft für Soziologie* (*DGS*). Since the dispute over value judgements spread epidemically, Weber left the Society in 1914.

These incidents did not affect his intellectual enthusiasm and productivity. Together with others he planned the comprehensive *Grundriß der Sozialökonomik* (*Outline of Socioeconomics*). He recruited established social scientists as well as promising young talents such as Joseph Schumpeter, not yet thirty years of age, who contributed the “Epochen der Dogmen- und Methodengeschichte” (1914), which formed the nucleus of the encyclopaedic *History of Economic Analysis* (Schumpeter, 1954). Weber himself began to compose *Wirtschaft und Gesellschaft* (*Economy and Society*), but failed to finish it while still alive. It was posthumously brought out by his wife in 1922 (MWG, I/22-24).

Like many of his colleagues, Weber in 1914 at first enthusiastically welcomed World War I. However, he soon changed his view. He realised with growing dismay the terrible bloodshed and damage the war caused.

---

<sup>6</sup> Vienna was the appropriate place for this to happen, because it was from there that the “founder” of the “Austrian School” of economics (whether there was such a thing is debatable; cf. Kurz, 2016a), Carl Menger, had already launched a fierce attack on the Historical School in 1883 and engaged in an occasionally venomous polemic with Schmoller and his followers. Schmoller rejected the attack in the same year and objected to Menger’s “taking the stick in his hand with too much schoolmasterly self-confidence and believing that he was allowed to rap the knuckles of anyone he found in the other rooms of the building who was of a different intellectual stamp than he was” (Schmoller, 1883, p. 987). Menger responded in 1884: “What I reproach the historical school of German economists with is not that it pursues economic history as an auxiliary science of political economy, but that a part of its followers has lost sight of political economy itself through historical studies” (Menger, 1884, p. 25). The subject had been theoretically gutted. A similar battle of directions between representatives of the inductive and deductive methods, led by the supporter of historicism Richard T. Ely on the one hand and the astronomer and mathematician Simon Newcomb on the other, took place in the *American Economic Association*, established along the lines of the *VfS*, at the time of its foundation in 1885.

In newspaper articles he advocated immediate peace negotiations and a strengthening of parliament and democracy in Germany. Because of worsening income prospects due to the war and extramarital affairs, Weber considered taking up teaching again. The University of Vienna was keen to recruit him, but he eventually declined the offer<sup>7</sup>. After the war, Weber became a founding member of the *German Democratic Party* and joined the German delegation at the Versailles peace negotiations. Yet his expertise was not requested<sup>8</sup>.

In 1919, Weber succeeded Lujo Brentano at the University of Munich. In the winter semester he gave a lecture on universal social and economic history, in which he dealt with the alternative explanations of capitalism by Marx, Sombart and others. Sombart ([1901] 1916) had also used the term “spirit of capitalism”, but Weber had anticipated him in this<sup>9</sup>. According to Weber the spirit of *modern* capitalism arose from dominantly religious ideas and motives and not from economic ones. He also rejected Sombart’s explanation of “original accumulation”, which focuses on the colonial economy and the accumulation of rents of land in countryside and city (*cf.* on this MWG, III/6, pp. 24-30).

---

<sup>7</sup> During his stay in Vienna in the spring of 1918, Weber met Schumpeter in the Café Landtmann. Schumpeter was interested in moving from Graz to Vienna and wanted to discuss this with Weber. Schumpeter’s friend Felix Somary, to whom we owe an account of the memorable meeting, was present at the conversation (*cf.* Somary, 1959, pp. 170-172). The conversation also touched the Russian Revolution, which Schumpeter welcomed because it would provide information about the viability of socialism. Weber interjected that, given Russia’s stage of development, the experiment was bound to end in disaster. Schumpeter agreed but insisted that it would be a “rather nice laboratory”. This infuriated Weber: “A laboratory with piles of human corpses!” Schumpeter coolly retorted, “So is any anatomy”. Weber became more and more enraged and began to shout, Schumpeter more and more sarcastic and quieter, until Weber finally jumped up indignantly and ran out onto the Ringstrasse with the words “This is unbearable!” Schumpeter turned quietly to Somary: “How can one shout *like that* in a coffee house!”

<sup>8</sup> In Versailles he may have met John Maynard Keynes, a member of the British delegation. (To the best of my knowledge there is no evidence that the two men in fact met.) Keynes’ warning that the reparations, which the Allies proposed to impose on the German Reich, could never be paid, went unheeded; *cf.* Keynes’ *The Economic Consequences of the Peace*, 1919, CW II).

<sup>9</sup> Weber had used the term already before the turn of the century as his lecture notes show (see MWG, III/2).

In the years from 1915 to 1920, Weber published several essays in the ASS on religious “systems of regulating life” —Confucianism, Hinduism, Buddhism, Christianity and Islam plus Judaism (MWG, I/19). He passed away on 14 June 1920 in Munich while preparing an edition of his *Collected Essays on the Sociology of Religion*.

### 3. PROLEGOMENA TO *PESC*

Several of Weber’s essays published around the turn of the 19<sup>th</sup> century contain elements that prepare the ground for *PESC*.

#### 3.1. Freedom from value judgements

Weber was keen to banish from the university, the temple of rigorous scholarship, ideology and politics and thus the “different value systems of the world” that are in “inextricable struggle with each other” (MWG, I/17, p. 99). Such value systems and the policies designed to realise them may, of course, be the object of sober, critical analysis, but they must not be the battle cries rallying students behind professors. The old gods and demons had luckily been deprived of their magic, but new ones had taken their place, no less frightening and dangerous. They had successfully started to conquer the university —perhaps the only remaining place of unbiased discourse committed to truth.

Weber was convinced that vague concepts paved the way to political abuse. In his view, the *VfS* had notoriously offered a veritable platform in this regard. On the occasion of its annual meeting in September 1909 in Vienna, Weber and like-minded scholars launched a frontal assault on the “historical-ethical” orientation of the association. One of the general themes of the meeting was “Productivity” in economics, which together with concepts like the “Welfare of people” or the “Common interest” was a prime example of the vagueness mentioned. Not only did such concepts contain “all the ethics of the world that there is” (MWG, I/12, p. 206), their sponginess virtually cried out for political capture. Weber accused Gustav Schmoller and his acolytes for having fallen victim to the naturalistic fallacy that prescriptive pronouncements regarding the “ought to be” (*Seinsollen*) can be derived from findings regarding the “being” (*Sein*). This however is not possible and “a matter of the devil” (*ibid.*, p. 208).

According to Weber, academic discourse must not be contaminated by value judgements. He was not so naïve as to assume that economists could be prevented from smuggling their value judgements into their teaching under the guise of “objective knowledge” and “enforced by the facts”<sup>10</sup>. This raises a deeper problem: What are the objective facts in a given situation? As Schumpeter remarked, the sea of facts is not only huge, it is also silent, and expands with the chosen time horizon. Which part of it is made to speak and how, and what justifies the selection of facts and speaking aids? How is it possible to approach a particular question in economics without some “vision” or elements of an “ideology”, as Schumpeter put it?

### 3.2. Pluralism in economics

It should therefore not come as a surprise that Weber strongly opted in favour of pluralism in economics. He chastised Schmoller for his statement in his Berlin Rectorate speech of 1897: “Neither strict Smithians nor strict Marxians can today lay claim to being taken seriously (*vollwertig*)” (*ibid.*, p. 193)<sup>11</sup>. To Weber this was one of the “greatest sins” committed in the history of the *VfS*. Because of the achievements of scholars like Smith and Marx, “we, their epigones of whatever ‘direction’, cannot be grateful enough” (*ibid.*, pp. 193-194). To this he added: Mixing up politics and science is not only to be found with so-called “socialists of the chair” (*Kathedersozialisten*), it is encountered to an even greater extent outside academia. He was particularly enraged by those who preached freedom of value judgement only to propagate the interests of big industry or “Manchesterism” all the more unabashedly.

---

<sup>10</sup> Even today there are still economists who *ex cathedra* are active in the said smuggling trade. Weber would have been as little surprised by this as by the fact that economic judgements are repeatedly championed with almost religious zeal. How could it be otherwise, given the existence of many “gods” between which, in Weber’s view, it was difficult or impossible to make a rational choice!

<sup>11</sup> Schmoller actively and successfully managed to prevent non-historicist scholars from being appointed to economic chairs in Prussian and other German universities.

### 3.3. Beware of average and aggregate concepts

Weber did not trust judgements based on “averages” and “aggregates” and took a radically micro-sociological point of view<sup>12</sup>. However, he could not strictly adhere to it. The danger of getting lost in the sea of facts is enormous<sup>13</sup>. However, trying to stick to a radical micro perspective also came at a high cost: It meant that an outstanding feature of modernity Weber was in danger of losing sight of —the overriding importance of innovations. These do not only lead to a net increase of the variety of goods, with significant cultural effects, which Weber took into account, they also increase labour productivity and real income per capita, which Weber, as will be seen, was inclined to largely put on one side. We therefore find in his writings little about innovations and technological change, that is what Schumpeter (1912, p. 159) called “the overwhelming fact in the economic history of the capitalist society.” This was less of a problem with regard to the period on which *PESC* focuses attention —the time when the “spirit” of *modern* capitalism was born in the 16<sup>th</sup> and 17<sup>th</sup> century. But it became a significant problem afterwards with the marked acceleration of productivity growth.

### 3.4. On the problem of heterogeneity in economics: An excursus

A comment on an approach to the problem of heterogeneity in economics is in place that is diametrically opposed to Weber’s. In his “Marshall Lectures” in 1985 at the University of Cambridge, UK, Robert Lucas asked who decided the famous Cambridge debate in the theory of capital in his favour —Cambridge, UK, or Cambridge, Massachusetts. He opined that if the dispute was about whether capital consists of heterogeneous means of production, the British side clearly did so. As if the *fact* of the

---

<sup>12</sup> Weber’s rigorism is exemplified by his critique of the famous example of pin manufacturing Adam Smith had used to illustrate the productivity-enhancing effects of intra-firm divisions of labour. The specialised worker, Weber stressed, cannot be compared with the full worker “because their work is no longer ‘the same’” — the work of the two is physically and *a fortiori* psychologically different and cannot be “really exactly related quantitatively” (*ibid.*, p. 218). What then can be related at all, we may ask?

<sup>13</sup> Joan Robinson aptly remarked that a theory that accurately mimics reality is as useful as a map on a scale of 1:1.

heterogeneity of capital could ever have been the subject of controversy! Surprisingly, Lucas went on to contend that physical capital is nevertheless best *assumed* to be *homogeneous* — “as a *force*, not directly observable, that *we postulate* in order to account in a *unified way* for certain things we can observe” (Lucas, 1988, p. 36; emphases added). One is prompted to ask whether in this science any kind of fancy assumption is allowed in order to circumnavigate analytical difficulties.

### 3.5. “Objectivity” in the social sciences

Weber’s strict micro perspective recurs in what he has to say about “objectivity” in the social sciences; see especially his essay on the theme published in 1904 in *ASS* (MWG, I/7, pp. 142-234). In his view the task of the social sciences was to develop a “thinking order of empirical reality” that grasps the “totality of all cultural processes” (*ibid.*, p. 163). This, however, requires that the “ideas” for which people stand and fight and which give “meaning” to their actions are made accessible to our understanding. Alas, this task fell largely outside the purview of what was then modern economics, which therefore missed the “historical power of ideas” for the development of social life. Seen in this way, it was clear that any particular attempt at understanding the bewildering multifariousness of the subject matter could only contribute a small piece o the intended *histoire raisonnée* of history. There simply “is no such thing as a purely ‘objective’ scientific analysis of cultural life or (...) of ‘social’ phenomena independent of the special and ‘one-sided’ points of view according to which they (...) are selected, analysed and structured as objects of research” (*ibid.*, p. 174). All knowledge of cultural reality is inevitably reflecting “specifically *particular points of view*” (*ibid.*, p. 189).

### 3.6. Critique of *naturalistic monism*

This fact is no longer well understood especially in economics, which, according to Weber, has come under the spell of *naturalistic monism*. Fascinated by the enormous success of the natural sciences, all events have now to be reduced to generally valid “laws”. Only the “lawful” is considered to be scientifically essential. This implies a grave error, for

the knowledge of cultural processes was not conceivable in any other way “than on the basis of the *meaning* that the always individual reality of life has for us in certain *individual* relationships” (*ibid.*, p. 188). A “mood of naturalistic monism imbued with faith (*glaubensfroh*)” had “powerful repercussions” on the economic discipline (*ibid.*, p. 197). Neither the socialists nor the historicists were able to prevent the diffusion of the naturalistic dogma and the “abstract” theoretical method. In fact, the establishment of a system of abstract and therefore purely formal propositions in analogy to the exact natural sciences was seen as “the only means of mastering social diversity” (*ibid.*, p. 199). The empirical validity of the tenets of abstract theory, it was claimed, is proven by the “*deductibility* of reality from the ‘laws’” (*ibid.*, p. 199). But this presupposed, Weber objected, that “the *totality* of the respective historical reality, including all its causal connections, would have to be taken as ‘given’ and presupposed as *known*, and that if *this* knowledge were accessible to the finite mind, any epistemological value of an abstract theory would be inconceivable” (*ibid.*, p. 200).

### 3.7. Ideal types vs. utopias

In the best case, abstract economic theory provides an ideal picture of what happens in markets with free competition and strictly rational choice. This image unites certain relationships and processes of life into a “cosmos of non-contradictory *imagined* relationships”. In terms of content, it “bears the character of a *utopia*, won through the mental enhancement of certain elements of reality”. Its relationship to the empirically given facts of life consists “merely in the fact that, where connections of the kind abstractly represented in that construction, *i.e.*, processes dependent on the ‘market’, are *established* or *conjectured* to be real to some degree in reality, we can pragmatically *illustrate* and make comprehensible to ourselves the *peculiar nature* of this connection by means of an *ideal type*” (*ibid.*, p. 203). An ideal type is thus obtained through the one-sided enhancement of one or several points of view and the amalgamation of a great many individual phenomena. It is neither an average nor a hypothesis, insisted Weber. While the heuristic and representational value of this construction must not be belittled, there is an inclination to grossly overestimate it.

### 3.8. Science in a world without God and prophets

In his famous lecture “Science as a Profession” of 1917 (MWG, I/17, pp. 71-111), Weber reiterated his point of view on the value judgement question, but then went on to discuss the changing role and meaning of science in the course of history. Scientific progress, he argued, is a most important part and parcel of “that process of intellectualisation to which we have been subject for millennia” (*ibid.*, p. 86). The idea of the ancient Greeks that the world could be grasped *conceptually*, followed by the introduction of *experimentation* as a means of reliably controlled experience on the threshold of modern times, the Renaissance, gave rise to an “occidental culture” in which *technical means took the place of magical means*. At first, under the influence of the Protestant and Puritan conception of the world, there was still the hope that science would show the way to God. But this hope had turned out to be illusionary. What remained was a “disenchanted world”, deprived of all magic, and a science that no longer knew “miracles” and “revelation”.

In a “time without God and prophets”, what was the meaning of science which could no longer derive its justification from pretending to reveal the existence of a superior being? Weber had little consolation in store. One does what one thinks one has to do, even if one deems it absurd. There remains the virtue of “simple intellectual rectitude”. He added the sibylline remark: “But this is plain and simple when everyone finds and obeys the demon that holds the strings of *his* life” (*ibid.*, pp. 110-111). To Weber it was apparently an illusion to believe that intellectualisation and social rationalisation had once and for all removed the influence of “demons”. Humans had been quick in filling the void in new ways.

### 3.9. Marginal utility theory and “irrational behaviour”

As regards marginal utility theory, Weber was convinced that it applied only to “purposeful behaviour” and as such had gained in relevance in the course of social rationalisation. He opposed the view of Austrian economists who had contended that people had always behaved as the theory predicts. However, he also insisted that “irrational” behaviour continued to play an important role, which “Understanding Sociology”

(*Verstehende Soziologie*) sought to explain. This necessitated asking about the “motives” of people, the “meaningful ‘reason’” an agent or the inspecting observer attributes to a particular behaviour (MWG, I/23, pp. 167-168). Weber’s respective observations reflect his acquaintance with the empirical anthropologies of a David Hume and Adam Smith and foreshadow findings of Behavioural and Experimental Economics today<sup>14</sup>. Humans, Weber emphasised, often pursue several purposes simultaneously, act in several social, possibly conflicting roles, and typically do so under multiple constraints: Income, time, norms, tradition, etc.<sup>15</sup> Interestingly, David Hume spoke of man as a “collection of contradictions”, a restless being that does not always act for his or her own good. The Puritan, Weber insisted, is a case in point.

### 3.10. Are human nature and the techno-physical world symmetrical?

Weber opposed the widespread interpretation that marginal utility theory was simply an application of the “Weber-Fechner law” in experimental psychology and therefore “psychologically” grounded (*cf.* MWG, I/12, pp. 115-133)<sup>16</sup>. Weber disagreed: No analogy could reasonably be postulated between stimulus and sensation and need and utility. The theory was not psychologically, but “pragmatically” grounded with reference to the categories of ends and means. He also expressed scepticism regarding the conceptualisation of pleasure (pain) as negative pain (pleasure) to be measured along a single scale. Modern neuroscience provides some support for his reservation: While the neural mechanisms for pleasure and pain overlap, one is not simply the negative of the other. And

---

<sup>14</sup> Behavioural and Experimental Economics took up again the thread authors like Hume and Smith had spun, which had been dropped with the rise of the economic man; *cf.* Ashraf, Camerer and Loewenstein (2005).

<sup>15</sup> Kenneth Arrow’s Impossibility Theorem regarding the aggregation of preferences of several agents applies also to the single agent conceived as a “multiple self” (Jon Elster), possessed of several preference orderings related to different roles played in life.

<sup>16</sup> The reference is to the German anatomist and physiologist Ernst Heinrich Weber and the physician, physicist and natural philosopher Gustav Theodor Fechner. The law formulates a psycho-physical relationship and states that the subjectively perceived intensity of a sensory impression depends logarithmically on the increase in the objectively measurable intensity of the corresponding stimulus.

he opposed the claim that the “laws” of diminishing marginal utility and of diminishing marginal productivity were both grounded in nature. He asked in amazement: “Do the soil and the plant react according to *psychological laws*?” Is it not most strange that there should be a fundamental symmetry between two things as different as human nature and the techno-physical world?

### **3.11. Power and domination**

Since Weber rejected the notion of productivity, that of marginal productivity also played hardly any role in his work. Consequently, he did not adopt the marginalist explanation of income distribution. Distribution, Weber insisted especially in *Economy and Society*, could not be understood without reference to economic power and domination. “*Power* means every chance to assert one’s own will within a social relationship, even against opposition, regardless of what this chance is based on. *Domination* means the chance to find obedience for a command of a certain content among persons who can be identified” (MWG, I/23, p. 210; cf. also Kurz, 2018a). The fact that power is difficult to perceive openly does not mean that it does not exist: It is omnipresent and leaves its mark on what happens. It avoids the light, moves quietly and works secretly and is often absorbed into institutions and rules of behaviour and solidifies in psychological and pragmatic dispositions. The view that in economics one is justified to assume perfect competition, which means that no economic agent is possessed of any power whatsoever, is a travesty of facts. Power asymmetries permeate society and economy. There are multiple sources of power, ranging from physical and military strength via property and wealth to the capability of people to capture other peoples’ minds. *PESC*, to which we now turn, illustrates vividly how religious ideas can lead to rigid systems regulating the life of believers that change the balance of power between different groups and classes of society.

## **4. THE HISTORICAL POWER OF IDEAS: PESC**

In the following we ask what Weber’s intention in *PESC* was and point out several misconceptions in the secondary literature. Then we turn to the contents of the essay.

#### 4.1. Weber's intention in *PESC*<sup>17</sup>

Weber makes it abundantly clear that he does not seek to explain the emergence of capitalism from its beginning, nor does he want to deal with its entire history up to the 20th century. He is exclusively concerned with a single, but extremely important episode of this history, in which the “idea” or “utopia of a ‘capitalist’ culture, *i.e.*, one *dominated solely by the profit motive of private capitals*” (MWG, I/7, p. 204; emphasis added) matured and took possession of society. He is solely concerned with “modern capitalism” of the Western European and American type (17) and resolutely rejects the “foolish and doctrinaire thesis” (49) that capitalism, as an economic system, is a product of the Reformation. Capitalism existed long before it and will exist long after it. What did not exist before the Reformation was the “spirit of capitalism”. Long after it, as a result of the withering of its religious roots, that spirit survived only as an after-glow. This spirit was the *differentia specifica*, which according to Weber shapes the special path Protestant societies took. It was to be understood as a special “part of the development of rationalisation as a whole” (37).

Weber's argument revolves around the emergence and spread of the following “*ethically* coloured maxim for the conduct of life” (17):

*Man is dominated by the making of money, by acquisition as the ultimate purpose of his life.* Economic acquisition is no longer subordinated to man as the means for the satisfaction of his material needs. This reversal of what we should call the natural relationship, so irrational from a naïve point of view, is evidently as definitely a leading principle of capitalism as it is foreign to all peoples not under capitalistic influence (18; emphasis added).

The religious ideas that blossomed during the Reformation burrowed deeply into the economy and society and produced the said “occidental culture”. The historical importance of the ideas in question had, of course, not escaped the attention of numerous observers, but their extraordinary power that affected all spheres of life had not been

---

<sup>17</sup> In the following all isolated page numbers refer to Parsons' edition of *PESC* (Weber, [1930] 2001).

given due recognition. Weber wanted to remedy this shortcoming. This does not mean that previous attempts at explaining the developments were null and void, but they were in need of supplementation. If Weber occasionally exaggerates the importance of religious ideas, it is for a reason that can be expressed by means of a proverb Adam Smith used in his criticism of mercantilism: “If the rod be bent too much one way, (...) in order to make it straight you must bend it as much the other” ([1776] 1976), IV.ix.4).

## 4.2. A problem of opinion dynamics

Weber begins his reasoning by noting the empirical predominance of Protestants when it comes to capital ownership, entrepreneurship and higher technical and commercial occupations at his time in Germany and elsewhere. He suspects the cause of this to be the new “infinitely burdensome and earnestly enforced” regulation of the whole of conduct (4) and the shedding of “economic traditionalism” in the wake of the Reformation around the turn of the 15th century. How was it possible that especially the middle classes not only accepted the hitherto unknown “tyranny of Puritanism” (5), but heroically defended it against all attacks with grim seriousness. Weber asks about the dynamics of religious and political opinion and will formation, about contagion and herd behaviour. What emerged in this way was an “unalterable order of things”, a de facto solid enclosure (19), a kind of *bubble with a hard shell*, so to speak, that imposed the norms of economic action on the individual.

In the prefatory note to his *Collected Essays on the Sociology of Religion*, Weber raises the question: “What concatenation of circumstances led to the fact that precisely on the soil of the Occident, and only here, cultural phenomena appeared which nevertheless —as at least we like to imagine— lay in a direction of development of *universal* significance and validity?” (MWG, I/19, p. 1) The emergence of a “way of looking at things common to *groups* of people” was “what really needs explanation” (20). This way of looking at things “had to fight its way to supremacy against a whole world of hostile forces” (20-21) and brought forth the modern capitalist “spirit as a mass phenomenon” (22). While Weber mentions the violence used in the post-Reformation religious wars, he does not enter into a deeper discussion of them.

The problem posed by Weber contains two sub-problems. First, which of the contending religious ideas and directions succeeded in asserting and consolidating themselves politically in Europe, especially in the Netherlands, England and France in the 16th and 17th centuries, and why? Secondly, how did they practically influence the way of life of people living in their sphere of influence, how much did they contribute to the genesis of the capitalist spirit? Weber insisted that what can at most be achieved in this regard is establishing a set of sufficient conditions that make the actual course of events look plausible. The search for an “economic law” that would fully determine that course implied searching for a will-o’-the wisp<sup>18</sup>.

### 4.3. Bearers of ascetic Protestantism

As far as the first sub-problem is concerned, according to Weber (1) Calvinism, (2) Pietism, (3) Methodism and the (4) numerous sects growing out of the Baptist movement proved to be particularly successful and were the “four principal forms of ascetic Protestantism” (53). The dynamics underlying their success can be briefly summarised as follows. In the period of moral renewal and religious reorientation following the elimination of Catholic ecclesiastical domination over life, the Protestant was seized by a concern that accompanied him for the rest of his life: In the *hereafter*, will he/she be among the elect who may sit at the Lord’s table, or will he/she fall prey to eternal damnation? And can he/she escape damnation through his/her actions in *this* world? But what can be said in this regard, given the unbridgeable gulf that separates man and God? The thoughts and ways of God are incomprehensible to humans, and after the “elimination of magic from the world” (61), the loss of the supernatural ability attributed to the Catholic priest to forgive sins and keep the gate to heaven open, the Puritans found themselves hopelessly thrown back on themselves. The believers had now to be priests and theologians themselves and had to find their own way. But how was this

---

<sup>18</sup> As he had put it in the “objectivity” essay, several explanations, which he called “utopias”, can be devised. It is a matter of “constructing connections that appear to our *imagination* as adequately motivated and thus ‘objectively possible’, as *adequate* to our nomological knowledge” (MWG I/7, p. 205).

possible? Were there not at least legible signs that signalled how God stood by one? The Calvinist doctrine of predestination intensified the feeling of being thrown into the world, because the decision about one's own fate was already fixed from eternity. In its "pathetic inhumanity", the doctrine of the election of grace resulted in "a feeling of unprecedented inner loneliness of the single individual" (60). From it grew eventually the "disillusioned and pessimistically inclined individualism which can even to-day be identified in the national characters and the institutions of the peoples with a Puritan past" (62).

#### **4.4. Proving the faith in professional work**

Was it nevertheless possible to know whether one was in a state of "grace of God"? This was of paramount importance to the Protestant. Two pastoral advices were put forward to the faithful. First, the believer was prompted to consider it an "absolute duty" to see himself "chosen" (66), since a lack of self-confidence in this regard could be interpreted as an expression of inadequate faith and the absence of grace. The life of a person keen to be a "saint" was directed exclusively towards the transcendental goal of salvation. In place of the humble sinners, to whom, according to Luther, the kingdom of heaven still beckoned, "those self-confident saints" were bred (67). Secondly, believers were instructed to control their lives rationally and systematically and to devote themselves to "restless professional work". For this "alone disperses religious doubts and gives the certainty of grace" (67). While no means of attaining salvation, it could numb the fear of it. Calvinism in particular propagated the necessity of *proving* one's faith in worldly professional life.

Professional work had a single goal: To increase God's glory on earth. The fruits of labour and entrepreneurial activity above and beyond necessary consumption were not to be squandered. Time, too, was not to be wasted, for the eternal rest of the saint lay in the hereafter. Ascetic action was thus shifted from the extra-worldly sphere of the monastery to the inner-worldly sphere of the economy and society. Every Christian was now requested to be "a monk all his life" (74). Paradoxically, the liberation from Catholic ecclesiastical paternalism and the rise of Protestant individualism erected an "iron cage" (123) of even stricter religious regimentation, lack of freedom and conformist coercion than before.

## 4.5. An “iron cage”

The implications for everyday life were numerous and profound, and included the need to patch over the contradictions and tensions inherent in the doctrine. Adherents to the new faith were prepared to make unheard-of sacrifices in pursuit of their ideals and irrational goals and got involved in bloody confrontations with the traditional powers that feared their anti-authoritarian ascetic streak. The reinterpretation of work as a vocation in the sense of *calling* and its valorisation as a fit means of assuring oneself the state of grace, reduced workers’ resistance to higher work demands<sup>19</sup>. Joblessness was understood as an unmistakable sign of a lack of God’s grace. As a consequence, the qualitative difference between voluntary and involuntary unemployment got blurred<sup>20</sup>. The interpretation of unrestricted entrepreneurial money-making and of the activities of the banking and financial sector likewise as proper “professions” removed earlier moral concerns from Aristotle to the Church Fathers (120-121). Inequality amongst people, especially in terms of income and wealth, was no longer seen as an expression of worldly injustice but of different states of grace. According to radical Puritan currents mercy and helpfulness towards those on the shady side of life was no longer a Christian duty, because need and misery were interpreted as unmistakable signs of eternal depravity. The “saint” was well advised to stay away from the “castaway”.

But how did one counter the apostolic hymn of praise to the lack of possessions and the warning against the pernicious consequences of wealth? If God had given man the chance to make profits and become rich, then he must have had something in mind. Ethically, striving for poverty makes as little sense as seeking to be sick. Possessions and wealth as such are not morally reprehensible, but their use is if not dedicated to an increase of God’s glory. Only the diligent saver and investor pleases the Lord.

---

<sup>19</sup> According to Marx, “Protestantism, by changing almost all the traditional holidays into workdays, plays an important part in the genesis of capital” ([1867] 1954, p. 262, n. 2). Marx echoes Engels in his essay “Umriss zu einer Kritik der Nationalökonomie” (Outlines of a Critique of Economics) (1844).

<sup>20</sup> A late echo of this may be seen in the finding reported in section 6 that Protestants today react to unemployment with a higher degree of subjective dissatisfaction than Catholics.

#### 4.6. Towards “utilitarian worldliness”

With the growing wealth of Protestant countries and regions, the temptation to enjoy it grew. A decline of “religious enthusiasm” set in and the “intensity of the search for the Kingdom of God” gradually dissolved into “sober economic virtue”. The “religious roots” died out gradually and made way for “utilitarian worldliness” (119). The ascetic educational effects, however, lasted: “What the great religious epoch of the seventeenth century bequeathed to its utilitarian successor was, however, above all an amazingly good, we may even say a pharisaically good, conscience in the acquisition of money” (119-120).

#### 4.7. An important inspirer: William Petty

*Vis-à-vis* radical apocalyptic sects violently struggling for influence and power, renouncing allegiance to earthly royalty and threatening to plunge the country into anarchy and chaos, political philosophers and economists including Thomas Hobbes, John Locke, Hume and Adam Smith were bound to comment on the developments. William Petty (1623-1687), to Marx and the young Schumpeter (1914) the “founder” of classical political economy, deserves to be mentioned here. Weber cites (*cf.* 121-122) a passage in Petty’s *Political Arithmetick*, published posthumously in 1690, in which Petty attributes the economic success of the “*Hollanders*” to the following circumstance: “Dissenters of this kind [*i.e.* Calvinists and Baptists], are for the most part, thinking, sober, and patient Men, and such as believe that *Labour and Industry is their Duty towards God*” (Petty [1690] 1986, p. 262; emphasis added)<sup>21</sup>. Petty adds in brackets: “How erroneous soever their Opinions be” (*ibid.*). Weber shares Petty’s critical judgement and calls Calvinism a “gloomy doctrine” (79).

---

<sup>21</sup> In order to illustrate the grip the Protestant ethic had on peoples’ lifestyle, Weber could have also mentioned John Locke. About him Eric Voegelin writes: “In Locke, the fierce madness of puritan acquisitiveness runs amok. The frenzy of personal mysticism has subsided, (...) what remains is the unattractive precipitation of the obsession with property” (1968, p. 145; my translation from German).

## 5. WEBER'S EXPLANATION IN THE LIGHT OF RECENT ECONOMIC THEORY

We now rephrase some of Weber's reflections regarding economic development and growth with the help of economic theory, followed by a comment on why innovations and technological dynamism play only a very modest role in Weber's work.

### 5.1. Consumption and saving

Today's conventional macroeconomic theory typically assumes that consumption is the sole end of economic activity and saving (alias investment) merely a means to control the intertemporal pattern of consumption and utility. Weber does not share this view: The modern capitalist entrepreneur is primarily concerned with restraining consumption and maximising the accumulation of wealth<sup>22</sup>. Weber speaks in fact of "accumulation of capital through ascetic compulsion to save" and refers to an "excessive propensity to accumulation". However, what Parson translated as "propensity" —the German term *Sucht*— actually means addiction (116)<sup>23</sup>.

Weber also talks of an "acquisitive manner of life" and a "crematist lifestyle" (34). In *Politics*, Aristotle had famously qualified the crematistic goal of unlimited money accumulation as "unnatural". Modern capitalism had rendered it natural, quasi the believer's second skin.

Expressing Weber's view within conventional macroeconomics assuming time to be continuous, utility function  $U(c)$ , with  $U$  as immediate utility and  $c$  as the flow of consumption, has to be replaced by:

---

<sup>22</sup> It is to be recalled that many important economists emphasised the accumulation motive, including Hume, Smith, Ricardo, Marx, Alfred Marshall, Irving Fisher, Thorstein Veblen, Frank Knight and John Maynard Keynes. Ricardo observed: "We all wish to add to our enjoyments or to our power. Consumption adds to our enjoyments, accumulation to our power" (1952, Works, Vol. VI, pp. 134-135).

<sup>23</sup> It is addictive behaviour rather than hedonism that is at stake. We nevertheless operate somewhat misleadingly with the term "utility" in the above. With regard to the question of free will, Weber distinguishes between an early, Puritan phase, and a later phase, after the religious roots have died out: "The Puritan wanted to work in a calling, we are forced to do so" (123). We are born into this "mechanism" that determines our "lives (...) with irresistible force" (123).

$$U = U(c, \dot{v})$$

where  $v$  is accumulated wealth and  $\dot{v}$  its derivative with respect to time.

The results that can be derived on the basis of this utility function differ from those in the usual Ramsey model because of the very different role of savings. In Weber's case, the consumption of the worldly ascetic may be assumed to remain constant over time at a level  $\bar{c} > 0$  as an expression of his "cool modesty". Assume for simplicity that the constant flow of consumption is financed from an income  $y = \bar{c}$  independent of wealth. With an interest (alias profit) rate of  $r > 0$  assumed also to be constant over time, the wealth-based income at the beginning of the observation amounts to  $rv_0$ , with  $v_0$  as the initial wealth of the agent. The God-fearing ascetic accumulates his entire interest income. If his life ends at time  $T$ , he will have accumulated a fortune of  $v_0 e^{rT}$  by then. He will "sink into the grave weighed down with a great material load of money and goods" (33). Coming before God, will it then be revealed that he had always belonged to the group of "saints"?<sup>24</sup>

What is "so *irrational* about this sort of life", Weber insists, is that "a man exists for the sake of his business, instead of the reverse" (32). This kind of existence reflects the spirit of capitalism in pure form: "Business with its continuous work has become a necessary part of [peoples'] lives" (32). The modern term "workaholic" captures well what is at issue.

## 5.2. Interest rate and growth rate

We now turn to the determination of the rate of profits, which Weber leaves open<sup>25</sup>. A simplified von Neumann's growth model illuminates his message and its limitations (*cf.* Kurz and Salvadori, 1995, pp. 403-407). Assume that in the Calvinist economy  $n$  commodities are produced by means of single-product processes of production that exhibit constant returns to scale. All commodities are needed directly or indirectly in the production of all commodities, *i.e.*, are "basic products" (Sraffa, 1960,

<sup>24</sup> And if so, would he then regret not to have indulged in enjoyment and luxury whilst still alive? And if not, would he then not feel the same way? Poor creature!

<sup>25</sup> Schefold (2011, p. 181) writes about Weber's analysis that "extreme complexity and lack of closure go hand in hand".

pp. 7-8). There are no luxury goods or non-basics —workers could not afford them anyway and the worldly ascetic capitalists “absolutely repudiated all idolatry of the flesh, as a detraction from the reverence due to God alone” (94)<sup>26</sup>.

The amounts of means of sustenance of workers and capitalists and of means of production per unit of output are given by the  $n \times n$  indecomposable input matrix  $\mathbf{A}$ <sup>27</sup>. The technique under consideration can then be characterised by  $(\mathbf{A} \rightarrow \mathbf{I})$ , with  $\mathbf{I}$  as the  $n \times n$  identity matrix. With matrix  $\mathbf{A}$  being productive, its dominant eigenvalue,  $\lambda$ , is smaller than unity, and the interest rate  $r$  is equal to  $(1 - \lambda)/\lambda$  and equal to the growth rate  $g$ :

$$g = r = \frac{1 - \lambda}{\lambda} > 0$$

Weber speaks of capitalists as “acquisition machines” (114), while Kelvin Lancaster (1973) called interest receivers in the von Neumann model “merely investing machines”.

According to Weber, the growth rate in the Puritan society is increased because:

1. The propensity to consume of capitalists is lower and their propensity to accumulate higher: The latter has risen from a value smaller than unity to unity.

---

<sup>26</sup> “The worldly Protestant asceticism”; Weber summarises his argument, “acted powerfully against the spontaneous enjoyment of possessions; it constricted consumption, especially of luxuries. On the other hand, it had the psychological effect of freeing the acquisition of goods from the inhibitions of traditionalist ethics. It broke the bonds of the impulse of profit in that it not only legalized it, but (...) looked upon it as directly willed by God” (115). Moral guardians of the new belief mercilessly pursued violations of the ascetic way of life in puritan towns and villages. Contemporary versions of such rules and regimes come easily to one’s mind.

<sup>27</sup> The matrix is also known as the “augmented matrix” because it contains not only the necessary inputs of means of production, but also the necessary means of sustenance of those involved in the production process. In order to establish a link to the previous macroeconomic approach,  $c$  would now have to be conceived as a semi-positive vector indicating the average consumption of the  $n$  commodities per capita in a time-discrete model. We refrain from this little exercise.

2. The annual labour performed per worker is larger at roughly constant real wages.
3. The new work ethic of both capitalist and worker entails a higher labour intensity.

All three factors imply that in the new matrix  $A^*$  several coefficients will be smaller than in  $A$  and none larger. Hence, the new dominant eigenvalue,  $\lambda^*$ , will be smaller and the rate of interest  $r^*$  and the rate of growth  $g^*$  correspondingly larger<sup>28</sup>.

Obviously, a system whose growth speeds up but generates hardly any labour-saving new technologies has to speed up also the growth of its population. While Weber in *PESC* does not deal in any depth with the mechanism that is supposed to bring this about, the “spirit of capitalism” is apparently also reflected in an acceleration of the growth of the number of “God’s creatures” (105)<sup>29</sup>.

### 5.3. Innovations and technological change

As has already been mentioned, technological progress plays hardly a role in Weber’s argument<sup>30</sup>. This is understandable because productivity

---

<sup>28</sup> It deserves to be stressed that in *PESC* both technical progress and human capital formation associated with the literacy of the Protestant population play hardly any role at all. Kelly, Ó Gráda and Mokyr in a recent paper on “The mechanics of the Industrial Revolution” (2020) note for England between the 1760s and the 1830s that in regions with relatively low wages and high mechanical skills of the labour force (“industry”), the observed growth of the textile industry was particularly high. Literacy (and other factors), on the other hand, contributed little to this. These findings provide some empirical support for Weber’s view of things for the period under consideration, which concerns the antechamber of the Industrial Revolution.

<sup>29</sup> Elsewhere Weber shows a strong interest in population issues (see MWG, III/2) and especially the possibilities and limits of the state to influence birth rates and migration.

<sup>30</sup> In *PESC*, Weber cannot avoid using the term “productivity” (see, e.g., 24, 120-121). It is significant to note that he always puts the term in inverted commas and actually uses it to describe a state of affairs that is far better described by the term “intensity” of labour (24), which he employs in parallel. (Parsons leaves out the inverted commas and thus eliminates the reservation Weber wishes to express with regard to the concept.) In the final analysis, the increase of labour intensity amounts “to force the worker by reduction of his wage-rates to work harder to earn the same amount than he did before” (24). This is, as will be seen in greater detail below, Marx’s case of the production of *absolute* surplus

growth in the 16th and 17th century was rather small. But Weber's reluctance to engage in a deeper analysis of technological progress is not limited to *PESC* and the period it covers. His dislike of using aggregate and average concepts, such as overall productivity, permeates his entire work, including *Economy and Society*. His contributions to a project initiated by the *VfS* on the industrial world of work also contain little useful information on the topic we are interested in here (cf. MWG, I/11). One learns a lot about working conditions, occupational choices, etc. of industrial workers, but hardly anything about the dominant forms of technological change and their effects on the distributional options available to society.

Ricardo had been the first to describe these options in terms of the constraint binding changes in the major distributional variables, the general rate of profits and the share of wages in given technical conditions. How does the wage curve change over time in response to various waves of technological change? Can Weber's intended *histoire raisonnée* of modernity be extended beyond the period investigated in *PESC* without distinguishing between different historical phases shaped by different forms of technological change (cf. Kurz *et al.*, 2018)? Weber abhors the bold leap from meticulous micro studies to the condensation of knowledge into a macroeconomic picture of the dynamics of the processes under consideration. He essentially stops at an analysis of extensive growth in the presence of low wages, a harsh professional ethic and great frugality. Intensive growth due to accelerating inventive and innovative activity rests largely submerged in the bottomless sea of empirical facts and surfaces only in regard to some of its socially and culturally connoted dimensions. Weber is a child of the younger Historical School, which also has difficulties to recognize the abstract in the concrete.

---

value and has nothing to do with increases in productivity in the proper sense of the concept. Weber is aware (as Marx was before him) that "the effectiveness of this apparently so efficient method has its limits" (24), but this does not lead him to discuss the case of the production of relative surplus value through labour-saving technological innovations. He argues that resistance to the reduction of wage rates was broken by "a long and arduous process of education", in the course of which labour became "an absolute end in itself, a calling" (25). A fundamental, religiously induced change of the mind-set of people reduced *inter alia* the aspirations of workers and established the spirit of capitalism throughout society.

## 5.4. The pull effect of economic success

If, as Weber points out, the Protestant ethic led to an acceleration of growth in Protestant areas (domestic or foreign), then the competitors might seek means and ways to keep up with the Protestants. The Protestant success can therefore be expected to exert a pull effect that, à la longue, also affects other populations and successively erodes the importance of ethics that are less prone to economic growth. Ideas are historically significant, but their significance is not locally locked-in: They may trigger noticeable economic dynamics even in countries long thought to be resistant to modernisation. As history shows, the spirit of capitalism is not a geographically, religiously or culturally contained phenomenon.

## 6. SOME REACTIONS TO WEBER'S WORK – THEN AND NOW

*PESC* is a great work. Schumpeter defines greatness by “revivals” and explains: “We need not believe that a great achievement must necessarily be a source of light or faultless in either fundamental design or details” ([1942] 2008, p. 3). Since its publication, *PESC* has been the subject of intensive discussions in several disciplines. Today the “Weber thesis”, or rather what is taken for it, is again hotly debated.

### 6.1. Early reception

Of great importance for Weber's international reputation was the euphoric reception of his work in the English-speaking world and especially in the United States of America. In *Religion and the Rise of Capitalism* (1926), the English economic historian Richard H. Tawney modified and supplemented Weber's argument by pointing out that Protestants and especially Puritans were initially often among the persecuted minorities, which spurred them on to special entrepreneurial efforts. A strong sense of individual responsibility and a Protestant mentality paved the way for entrepreneurship, market liberalisation and modern capitalism. Talcott Parsons' translation of *PESC* into English in 1930 facilitated the diffusion of Weber's ideas worldwide. It was also a main source of the problematic interpretation of *PESC* as an idealistic counter-project to Marx's materialistic one, an interpretation which Weber had explicitly

renounced. H. M. Robertson (1933) denied that the spirit of capitalism was a product of the Protestant ethic: No religious impulse produced it, but the material conditions of the time.

## 6.2. Some recent contributions

The recent literature on the Weber thesis is enormous and still growing rapidly; only a few contributions can be mentioned<sup>31</sup>. In an evaluation of social product estimates for the time from 1500 to 2000 in Europe, Young (2009) concludes that after the Reformation economically relatively backward Protestant regions gradually caught up with and then overtook Catholic ones. By 1700, the average per capita income in Protestant countries was higher than in Catholic countries. The difference widened over the following two and a half centuries and declined only slowly in more recent times. Rubin (2017) arrives at a similar conclusion. He compares the development of real income of the inhabitants of 17 major Protestant and Catholic cities from 1500 to 1899 and shows that over the entire period Protestants were on average always better off than Catholics in absolute terms and, since the middle of the 17th century, also in relative terms<sup>32</sup>.

Becker and Woessmann (2009) emphasise in their work: “Protestantism was (and is) associated with economic prosperity, as purported by the Weber thesis” (*ibid.*, p. 537). However, they explain the phenomenon differently from Weber: The obligation to read the Bible in the mother

---

<sup>31</sup> Peltonen (2008) contains an overview of the reception of the Weber thesis by economic historians. Becker, Rubin and Woessmann (2020) summarise numerous studies on the role of religion in history.

<sup>32</sup> He extends Joseph Needham’s famous question (1969) of why the modern economy emerged in Europe and not in China or the Middle East, which at the time of the spread of Islam was economically and technologically superior to Europe in a variety of dimensions. In Rubin’s view, it was not so much Islam that was responsible for this than the enforced religious legitimisation of politics and the great importance of the Muslim clergy in all secular matters. In particular, the opposition to the use of the printing press and the Islamic ban on interest had an inhibiting effect on development. One could perhaps say that the suppression of the “paper culture” (Johann Gottfried Herder) cost dearly. Of course, the ban on interest existed also in Christianity. It can be shown that *riba* in the Qur’an does not imply a prohibition of interest but the outlawing of the doubling of a debt in the event of the debtor failing to pay back the debt as agreed, which was widespread in the Arab world.

tongue resulted in higher school attendance among Protestants and, as an unintended consequence, in human capital accumulation and greater economic prosperity (*ibid.*, p. 542). The authors test their explanation empirically with reference to data from Prussian districts in the late nineteenth century. The human capital-based explanation does not make the authors reject the Weber hypothesis, as they believe that there should be a correlation between work ethic and literacy (*ibid.*, p. 582). However, a rejection would at any rate not be justified because Weber refers to the period of the rise of Protestantism and not that of its afterglow.

The literature in question focuses attention on an increasing number of cultural factors and their importance for economic prosperity. Positive effects are attributed to religious freedom, which is favourable to the preservation of civil and democratic rights, social peace and low corruption. Protestant socialisation increases self-control, strengthens mutual trust, leads to longer working hours, lower alcohol consumption and greater dissatisfaction in the case of unemployment. It also translates into a higher likelihood of becoming an entrepreneur. Barro and McCleary (2019) argue that Protestant societies are able to adapt more easily to challenges, which speaks in favour of greater resilience and likelihood of survival.

### **6.3. A culture of innovation**

Joel Mokyr in *A Culture of Growth. The Origins of the Modern Economy* (2017) emphasizes the importance of “cultural entrepreneurs” (see also Gehrke, 2018). While “Weberian values” can be conducive to growth, he follows more closely the sociologist Robert K. Merton ([1938] 2001), a student of Parsons. Merton had directed the attention above all to the changing orientation of natural philosophy under the influence of Francis Bacon as well as the role of science and technology in the Age of Enlightenment. As Weber also noted (see Section 3 above), many scientists in the second half of the seventeenth century still conceived of their research as a form of worship, but this moment was progressively losing in importance relative to the task Bacon had assigned to science, that is of solving practical problems in order to improve the material wellbeing of people. The rise of British science, according to Merton, was due to its puritan character, which was strongly empirical and had

little to do with the deductive, logically rigorous constructions favoured especially by Descartes in France. Bacon's experimental methodology relied on observation and a careful examination of facts rather than rational, contradiction-free propositions (*cf.* Mokyr, 2017, pp. 230-231)<sup>33</sup>. From then on, the interest shifted to generating economically useful knowledge.

According to Mokyr, the development is mainly driven by a growing belief in human and social progress and a rejection of the Malthusian doctrine that the majority of men are irrevocably condemned to live in distress and misery. He implicitly agrees with Weber that the culture of growth was the unintended consequence of a long series of disjointed institutional and social reforms in Europe and not the deliberate outcome of rational policy (or a reflex of European genetic superiority). In his view, what mattered were above all factors at work that Weber had touched upon only in passing, if at all. These make it possible to answer the question raised by Joseph Needham<sup>34</sup>. According to Mokyr, it was the facilitation of communication between people who know things and those who produce things and the establishment of learned societies and academies that facilitated the transmission of knowledge. The emergence of cultural entrepreneurs such as Newton, Galilei, Leibniz and Spinoza, the separation of science and metaphysics, and especially the reduction of access costs to information and knowledge made European economies, especially Holland and England, and in their wake their overseas offsprings, embark on a path of sustained growth.

## 7. MAX WEBER AND KARL MARX

Weber repeatedly expressed his admiration for the achievements of Marx and called him a "great thinker". However, in the literature Weber's in-

---

<sup>33</sup> A special role in this development played the English Puritan theologian Richard Baxter (1615-1691), whom Merton esteemed as a cultural entrepreneur and whom Weber also praised for his "eminently practical and realistic attitude".

<sup>34</sup> David Hume (1742) had argued that the political fragmentation of Europe induced competition between the countries vying for supremacy and established a market for ideas. This spurred productivity growth and accelerated economic development. Mokyr basically agrees with Hume.

debtedness to Marx is not always well understood<sup>35</sup>. A few observations on four issues must suffice. (For a recent critical appraisal of Marx's contribution, see Kurz 2018b.)

### 7.1. The production of absolute and relative surplus value

Marx in volume I of *Capital* distinguished between a period in the history of capitalism that was based on what he called the “production of absolute surplus value” and a subsequent one that was based on the “production of relative surplus value”. While the former is due to the prolongation of the working day, the latter is due to the curtailment of the “necessary labour time” because of an increase in labour productivity, given real wages (see Marx [1867] 1954, p. 299). The former case has nothing to do with increases in labour productivity due to technological-cum-organisational change. This is the case Weber discusses in *PESC*. He was concerned with the situation in the antechamber of the Industrial Revolution, so to speak, in which methods furthering the production of absolute surplus value dominated. An important aspect was breaking the resistance of workers to the reduction of real wage rates by “a long and arduous process of education” in the course of which labour became “an absolute end in itself, a calling” (25).

### 7.2. Being and consciousness

Is *PESC* an antithesis to Marx's “materialistic” explanation of capitalism? If one interprets the famous dictum attributed to Marx in the *German Ideology* ([1845-1846] 1932): “It is not the *consciousness* of men that *determines* their being, but on the contrary, it is their social *being* that *determines* their *consciousness*” (for short: “Being determines consciousness”) naively and Weber's construction just as naively as simply reversing the causality postulated therein, then the thesis is superficially correct. However, things are a great deal more complicated.

---

<sup>35</sup> Schumpeter ([1942] 2008, p. 11) is one of the few commentators who saw clearly how much Weber was influenced by Marx: “All the facts and arguments of Max Weber [in *PESC*] fit perfectly into Marx's system.”

First, taken literally, both propositions make no sense, since in them general concepts, universals, are related to one another where only particulars could. Well versed in philosophy, both authors knew this. In the case of Weber, it was the Protestant ethic that brought about the capitalist spirit. Secondly, and more importantly, ideas have consequences to the extent to which they govern peoples' actions, but these rebound on the former, and so on —consciousness and being are subject to a process of co-evolution or, as Weber put it in *PESC*, of a “process of mutual adaptation” (253, n. 84). As we have seen, his argument concerned only the period immediately subsequent to the Reformation. However, the maxims for the conduct of life and the corresponding behaviour that were then shaped continued to be effective, though in a somewhat subdued form, after their original religious motivation had long waned. In his introduction to the *Economic Ethics of the World's Religions*, Weber clarified his view of the relationship between ideas and interests: “Interests (material and ideal), not ideas, directly dominate peoples' actions. But: The ‘world views’ created by ‘ideas’ have very often acted as shunts that determined the orbits or paths along which the dynamics of interests has moved action” (MWG, I/18, p. 11).

Finally, towards the end of his treatise, Weber addresses directly the question asked at the beginning of this subsection. “The modern man”, he writes, “is in general (...) unable to give religious ideas a significance for culture and national character which they deserve” (125). Correcting this conception, “naturally” does not include the intention to “substitute for a one-sided ‘materialistic’ an equally one-sided ‘spiritualistic’ causal interpretation of culture and of history.” He adds: “*Both are equally possible*” (125).

### **7.3. Determinatio est negatio**

The relationship between religion and economics played an important role in an essay by young Friedrich Engels (1844), son of a successful Pietist cotton manufacturer, in which Engels launched a frontal assault on political economy. He argued that economics is a child of the expansion of trade in the mercantile period and grew up in parallel with Protestant religion and theology. To him Adam Smith was the “economic Luther” (*ibid.*, p. 474), whose doctrine of free trade had been designed to give

trade, which was anarchic and violent in the mercantile period, a humane veneer, thereby justifying it. Protestant “hypocrisy” thus replaced Catholic bluntness.

Engels’ essay prompted Marx to throw himself into political economy. Like Engels, he was intrigued by the relationship between religion and economy and how this was reflected in the writings of political economists. In his critique of the abstinence theory of profit and interest he wrote about the capitalist’s drive to accumulate: “But, so far as he is *personified capital*, it is not values in use and the enjoyment of them, but exchange-value and its augmentation, that spur him to action” (Marx [1867] 1954, p. 555; emphasis added). Marx’s “personified capital” may be said to express in undiluted form Weber’s “spirit of capitalism”. In the classical period of capitalism, Marx went on, the capitalist is only respectable as personified capital. In this period, his “passion for wealth as wealth (...) [is] the effect of the *social mechanism*, of which he is but one of the wheels.” The driving force of this social mechanism is competition, which

makes it constantly necessary to keep increasing the amount of the capital laid out in a given industrial undertaking, and *competition* makes the immanent laws of capitalist production to be felt by each individual capitalist, as *external coercive laws*. It compels him to keep constantly extending his capital, in order to preserve it, but extend it he cannot, except by means of *progressive accumulation* (*ibid.*; emphases added).

In this period the capitalist conceives of his own consumption as “a robbery perpetrated on accumulation” (*ibid.*).

After a long and drastic quotation from Martin Luther’s *An die Pfarrerherrn wider den Wucher zu predigen* (*Pastoral Admonition against Usury*) from 1540, in which Luther denounced imperiousness as an element of the instinct for enrichment, Marx turned to the post-classical period, in which, according to Weber, “utilitarian worldliness” began to prevail. The modernised capitalist begins

to smile at the rage for asceticism, as a mere prejudice of the old-fashioned miser. While the capitalist of the classical type brands individual consumption as a sin against his function, and as ‘abstinence’ from accumulation,

the modernised capitalist is capable of looking upon accumulation as ‘abstinence’ from pleasure (*ibid.*, p. 556).

In this period “a Faustian conflict between the passion for accumulation, and the desire for enjoyment” developed in the breast of the individual capitalist (*ibid.*, p. 557).

While the motto of the classical capitalist was: “Accumulate, accumulate! That is Moses and the prophets!” (*ibid.*, p. 558), the modernised capitalist derived satisfaction from both consumption and accumulation. To him it was irrelevant whether accumulation was called “abstinence from consumption” or consumption “abstinence from accumulation”. Marx did not deny that the capitalist who saves and invests abstains from consumption. But he rejected the view, held by Nassau W. Senior and others, that this presupposed a special effort that deserved a special remuneration —profit. Marx ridiculed the abstinence theory of profits:

It has never occurred to the vulgar economist to make the simple reflexion, that every human action may be viewed, as ‘abstinence’ from its opposite. Eating is abstinence from fasting, walking, abstinence from standing still, working, abstinence from idling, idling, abstinence from working, &c. These gentlemen would do well, to ponder, once in a way, over Spinoza’s: ‘Determinatio est Negatio’ (*ibid.*, p. 559, n. 2).

According to Weber, the reward the ascetic capitalist expects for his abstinence from consumption is the grace of God. Could there be anything more valuable to him than this?

#### **7.4. *Quo vadis?***

Both Marx and Weber were impressed by the creative and destructive powers of capitalism. But while Marx was optimistic about the future because he expected socialism to replace capitalism and overcome the latter’s afflictions, Weber was pessimistic and even defeatist. His view has apocalyptic features. The initiated developments had resulted in “the tremendous cosmos of the modern economic order” which is “now bound to the technical and economic conditions of machine production” and determines our lives with “irresistible force” (123). He concluded in

alarming tone: “Perhaps it will so determine them until the last ton of fossilized coal is burnt” (123). Instead of the light cloak that could be cast off at any time, which the puritan priest Richard Baxter had promised, “fate decreed that the cloak should become an iron cage” (123). In the remodelled world, the “material goods have gained an increasing and finally an inexorable power over the lives of men as at no previous period in history. To-day the spirit of religious asceticism — whether finally, who knows?— has escaped from the cage. But victorious capitalism, since it rests on mechanical foundations, needs its support no longer (124)”.

Where will the “tremendous development” lead? No one knows, but one possibility could be that “for the last stage of this cultural development, it might well be truly said: ‘Specialists without spirit, hedonists without heart; this nullity imagines that it has attained a level of civilization never before achieved’” (124).

Marx, we know, placed all his hope in socialism’s capacity to reconcile mankind with itself and with nature. However, like Weber some forty years later, he did not only fear the exhaustibility of natural resources, such as coal and mineral deposits. He also asked in a letter to Engels of 25 March 1868, one year after the first volume of *Capital* had been published: What will happen if the utilisation of land, a potentially renewable resource, is “not consciously controlled” and leaves behind “deserts”? Will socialism nevertheless still have a chance, inheriting a devastated planet? And in his geological notebooks (see MEGA, IV, p. 26), he asked whether mankind and earth will permanently get along with each other or whether earth will eventually rid itself of mankind.

## 8. CONCLUDING REMARKS

Weber was a *homo universalis* in the cultural and social sciences and history. To become one, one needs many talents, and Weber was richly blessed with them: Quick perception, sharpness of mind, power of association, curiosity, tenacity and depth. To these he added an impressive erudition, a comprehensive education, a remarkable knowledge of languages and a vivid literary style. One does not meet him unprepared or even clueless in almost any field of knowledge. Even in subjects far away from his own domains, he was keen to stay abreast of recent developments.

As Weber stated towards the end of his life, he was “nowhere quite reliably at home” (cf. Kaesler 2014, p. 923). The multi-talented and all-round inquisitive scholar was constantly exposed to the temptation to engage in new questions and fields of research and repeatedly succumbed to this temptation. At a first glance, therefore, his work seems indeterminate. On a second glance, however, one realises that for all the diversity of the subjects and themes dealt with, they do not lack an inner bond. Weber strolled freely in the fascinating garden of knowledge—from Roman agricultural law to the sociology of music, from the stock market to the religious sects of America—but he always asked what was the *meaning* of things, what sense do people in their respective times attach to them, and how are things connected. Above all, he was concerned with exploring the historical power of “ideas”. And so, with great dedication, a sharp eye, a bright mind and an extraordinary artistry, our author weaved the bits and pieces of an enormous chiffon which, laid over the real phenomena, maps their contours and structures and offers a “thinking order of facts”.

It is therefore not surprising that, apart from important exceptions, the economics profession found it difficult to relate to him. At his time, the subject was already taking a new direction, especially outside Germany, and began to emulate physics. Weber did not want to take such a path. In his critique of “naturalistic monism” he wrote: “It was not the ‘*factual*’ connections of ‘*things*’ but the *intellectual* connections of *problems*” that had to be addressed by the social sciences (MWG, I/7, pp. 167-168). He was therefore not primarily concerned with describing and modelling socio-economic and cultural phenomena, but with interpreting them. Weber did not establish economic theorems within the framework of well-specified models. This was not his business. Other people might well make it theirs and see how far they get. The object of knowledge, he was convinced, is of such a complexity that any attempt to try to deal with it in terms of a single principle and by means of a single method only was doomed to failure. ◀

## REFERENCES

### Works of Max Weber

- Max Weber *Gesamtausgabe*, abbreviated as MWG, various years and editors, 54 volumes (including partial volumes) to date, Tübingen: Mohr Siebeck, several years.
- Weber, M. ([1930] 2001). *The Protestant Ethic and the Spirit of Capitalism*, translated by Talcott Parsons. London: Routledge.
- Weber, M. (2006). *Die protestantische Ethik und der Geist des Kapitalismus*, Dirk Kaesler (ed.). Complete edition. 2nd ed. Munich: C.H. Beck.
- Weber, M. (2012). *The Protestant Ethic and the Spirit of Capitalism*, translated by Stephen Kalberg, first published in 2001, new edition. London: Routledge.

### Other literature

- Ashraf, N., Camerer, C.F., and Loewenstein, G. (2005). Adam Smith, behavioral economist. *Journal of Economic Perspectives*, 19, pp. 131-145. <https://doi.org/10.1257/089533005774357897>
- Barro, R.J., and McCleary, R. (2019). *The Wealth of Religions: The Political Economy of Believing and Belonging*. Princeton: Princeton University Press.
- Becker, S.O., and Woessman, L. (2009). Was Weber wrong? A human capital theory of protestant economic history. *Quarterly Journal of Economics*, 124(2), pp. 531-596. <https://doi.org/10.1162/qjec.2009.124.2.531>
- Becker, S.O., Rubin, J., and Woessmann, L. (2020). *Religion in economic history: A survey* [Warwick Economics Research Papers Series no. 1273]. Universität Warwick, Department of Economics, Coventry.
- Engels, F. (1844). Umriss zu einer Kritik der Nationalökonomie. *Deutsch-Französische Jahrbücher*, 1st/2nd delivery. Paris. Reprinted in *Marx-Engels Gesamtausgabe* (MEGA), Vol. I/2 (pp. 467-494). Berlin: De Gruyter.
- Gehrke, C. (2018). Joel Mokyr's *A Culture of Growth*: A book roundtable, with contributions by Erik Buyst, Heinz D. Kurz, Bertram Schefold and Richard Sturn. *European Journal of the History of Economic Thought*, 25(6), pp. 1493-1536. <https://doi.org/10.1080/09672567.2018.1522861>
- Hume, D. (1742). Of the rise and progress of the arts and sciences. Reprint in: E.F. Miller (ed.), *Essays. Moral, Political, and Literary* (columns 111-137). Indianapolis: Liberty Fund.

- Kaesler, D. (2014). *Max Weber - Preuße, Denker, Muttersohn*. Munich: C.H. Beck.
- Kelly, M., Ó Gráda, C., and Mokyr, J. (2020). *The mechanics of the Industrial Revolution* [UCD Centre for Economic Research Working Paper Series no. WP20/16]. University College Dublin.
- Keynes, J.M. (1919). *The Economic Consequences of the Peace*. London: Macmillan. Reprint in *The Collected Writings of John Maynard Keynes (CW)*, vol. II. London: Macmillan.
- Kurz, H.D. (2016a). German and Austrian Schools. In: G. Faccarello and H.D. Kurz (eds.), *Handbook on the History of Economic Analysis*, vol. II: *Schools of Thought in Economics* (pp. 252-273). Cheltenham-Northampton: Edward Elgar.
- Kurz, HD. (2016b). *Economic Thought: A Brief History*. New York: Columbia University Press.
- Kurz, H.D. (2018a). Power – the *bête noire* in much of modern economics. *Artha Vijnana*, 60(4): 319-376. <https://doi.org/10.21648/arthavij%2F2018%2Fv60%2Fi4%2F178083>
- Kurz, H.D. (2018b). Marx and the “law of value”. A critical appraisal on the occasion of his 200<sup>th</sup> birthday. *Investigación Económica* 77(304), pp. 40-71. <http://dx.doi.org/10.22201/fe.01851667p.2018.304.66399>
- Kurz H.D. (2020). Über das scheinbare Paradox von Weltablehnung und Erwerbervirtuosität. Zum 100. Todestag von Max Weber. *Perspektiven der Wirtschaftspolitik*, 21(4), pp. 326-352. <https://doi.org/10.1515/pwp-2020-0054>
- Kurz, H.D., and Salvadori, N. (1995). *Theory of Production. A Long-Period Analysis*. Cambridge: Cambridge University Press.
- Kurz, H.D., Schütz, M., Strohmaier, R., and Zilian, S. (2018). Riding a new wave of innovations: A long-term view at the current process of creative destruction. *Wirtschaft und Gesellschaft*, 44(4), pp. 545-583.
- Lancaster, K. (1973). The dynamic inefficiency of capitalism. *Journal of Political Economy*, 81(5), pp. 1091-1109. <http://dx.doi.org/10.1086/260108>
- Lucas, R.E., Jr (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), pp. 3-42. [https://doi.org/10.1016/0304-3932\(88\)90168-7](https://doi.org/10.1016/0304-3932(88)90168-7)
- Marx, K., and Engels, F. (1845-1846] 1932). *Die deutsche Ideologie*. First published by D. Riazanov, Moscow: Marx-Engels Institute. Reprinted in MEGA, Part I, Volume 5.
- Marx, K. ([1867] 1954). *Capital*, vol. I, 1<sup>st</sup> ed. in German 1867; 4<sup>th</sup> ed. 1890. English ed. London: Lawrence and Wishart.

- MEGA, *Karl Marx/Friedrich Engels Gesamtausgabe* (1975 et seq.). International Marx-Engels Foundation (IMES) (ed.), several editors, previously Akademie Verlag, Berlin, now DeGruyter, Berlin.
- Menger, C. (1883). *Untersuchungen über die Methode der Sozialwissenschaften und der Politischen Ökonomie insbesondere*. Leipzig: Duncker & Humblot.
- Menger, C. (1884). *Die Irrthümer des Historismus in der deutschen Nationalökonomie*. Wien: Manfred Hölder.
- Merton, R.K. ([1938] 2001). *Science, Technology, and Society in Seventeenth-Century England*. New York: Howard Fertig Press.
- Mokyr, J. (2017). *A Culture of Growth. The Origins of the Modern Economy*. The Graz Schumpeter Lectures. Princeton and Oxford: Princeton University Press.
- Needham, J. (1969). *The Grand Titration*. Toronto: University of Toronto Press.
- Parsons, T. (1937). *The Structure of Social Action*. New York: McGraw-Hill.
- Peltonen, M. (2008). The Weber-thesis and economic historians. *Max Weber Studies* 1 (pp. 79-98). <https://doi.org/10.15543/MWS/2008/1/4>
- Petty, W. ([1690] 1986). *Political Arithmetick*, first published posthumously in 1690. Reprinted in *The Economic Writings of Sir William Petty*. New York: Augustus M. Kelley.
- Ricardo, D. (1952). *The Works and Correspondence of David Ricardo*, vol. VI, *Letters 1810-1815*, edited by P. Sraffa with the collaboration of M.H. Dobb. Cambridge: Cambridge University Press.
- Robertson, H.M. (1933). *Aspects of the Rise of Economic Individualism*. Cambridge: Cambridge University Press.
- Rubin, J. (2017). *Rulers, Religion, and Riches: Why the West Got Rich and the Middle East Did Not*. Cambridge: Cambridge University Press.
- Schefold, B. (2011). A contribution to Weber's theory of modern capitalism. In: N. Salvadori and C. Gehrke (eds.), *Keynes, Sraffa and the Criticism of Neoclassical Theory. Essays in Honour of Heinz Kurz* (pp. 179-197). London: Routledge.
- Schmoller, G. (1883). Zur Methodologie der Staats- und Sozialwissenschaften. *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, 7, pp. 975-94.
- Schumpeter, J.A. (1912). *Theorie der wirtschaftlichen Entwicklung*. Berlin: Duncker & Humblot.
- Schumpeter, J.A. (1914). Epochen der Dogmen- und Methodengeschichte. In: *Grundriß der Sozialökonomik*, vol. I. Tübingen: Mohr.
- Schumpeter, J.A. (1954). *History of Economic Analysis*. London: George Allen and Unwin.

- Schumpeter, J.A. ([1942] 2008). *Capitalism, Socialism, and Democracy*. New York: Harper Perennial Modern Thought Edition.
- Somary, F. (1959). *Erinnerungen aus meinem Leben*, 2<sup>nd</sup> ed. Zürich: Manesse.
- Smith, A. ([1776] 1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*, two vols. In: R.H. Campbell and A.S. Skinner, *The Glasgow Edition of the Works and Correspondence of Adam Smith*. Oxford: Oxford University Press.
- Sombart, W. ([1901] 1916). *Der moderne Kapitalismus*, vol. I: *Die Genesis des Kapitalismus*, vol. II: *Die Theorie des Kapitalismus*, 1<sup>st</sup> ed. each 1901; 2<sup>nd</sup> ed. 1916. Leipzig: Duncker & Humblot.
- Sraffa, P. (1960). *Production of Commodities by Means of Commodities*. Cambridge: Cambridge University Press.
- Voegelin, E. (Hrsg.) (1968). *Zwischen Revolution und Restauration. Politisches Denken in England im 17 Jahrhundert*. München: List Verlag.
- Tawney, R.H. (1926). *Religion and the Rise of Capitalism*. New York: Harcourt, Brace and Company.
- Young, C. (2009). *Religion and economic growth in Western Europe: 1500-2000*. Stanford University, Stanford. [online] Available at: <[http://www.stanford.edu/~cy10/public/Religion\\_and\\_Economic%20GrowthWestern\\_Europe.pdf](http://www.stanford.edu/~cy10/public/Religion_and_Economic%20GrowthWestern_Europe.pdf)>.