Walter Eucken on Patent Laws: Are Patents Just 'Nonsense upon Stilts'?

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Abstract: As recent newspaper headlines show the topic of patents/patent laws is still heavily disputed. In this paper I will approach this topic from a theoretical-historical and history of economic thought-perspective. In this regard I will link the patent controversy of the nineteenth century with Walter Eucken's Ordoliberalism – a German version of neoliberalism.
My paper is structured as follows: The second chapter provides the reader with a historical introduction. At the heart of this paragraph are the controversy and discourse on patent laws in nineteenth century Europe as well as the pro and contra arguments presented by the anti-patent/free-trade movement respectively by the advocates of patent protection. The focus of my paper is on the struggle for the protection of inventions and innovations in nineteenth century Germany, since Walter Eucken, main representative of the Freiburg School of Law and Economics, picks up the counter-arguments presented in the national debate and in particular by the *Kongress deutscher Volkswirthe*. The third chapter deals intensively with the question whether patent laws are just 'nonsense upon stilts' from an ordoliberal perspective. Here, Eucken's arguments against the current patent system are elaborated in great detail. The paper ends with a summary of my main findings.

Keywords: Patents/patent laws, nineteenth century patent controversy, Ordoliberalism, Walter Eucken.

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1. Introductory Remarks

'Apple-Samsung patent war', 'Oracle-SAP patent showdown', 'Microsoft-Google copyright infringement' and 'Samsung-Microsoft patent alliance versus Google': these have been some recent headlines in the news all over the world. Within Europe there is currently an ongoing debate about the introduction of European-wide patents, about patents on pharmaceutics and (generic) drugs, groceries and in particular about patents on genes, so called 'biological patents'. As the headlines as well as the public debates show the topic of patents/patent laws is still heavily disputed. In this paper I will approach this topic from a theoretical-historical and history of economic thought-perspective. In this regard I will link the patent controversy of the nineteenth century with Walter Eucken's Ordoliberalism – a German version of neoliberalism.

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2. Historical Overview: The Discourse on Patent Laws in the nineteenth Century

A patent is an exclusive right and in some sense a privilege and monopoly of temporary duration granted by a state-run institution to an inventor or someone who has succeeded in the formal application and examination procedure. In recent times, patents are an essential type of intellectual property rights. The word 'patent' itself originates from the Latin verb *patere* which means 'to reveal', 'to expose' or 'to lay open'; usually it is often translated as 'open letters' or 'letters patent' (*litterae patentes*) referring to the openness for public inspection and public availability often granted by a royal decree or document.

Here, it is not the right place to study the different types of patents and to distinguish between patent, copyright, trademarks and utility model/*Gebrauchsmuster* in particular. In addition, it is not the main aim of this paper to review the whole history of patent laws: milestones in the history of patent laws include the Patent Law of the Republic of Venice dating from 1474, the *Statute of Monopolies* (1624) – the '*Magna Charta* of the protection of inventions'[1] –, the 1791/93 patent acts of France and the United States, the so called Prussian *Publikandum* of

[1] Machlup/Penrose 1950: p. 2; see Machlup 2000 and Pfaller 2008.

1815[2], the first *International Patent Protection Congress* as part of the Vienna World Fair (1873)[3], the *Reichspatentgesetz* of 1877 (German Patent Act) laying the foundation for the German patent system and implementing the German Patent Office[4], and finally, the 1883 *Paris Convention for the Protection of Industrial Property*[5] as the starting point of the still ongoing process of internationalization and harmonization of national laws. Instead, the focus of the following parts of this paper is on the nineteenth century patent controversy[6] which was at its height between 1850 and 1873; the regional focus is on the German discourse on patents in the second half of the nineteenth century. In this regard, it is essential to analyze the international anti-patent movement[7] as well as the free-trade movement in the tradition of Adam Smith (i.e., both groups were loyal followers of the ideas of Smith – although Smith himself was not a direct opponent of patent laws; instead he accepted certain forms of patents (cp. WN Book V, Chapter 1, Part III, 119)).[8] Of particular importance in the present context are the arguments of the patent advocates presented by the *Verein deutscher Ingenieure* (Association of German Engineers) and the *Deutscher Patentschutzverein* (German Patent Protection Association) as well as the counter-arguments of the anti-patent movement presented by the *Kongress deutscher Volkswirthe* (Congress of German Economists) and John Prince-Smith, an English-born German economist and politician and one of the outstanding advocates of free-trade in Germany and beyond. As we will see, the patent controversy revolves mainly around the arguments put forward by three German associations and the quarrel between them; one of these institutions was even founded for this particular reason.

Among these alliances was the *Kongress deutscher Volkswirthe*[9] founded in 1858 in Gotha. The main aim of this association of German economists was to promote (economic) liberalism, deregulation and free-trade and to fight protectionism. Inspiring example and role-model was the free-trade and laissez faire Manchester school and especially the Anti-Corn Law League established in 1838 by Richard Cobden, John Bright and George Wilson. The publication organ of the Congress was the *Vierteljahresschrift für Volkswirthschaft und Culturgeschichte.* Important figures of the Congress of German Economists were *Karl Braun*, politician and long-time president of the Congress, *Viktor Böhmert*[10], economist and journalist, *Rudolf Delbrück*, head of the chancellery, *Julius Faucher*, journalist, *Wilhelm Adolf Lette*, social policy maker and jurist, *Otto Michaelis*, political advisor of Delbrück, *Hermann Schulze-Delitzsch*, economist and politician, and especially *John Prince-Smith* (1809-1874), economist, Member of Parliament of the German National Liberal Party (1871-74) and one of the leading figures of the German anti-patent movement.[11] With the advent of the rising international protectionism at the end of the nineteenth century the Congress lost more and more influence – chapter 2.1. will deal with the reasons for this sudden disappearance and for

[2] Cp. Pfaller 2008.
[3] Cp. Seckelmann 2006: pp. 155.
[4] Cp. Boch 1999: pp. 71; Kurz 2000: pp. 372.
[5] Cp. Kurz 2000: pp. 469; Pfaller 2008.
[6] Cp. Machlup/Penrose 1950: pp. 3.
[7] Cp. Kurz 2000: pp. 350; Pfaller 2008.
[8] Other important economists justifying patents are for example Friedrich List (*Das nationale System der politischen Ökonomie*), Jeremy Bentham (*Observation on Parts of the Declaration of Rights, as Proposed by Citizen Sieyes*: p. 533), and John Stuart Mill (*Principles of Political Economy*: Book V, chapter X, p. 932). All just mentioned philosopher-economists justify patents by highlighting the differences between patents and monopolies; according to them, patents have nothing in common with monopolies and they are justified as a means of rewarding the inventor's expense and risk (cp. Machlup/Penrose 1950: pp. 7).
[9] Cp. Boch 1999: pp. 72; Seckelmann 2006: pp. 139.
[10] Böhmert compares patents to 'rotten fruits on the tree of civilization which are ripe to fall' (Böhmert 1869: p. 34).
[11] Cp. Prince-Smith 1843; 1845; 1848; 1863; 1877; 1879 and 1880; see also Hentschel 1975; Boch 1999: p. 73; Kurz 2000: pp. 354; Seckelmann 2006: pp. 140.

the reversal of opinion in great detail. As a consequence the Congress was soon to be dissolved in 1885. Remarkable is the fact that the Congress of German Economists was *the* central counterinstitution of the German *Verein für Socialpolitik* (Social Policy Association) founded in 1873 and gathering around Gustav Schmoller and Adolf Wagner. Furthermore, the Congress was linked with the (German) free-trade movement and with the anti-patent movement (1850-1873). The opponents of patents were above all supporters of free-trade and vice versa. Characteristic features of the Congress and the anti-patent movement were a far reaching belief in progress and economic growth, the speaking up for Smith's invisible hand theorem, the self-regulation of markets and the harmonious economic society, and moreover, the agitation against any form of state interventionism. The movement's main aim was the entire abolition of the whole patent system including all patent laws and similar forms of monopoly-like privileges.

The pro-patent movement's[12] main associations on the other hand were the *Verein deutscher Ingenieure* and the *Deutscher Patentschutzverein*. The technical association *Verein deutscher Ingenieure* (Association of German Engineers (VDI))[13] was founded in 1856. The main representatives of this association were Rudolf Klostermann, Eugen Langen, Carl Pieper[14] and Franz Wirth. The *Deutscher Patentschutzverein* (German Patent Protection Association)[15] instead was founded in 1874. The main aims of these two organizations were the (state-run) promotion of inventions and innovations, the prevention of the abolition of patent laws and other measures restricting the protection of inventions. Additionally, both institutions were campaigning for overcoming the fragmented and trade-inhibiting patchwork of diverse patent laws in the different German provinces; especially after the foundation of the German Empire in 1871 they were agitating for the unification of German economic laws and in particular a harmonized, nationwide patent legislation for all of the member states of the German *Zollverein* (German Customs Union). Above all the German Patent Protection Association rendered itself conspicuous when preparing a patent draft bill which provided the basis for the 1877 German Patent Law.

One of the main figures of the VDI and the German Patent Protection Association was *Werner von Siemens*[16], German inventor and industrialist, founder of the electrical and telecommunication corporation Siemens and first chairman of the German Patent Protection Association. Siemens and other German industrialists like Borsig and Krupp embody the primacy of entrepreneurial interests within the pro-patent movement. Moreover, Siemens was one of the key-figures in the run-up to the first uniform nationwide German Patent Act in 1877. Due to his eminent influence on (patent) legislation, the German 1877 patent law for the entire Reich is often referred to as the *Charta Siemens*.[17]

[12] Cp. Kurz 2000: pp. 361.
[13] Of special importance in this regard were the VDI memoranda *Zusammenstellung der leitenden Principien eines allgemeinen deutschen Patentgesetzes*, published in 1862, and *Zur Patentfrage* (On the Patent Question) published in 1864; see also Siemens' memorandum *Promemoria*; cp. Boch 1999: pp. 75; Seckelmann 2006: pp. 144.
[14] Cp. Pieper 1873.
[15] Cp. Boch 1999: pp. 71; Seckelmann 2006: pp. 163.
[16] Cp. Gispen 1999: pp. 7; Häusser 1999: p. 16; Boch 1999: pp. 71 and pp. 77; Kurz 2000: pp. 368.
[17] Cp. Kurz 2000: p. 382.

2.1. Patents: Arguments and Counter-Arguments

What were the main arguments put forward in the nineteenth century patent controversy? First of all, we have to consider the *pro-arguments*: Four types of arguments justifying and legitimizing patent rights may be separated: the (natural) property right in ideas argument, the just reward for the inventor argument, the best incentive to invent argument and the (social) contract theory argument.[18]

1. According to the (natural) *property right in ideas argument*, each invention is an intellectual property of the inventor comparable to a physical entity owned by a person; intellectual property is similar in its logical nature to material property. Or to put it differently: "A man has a natural property right in his own ideas. Their appropriation by others must be condemned as stealing. Society is morally obligated to recognize and protect this property right. Property is in essence exclusive. Hence enforcement of exclusivity in the use of a patented invention is the only appropriate way for society to recognize this property right."[19]

2. The *just reward for the inventor argument* highlights the necessity of an appropriate (pecuniary) reward and a sufficient compensation and recompense for the inventor's (time-consuming and costly) efforts[20], for the useful services rendered to society as a whole and as a return for the assumed increase in social welfare. In addition, these kind of moral arguments refer to a common sense of fairness and 'justice as fairness' (Rawls) by pointing at the importance of a fair equivalent between give and take, between service and return service.

3. A major pre-condition for economic growth and the overall prosperity of a society is the innovation ability of a country. In order to foster and stimulate inventions, innovations and technical progress and as a consequence the 'wealth of nations', it is advisable to promote ingenuity, entrepreneurial spirit, inventive talent and in general the innovative skills of the individuals. One way of promoting the economy in such a way is via education and science policy; another one contains the granting of patents (i.e., *best incentive to invent argument*).[21]

[18] "The four types of argument are independent of one another. Any one of them may be upheld if the other three should be rejected. The first two are based on ethical norms, the last two on political expediency. The first is anchored in conceptions of natural law, giving the inventor a natural right to protection; the second calls for protection in the name of fairness to secure the inventor his just reward. The third, resting on the assumption that not enough inventions would be made and utilized without adequate inducements, recommends patent protection as the best inducement. The fourth, fearing the loss of inventions through secrecy, recommends patent protection as a means of inducing disclosure and publicity" (Machlup/Penrose 1950: p. 11); see also Ammermüller 1846; Emminghaus 1858 and Machlup 1964.

[19] Machlup/Penrose 1950: p. 10. This jusnaturalistic justification of intellectual property rights which are in this sense similar to human rights is in a way problematic: How can we justify (intellectual) property rights or generally speaking human rights which are only conditional and limited to a certain period of time? As we all know, patents are awarded for a limited period of time.

[20] Smith for example justifies patents on that basis. He argues that temporary monopolies granted to an inventor by the state may be justified as a means of rewarding expense and risk (cp. WN Book V, Chapter 1, Part III, 119.

[21] "Industrial progress is desirable to society. Inventions and their exploitation are necessary to secure industrial progress. Neither invention nor exploitation of invention will be obtained to any adequate extent unless inventors and capitalists have hopes that successful ventures will yield profits which make it worth their while to make their efforts and risk their money. The simplest, cheapest, and most effective way for society to hold out these incentives is to grant exclusive patent rights in inventions" (Machlup/Penrose 1950: p. 10). "Continental writers were prone to take the rapid industrialization of England and the United States plus the fact that these nations had patent systems as sufficient grounds from which to infer a causal relation between patents and progress. On the other hand, there were some German and Swiss economists who attributed industrial progress in their

4. The (social) *contract theory argument* which is linked with transparency and disclosure arguments (i.e., *best incentive to disclose secrets*) reads as follows: Inventors and innovators enter into a hypothetical social contract: society as whole grants exclusive rights and security against (commercial) imitation and plagiarism while the inventor agrees to disclose the secrets behind the innovation. The argument is based on the assumption that without patent laws the secrets would be kept and not revealed (i.e., secret-mongering). With the help of patent laws innovations are now released and the public gains access to most recent technological knowledge. As a consequence, knowledge will be widely dispersed (i.e., diffusion of know how) and the technological gap will be overcome respectively the lead through technology will extend.[22]

These kinds of reasons coupled with commercial motives and monetary interests were alleged by the *Verein deutscher Ingenieure* (Association of German Engineers), the *Deutsche Chemische Gesellschaft* (German Chemical Association) and the *Deutscher Patentschutzverein* (German Patent Protection Association) during the patent controversy in the nineteenth century.

The *arguments* presented by the free-trade movement[23] *against patent protection* on the contrary comprise the following ones:[24] the free-trade argument, the re-feudalization argument, the 'patents as obstacle to progress argument', and the 'invention as an intellectual common property argument'.

1. *Free-trade argument*: According to the anti-patent advocates, patents promote the monopolization of the economy due to the fact that they enhance the granting of exclusive privileges; patent laws are linked with monopoly privileges. To put it differently: patent privileges equal monopoly privileges! From that perspective patents as exclusive rights or 'intellectual monopolies' restrict the freedom of trade. The focus of the free-trade movement lies on self-regulation and, as the name implies, on free commerce; they are supporting the removal of all regulations on the free movement of capital, goods and labour and they are questioning all forms of exclusive rights to monopolize. Patents in this regard are regulations on the free movement of goods, they are tariffs and in the end they are barriers to free-trade.

Linked with the free-trade argument are two other arguments favouring the abolition of patent laws: a) patents are an institution of protectionism; b) patents are a means of enforcing market power. According to the protective tariff or *infant industry argument* picked up by Alexander Hamilton, Daniel Raymond, Friedrich List and others, new or infant industries which in their early stage are not able to compete with their older and well-established competitors need protectionist help by the state in order to develop. One way of granting such help is via patents. In this sense, patents enhance protectionism and the relapse into a mercantilist era:

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countries to the absence of effective patent protection. […] The main thesis demonstrating the beneficial effects of patents rested on the following assertions: (1) industrial progress is desirable, (2) invention is a necessary condition of industrial progress, (3) not enough inventions will be made or used unless effective incentives are provided, (4) patents are the cheapest and most effective means of providing these incentives" (Machlup/Penrose 1950: p. 21).

[22] "Industrial progress is desirable to society. To secure it at a sustained rate it is necessary that new inventions become generally known as parts of the technology of society. In the absence of protection against immediate imitation of novel technological ideas, an inventor will keep his invention secret. The secret will die with him, and society will thereby lose the new art. Hence it is in the interest of society to induce the inventor to disclose his secret for the use of future generations. This can best be done by granting exclusive patent rights to the inventor in return for public disclosure of his invention" (Machlup/Penrose 1950: p. 10).

[23] Cp. Kurz 2000: pp. 315 and pp. 350.

[24] Cp. e.g. Emminghaus 1858; Machlup/Penrose 1950; Machlup 1964.

patents are holdovers from an old regime and they are a relic of pre-modern times such as mercantilism and feudalism.

Moreover, and most severe, patents in fostering the monopolization of the economy are also maximizing market powers and the re-feudalization (*Vermachtung*) of the economy. As such, the (politico-) economic consequences have to be taken seriously. The social costs of granting patents include the costs of bureaucracy administering the patent system, the costs of hampering technological progress via so called blocking patents (i.e., this implies a delayed (further) development of patented products as well), but also the costs of monopoly rents and of enhancing market power. All these economic disadvantages connected with the granting of privileges and monopoly power have to be taken into account. According to the anti-patent movement the costs outweigh the alleged benefits (i.e., increase in productivity due to patent protection, support of knowledge- and science-based high-tech industries, etc.) by far; from an economic perspective they are simply not acceptable. This *re-feudalization argument* (2.) is at the core of Walter Eucken's analysis of patent laws. Later on I will elaborate this argument in more detail.

In addition, the proponents of the anti-patent law-movement were convinced that patents hamper industrial progress: patents form an obstacle to technological progress and innovation. This '*patents as obstacle to progress argument*' (3.) is highly related with the first one, namely the free-trade argument: in fostering protectionism and the monopolization of the economy, patents increase the price of certain products and, worst of all, they are blocking further experimenting and the further advancement and development of products. Thus, they are jointly responsible for the gridlock of the (nineteenth century German) economy.

The next argument refers to the question whether inventions are a private property of the innovator or whether they are a common good. The nineteenth century free-trade movement stated that all kind of inventions and innovations are an intellectual property owned by the whole society. Prince-Smith for example was arguing against 'intellectual monopolies' and envisioned a world in which all inventions and innovations would be part of the public domain (*inventions as an intellectual common property argument* (4.)). Later on this argument was denounced as being part of the 'intellectual communism' and the socialist view of property of the free-trade school. Yet, the free-trade movement felt confident that inventions and innovations are sufficiently rewarded by the market: pioneering enterprises gain profits due to the temporal advantage through technology; they are able to promote their invention ahead of their competitors and thus can obtain an (additional) financial return resulting from their invention (i.e., (Schumpeter's) first mover advantage or innovator's head-start profits). Moreover, the free-trade movement declared that individual achievements were not the decisive factor; they were not as much as important as societal achievements and in particular the general framework conditions: without politico-economic and legal parameters inventions would hardly be possible, so the argument goes. As a consequence an individual and privately owned intellectual property right is a *contradictio in adiecto*: each inventor is standing on the shoulders of his predecessors profiting from the overall institutional framework.

To sum up the arguments against patent laws we can refer to the resolution adopted by the *Kongress deutscher Volkswirthe* in 1863: "Considering that patents hinder rather than further the progress of invention; that they hamper the prompt general utilization of useful inventions; that on balance they cause more harm than benefit to the inventors themselves and, thus, are a highly deceptive form of compensation; the Congress of German Economists resolves: that

patents of invention are injurious to common welfare" (quoted in Machlup/Penrose 1950: p. 4).

These kinds of arguments were presented by the London *Economist* and Robert Andrew Macfie[25] in Great Britain, by the *Kongress deutscher Volkswirthe* and by the Prussian ministerial bureaucracy. Almost half a century later Walter Eucken, main representative of the Freiburg School of Law and Economics, adopted a similar attitude, yet with slightly different reasons. The arguments put forward by Eucken are the subject of the following paragraph.

Excursus: The Decline of Nineteenth Century Anti-Patent Movement

Before moving on to this section it is important to note, that the abolitionists of patents were not able to get their demands – the complete abolition of the whole patent system – accepted. Instead they had to resign in the 1870ies and acknowledge their defeat by the friends of the patent system gathering around the *Verein Deutscher Ingenieure* and the *Patentschutzverein* (i.e. victory of the allied forces of patent advocates in the so called 'German Patent Dispute'). But what were the reasons for the sudden disappearance of the anti-patent movement in the 1870ies? How is it possible to explain the reversal of public opinion? The aim of the following paragraph is thus to reconstruct and understand why the free-trade and anti-patent movement lost its influence in the years following the foundation of the German Reich.

Until the 1870ies it looked as though the free-trade movement was able to win the battle over patent laws. Since the 1850ies patent protection experienced a crisis of legitimation in Germany and other European countries. But then many unforeseen events occurred which may help clarifying the change of mood at the cost of the anti-patent movement and in favor of patent protection. In 1873, after the glorious founder's years, a financial crisis broke out; it was soon to be followed by a great depression, the so called *Gründerkrach*. As a consequence of the panic of 1873 the free-trade and anti-patent movement in Europe and especially in Germany were deeply shaken and sustainably weakened; the financial crisis and the following depression was successfully presented as a failed test of the logics of free-trade liberalism by their protectionist rivals.[26] "The idea of patent protection regained its public appeal when, after the crisis of 1873, protectionists won out over the free-traders" (Machlup/Penrose 1950: p. 6). The 1873 economic crisis can thus be seen as a trigger of departing from economic liberalism and as a trigger of the reinvigoration of protectionism. While the free-trade movement was tremendously shaken, protectionist measures and instruments such as protection tariffs and other trade barriers as well as patent laws grew in popularity in the following years after the severe depression. The resistance against the patent system as well as the combat readiness on the other side ebbed away. The increased acceptance and popularity of protectionism was accompanied by the upcoming rise of nationalism in the course of the foundation of the German Reich in 1871: the strengthening of the German industry via patent laws among others (i.e., advancement of the quality of products as well as fostering technological progress) was seen as the basis of a strong and powerful German nation.

Furthermore, the ever-increasing internationalization of the (globalized) world economy (i.e. first wave of globalization) and the increasing numbers of (world) fairs demanded a sufficient patent protection (i.e., exhibitors' fear of imitation[27]). In Germany a transformation of the

[25] Cp. Macfie 1863/1964 and 1869.

[26] Cp. Lang 2010: p. 13 and p. 19; ""thanks to the bad crisis" the public opinion had turned away from the "intellectual communism" of the free-trade school" (Ackermann quoted in Lang 2010: p. 15).

[27] One reason behind the initiative of the first International Patent Protection Congress in 1873 was the fact that many foreign and oversees manufacturers had refused to present their products at the World Fair in Vienna.

industrial structure took place: at around 1840 Germany was an industrially underdeveloped country; it heavily relied on the unrestricted import of ideas and inventions and the theft of foreign inventions; Germany was regarded as a nation of imitators and German products as cheap and low-quality imitation and plagiarism of foreign high quality products; as a consequence, German goods with its bad reputation on global markets experienced significant export losses. In this situation of a technological gap of German industries the introduction of a nation-wide patent system would have been counter-productive. But then the transition and catching up-process started: three decades later, in the 1870ies, the protection of inventions and innovations and the protection against plagiarism was reasonable since many high-tech products were introduced for the first time and so the industry and in particular the *Verein deutscher Ingenieure* demanded patent protection.

The reversal of public opinion in favor of the pro-patent movement and the more or less sudden disappearance of the free-trade movement in the 1870ies were also promoted by a shift in attitudes of the most prominent economists in Germany. They were no longer hostile to the state; instead they were advocates of state interventionism especially in the field of social policy and in order to solve the social question; thus, they favored a more active role of government and the state. According to these kinds of economists – the main representatives were the adherents of the Historical School and the so called *Kathedersozialisten* which played a major role within the 1873 founded *Verein für Socialpolitik* – a new type of economic policy was required. Furthermore, many German economists in that era were more and more skeptical with regard to unlimited and unrestricted free-trade.[28]

The last and probably most influential reason for this turnaround and political *Umschwung* leading to the victory of the allied forces of patent proponents was the political agitation and in some sense propaganda of the patent advocates catching the attention of the media and the public. The debate was carried on in newspapers, journals, pamphlets, books, and of course in the daily press, in various societies, associations, chambers of commerce and in the legislatures.

> "The advocates of the patent system organized a mighty counteroffensive. The techniques of propaganda employed in the years between 1867 and 1877 were quite remarkable for the time. New societies for patent protection were formed, resolutions were drafted and distributed to the daily press, speakers were delegated to professional and trade association meetings, floods of pamphlets and leaflets were released, articles were planted in trade journals and reproduced in daily papers, public competitions were announced with prizes for the best papers in defense of the patent system, petitions were submitted to governments and legislatures, international meetings were arranged, and compromises were made with groups inclined to endorse liberal patent reforms" (Machlup/Penrose 1950: pp. 5:). In this regard "[i]t was strategically essential for the [defenders of the patent system] to separate as far as possible the idea of patent protection from the monopoly issue and from the free-trade issue. This was attempted by presenting the case of patent protection as one of natural law and private property, of man's right to live by his work and society's duty to secure him his fair share, and of society's interest in achieving swift industrial progress at the smallest possible cost" (Machlup/Penrose 1950: p. 9).

The patent dispute as such is an early example of the influence of lobbying pressure groups causing a reversal of opinion in politics and the public.

So far I have just presented the points of conflict, the different conflicting parties and the alleged arguments: Engineers, inventors, industrialists and other groups profiting from the

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They feared the imitation by other exhibitors, especially German ones, due to the insufficient patent protection in many European countries. What was needed was an international harmonization of regulations as well as the need for (national) patent protection

[28] Cp. Eucken's criticism of the Historical School in: e.g. Eucken 2001.

patent laws (e.g. patent lawyers and jurists, etc.) were among the advocates of the patent system, a system of inventor's protection, while free-trade economists and other adherents of the free-trade and anti-patent movement were among the opponents of the patent system. The *Kongress deutscher Volkswirthe* aimed at the abolition of the whole patent system, while the *Verein deutscher Ingenieure* and the *Patentschutzverein* were agitating for the implementation of a nation-wide patent law. The patent dispute ended with the victory of the allied forces of patent proponents due to different reasons (see above). In 1877 the German Patent Act became effective. This law is often considered as the 'corporative turning point' (*korporative Wende*) since it ends the era of free-trade liberalism (at least for the moment) and heralds the start of an epoch of state interventionism.

3. Eucken on Patents: Are they just 'Nonsense upon Stilts'?

Walter Eucken's main anti-patent law argument rests upon the (alleged) linkage between patents, monopolies, exclusive privileges and protectionism. In this sense, Eucken is highly critical of the intrinsic monopolistic momentum of patents. From an (ordo-)liberal perspective patents are fostering the monopolization and re-feudalization of the economy; moreover they enhance the foundation and strengthening of cartels, trusts and syndicates. As a consequence Eucken demands the reduction of patent protection as well as a reform of the current patent system. Although Eucken is not as much as radical as the proponents of the nineteenth century anti-patent movement he makes use of the arguments of the patent controversy in the previous century. What should become clear in the next paragraphs is that Eucken is one of the leading figures of the twentieth century movement against privileges, monopolies, and protectionism. As such he speaks up against patent laws in its present form; however, he does not provide the reader with necessary reform measures (like the anti-patent movement).

The following paragraph is structured as follows: the next subsection outlines the central axioms of Eucken's Ordoliberalism. Based on Eucken's politico-economic principles I will then take a closer look at Eucken's primary writings with special emphasis on his arguments against patent protection. In this regard I will deal with the topic of the necessary framework conditions for releasing and implementing creativity, inventiveness and originality. The pro-patent advocates state that patent laws are quite essential in order to enhance inventions and innovations; on the contrary, the patent opponents à la Eucken claim that only the ordoliberal competitive order and its inherent fight against any form of market power has the ability to foster creativity and in the end the overall wealth of a society.

3.1. The Freiburg School of Law and Economics and its Central Axioms[29]

The ordoliberal Freiburg School of Law and Economics, often referred to as German Neoliberalism, was an interdisciplinary research community at the University of Freiburg in the 1930ies-1940ies. The main representatives, including Walter Eucken, Franz Böhm, Hans Großmann-Doerth and Leonhard Miksch, to name just a few, were convinced, that the market economy mechanism can neither develop spontaneously nor survive unaided (i.e. Freiburg Imperative). Hence, the institutionalization of constituent and regulative principles is necessary to establish and maintain a new permanent socio-economic order – 'Ordo' simply means order – which is capable of solving the New Social Question (i.e. dependencies and exploitation of socioeconomic powers as a threat to individual liberty (Eucken 1948b)). The main characteristics of German Ordoliberalism as among the central pillars of Social Market economy are the following ones: differentiation between *Ordnungs*- and *Prozesspolitik* (rules

[29] Cp. Klump/Wörsdörfer 2010; Wörsdörfer 2010.

of order vs. rules of the game), 'Interdependency of Orders', notion of 'Leistungs-' instead of 'Behinderungswettbewerb' (competition on the merits and in terms of better services to consumers (consumer sovereignty)), market conformity of economic policy measures (Röpke 1942: pp. 258)) rather than arbitrary, isolated and case-by-case interventions, and the liberal ideals: freedom of privileges, non-discrimination and equality before the law.

One of the main distinctions drawn by the ordoliberal Freiburg School is in relation to regulation and process policy (rules of the game (choices of rules) vs. plays of the game within these rules (choices within rules) (see Eucken 1999)). The state must limit itself to the formation of regulation, or frameworks; state intervention in the economic plays of the game must be on the grounds of market conformity (Röpke 1942: pp. 252), i.e. it must not impair the functioning of market and price mechanisms. Process policy-oriented intervention which does not conform to the market must be avoided. In this instance, state regulation must take into account the "Interdependency of Orders"[30] (Eucken), i.e. the fact that economic intervention can also have an impact on the remaining social structures. (Interdisciplinary) "Thinking in Orders" (Eucken), which takes account of these interdependencies, is, therefore, of great importance. It is incumbent upon the "strong state" (Rüstow[31]), as an "ordering power" and "defender of the competitive order" (*Hüter der Wettbewerbsordnung*) (Eucken 1952/2004: pp. 325), to use regulation to establish an economic system, which allows competitive performance to flourish, as this promotes innovation (i.e. competition on the merits and in terms of better service to consumers) (Eucken 1952/2004: p. 247, p. 267 and p. 297), and in which perfect competition ensures that socio-economic interest groups are stripped of power ("competition as an instrument of disempowerment" (Böhm 1971/2008: p. 306)). The liberal ideals, which are at the basis of Ordoliberalism, include freedom of privileges and non-discrimination (see Vanberg 2008). The 'strong', 'powerful' state – governed by the rule of law – must be, constitutionally speaking, in a position to ward off particular interests; it should ideally be above interest groups, seek to remain neutral and serve the common good. In this respect, it is particularly important that the role of the state, but also the boundaries for state activity, are clearly defined, so as to prevent abuses of power and particular interest groups from exerting influence. To put it differently: According to Eucken (1952/2004: p. 177), companies, associations and the state pose several, socio-economic threats to liberty. These threat scenarios must be prevented using the rule of law, the competitive order (*Wettbewerbsordnung*) and the control mechanisms invested in them. Eucken's Fundamentals of Economic Policy and the Constituent and Regulatory Principles – fundamentals and principles form a coherent entity – serve as a means to an end; they enable competition, which, in turn, minimizes the abuse of power and facilitates the exercising of civil liberties. The Kantian moments relate to the prevention of power (i.e. socio-economic limitation of power and limitation of the state's authority) and the facilitation of liberty (cp. Kant's Metaphysics of Morals).

3.2. Eucken's Main Arguments against Patent Protection

But what are Eucken's main arguments against the current patent system? In this regard we have to take a closer look at the ordoliberal primary literature. Interestingly, Eucken refers to patent laws only in five of his writings – namely in the *Staatliche Strukturwandlungen und die Krisis des Kapitalismus* (1932), in the *Grundlagen*-book (1939), in the essay *Industrielle Konzentration* (1946), in one of his speeches at the London School of Economics and Political

[30] For more information about the ordoliberal slogans *Denken in Ordnungen* and *Interdependenz der Ordnungen*, see Eucken: 1950/1965: pp. 50 and p. 62; Eucken 1940 and 1952/2004: pp. 13, pp. 19 and p. 183.

[31] The term 'strong state' was introduced into the ordoliberal debate by Rüstow in 1932 at a conference of the Verein für Socialpolitik. His lecture was entitled "Free Market - Strong State".

Science (LSE) entitled *Zwangsläufigkeit der wirtschaftspolitischen Entwicklung?* (1950), and finally and most importantly in the *Grundsätze*-book published posthumously in 1952. Four of these writings contain rather minor paragraphs devoted to patent laws; only the Grundsätze-book contains a detailed and elaborated analysis of the current patent system and its failure. Moreover, we are aware of an unpublished letter written by Eucken to Friedrich August von Hayek dating from 1946 in which he critically assesses patent laws.

In *Staatliche Strukturwandlungen und die Krisis des Kapitalismus* (1932) Eucken blames patents for being responsible for an increasing inflexibility and rigidity of the German economy. In cases where the 'whip of competition' ("*Peitsche der Konkurrenz*" (p. 298)) is missing, the economic system lacks a sufficient degree of adaptability and elasticity; the feudalization spreads and a fundamental change in the entrepreneurs' attitude takes place which is not suitable for an ordoliberal competitive order and which deviates from a Schumpeterian entrepreneur model ("*Unternehmertyp des Wettbewerbs*" (p. 299)). In this regard, Eucken implicitly picks up one of the arguments of the patent controversy of the nineteenth century, namely the '*patents as obstacle to progress argument'*. In the same paper Eucken laments on the paradoxical situation of an increasing politization of the economy, the emergence of the total economic state and state interventionism. At the same time the state is paradoxically weakened and the danger of a decomposition of the state comes up. The eroding state becomes captivated and fettered by special interest groups and the decision-making procedure depends on particularistic rent seekers. In the end the state is entirely in the hands of lobbying groups abusing state authorities as a tool in order to realize their particularistic goals. This kind of a weak state hampers the technological progress and the private initiatives of businessmen. Although Eucken does not make this point abundantly clear, his argument immediately suggests that patents as well as special interests groups play a decisive role: the influence of special (patent) interest groups on the (reform of the) patent legislation process contribute to the erosion and disintegration of the state and the re-feudalization of the economy. Moreover, patents indeed hamper the innovative process as they prevent the advancement of technology.

Eucken's *Grundlagen der Nationalökonomie* (Foundations of Economics) is remarkable in two ways: first of all it is remarkable that Eucken's *opus magnum* contains only two quotations concerning patent laws (p. 107 and p. 157); secondly, it is noteworthy that Eucken criticizes and defends patents at the same time. Critically he notes that patents are able to close the market in the sense that they restrict the number of producers. The market entry barriers are artificially raised and they are much higher than they would be in the case of an ordoliberal competitive order (cp. Eucken 1950/1965: p. 107[32]). A few pages later (p. 157) Eucken on the contrary praises patents as an instrument of fostering inventions due to the fact that they protect inventions from imitation.[33] In the *Grundlagen*, Eucken's judgment is ambivalent incorporating a positive as well as a negative evaluation.

In the essay *Industrielle Konzentration* which may be translated as 'industrial concentration', Eucken highlights the *non*-technical causes which played a decisive role within the industrial concentration process. In this regard he refers to the role patent laws played within this process (see also Eucken's letter to von Hayek dating from 12 March 1946). The main topics of Eucken's essay are the entanglement and interwovenness of enterprises (i.e., trusts, big

[32] "Schließen *Patente* das Angebot auf dem Markt? – Sicher nicht, wenn sie sich nur auf einen kleineren Teil des Produktionsprozesses beziehen, was oft der Fall ist. Wenn es sich aber um Patente handelt, ohne welche eine Produktion unmöglich ist, so ist das Angebot in der Tat für die Laufzeit der Patente geschlossen."

[33] "Darüber hinaus hat die Schaffung der modernen Patentgesetze, die einen gewissen, wenn auch befristeten Schutz vor Nachahmungen boten, den Strom der Erfindungen wahrscheinlich vermehrt."

business corporations, and concerns), and the market arrangements and agreements between these institutions, in everyday language: cartels and syndicates. The question comes up: what are the reasons of this issue of concentration and monopoly and how is it possible to prevent it (p. 27)? Following Eucken the main reasons for the industrial concentration process in Germany are not the technical ones; rather non-technical aspects such as fiscal law, state-run trade policy, wartime economy, law on stock companies as well as patent legislation(!) and trademark law(!) (pp. 30). All these factors lead to the disequilibrium and imbalance of markets, re-feudalization (*Vermachtung*), monopoly fights and economic concentration; even more important, they are endangering the competitive order and they are in a way the forerunners of the centrally planned economy – unless they are combated in a sufficient (i.e., ordoliberal) manner. Patents – in combination with other factors threatening the functioning of a market economy – cause oligopolies and monopolies. The following required countermeasures should be adopted from an ordoliberal perspective: reform of corporate law, fiscal law and patent legislation with the aim of strengthening personal viability and accountability; moreover a prophylactic economic policy is needed and in particular a monopoly commission and a cartel office are required in order to supervise and monitor corporations and in order to break up cartels, trusts and syndicates (p. 36). In sum, Eucken does not plea for an entire abolition of all patent protection; instead he campaigns for a fundamental reform of patent legislation. Yet, he gives no answer on the specific measures which should be adopted in order to reform the patent legislation.

The major argument offered in Eucken's speech at the LSE in 1950 (*Zwangsläufigkeit der wirtschaftspolitischen Entwicklung?*) is that patents foster the concentration process (p. 32) and hinder competition at the same time. According to Eucken, modern technology has intensified and accentuated competition (i.e., improvement of logistics, reduction of transport costs, market extension right up to a global/world economy, variety of substitution goods, increase in adaptability and flexibility via technical know-how (pp. 24)). Nevertheless many attempts were made in order to restrict or block competition. This subversive fight against competition was lead – among others – by patent and licensing advocates (p. 27). Patents in this regard enhance the inherent tendency towards monopolies, cartels and the re-feudalization of the economy (*Hang zur Monopolbildung*) via a containment and suppression of competition.[34] They are nothing else than instruments on behalf of special interest groups combating the competitive market economy (pp. 29).

As said before, the most detailed and elaborated analysis of the current patent system and its failure by Eucken can be found in his *Grundsätze der Wirtschaftspolitk* (Principles of Economic Policy) which were published posthumously in 1952. Here, Eucken repeats his main arguments and pleads for a radical reform of the present patent legislation; however, he does not demand a complete abolition of patent laws.

As we already know, patents foster the formation and consolidation of monopolies (p. 9); especially *Sperr*- or blocking patents are of great evil (Eucken 1952/2004: p. 41). What is decisive in Eucken's argument is that he blames the state authorities for provoking the foundation of monopolies, cartels and the like and for being responsible to encourage the emergence and growth of private power. One reason for such a development is state-made patent legislation. Via patent laws and other economic policy measures the state initiates and triggers the re-feudalization, monopolization and cartelization of the economy and afterwards the state authorities and especially the government will totally depend on such private economic power. The state authorities are digging their own graves; private interest groups

[34] Cp. Eucken 1914/1990; 1921.

and rent seekers behave just like undertakers. Eucken himself notes: "The formation of monopolies may be provoked and prompted by the state itself, e.g. via its patent policy […]. First, the state encourages and fosters the emergence of private economic (market) power, then the state becomes partially dependent on it"[35] (Eucken 1952/2004: p. 183). In addition, Eucken states that the modern patent law and the ordoliberal competitive order are mutually incompatible! To the contrary, patent legislation (often) leads to the emergence of economic orders which are alien to the system (i.e., "systemfremde Wirtschaftsformen" (p. 268)). Eucken admits that the negative consequences of patent laws – namely the inherent tendency towards monopolies as well as the fostering of the concentration process within the German industry (p. 268) – were not the intention of the lawmaker; the original intention was to foster inventions and the technical progress and to protect the inventor from imitation and plagiarism. However, what was not taken into consideration was that patents grant exclusive and monopolistic privileges, that they clothe private interest groups with power and that they therefore close markets, cause and corroborate the politico-economic concentration process and enhance the emergence of cartels and concerns (p. 268). Eucken speaks in this regard of patent cartels and patent trusts (*Patentkartelle* respectively *Patenttrusts* (p. 268)). He goes on to state that: "The interchange of licenses facilitates the emergence of cartels; the danger that one member [of the cartel] faces in case of abandoning the cartel, i.e., the loss of certain patent rights, cements a cartel. Furthermore, cartels are essentially important when it comes to the setup of modern [multinational] corporations and concerns, namely for their expansion [strategies] as well as their fight against outsiders" (p. 268).[36]

In sum, patents as well as trademark protection and its inherent (resale) price maintenance determined the development of the 'modern' economic system mainly characterized by market-dominating monopolies and cartels. This concentration process was additionally promoted by the jurisdiction: In 1897, for example, the German Supreme Court legalized cartels (cp. Eucken 2001: p. 14); in 1923 a new cartel regulation was passed which again legalized cartels and which proclaimed the state-run supervision of cartels, yet in an totally insufficient manner (cp. Böhm's criticism in: Böhm 1933/1964; 1937: pp. 98 and pp. 138). This formal-juridical *legalization* of the cartelization and concentration process led to a steady increase in the number of trusts, cartels and syndicates. Germany at that time was commonly known as a 'nation of cartels'. Moreover, this legalization was accompanied by a far reaching *legitimization* of cartels and monopolies – most notably by the German Historical School and one of its main representatives, Gustav Schmoller (cp. e.g. Schmoller 1901: pp. 448; 1920: pp. 470 and p. 560). Due to the outstanding importance of Schmoller and the Historical School especially within the (in the meantime[37]) cartel-friendly attitude of many economists of the *Verein für Socialpolitik* (cp. Eucken 1914/1990: p. 221 and Eucken's letter to von Hayek dating from 29 June 1948) an intellectual climate arose which abetted the upcoming total cartelization of the German economy. Eucken himself was one of the outstanding critics both of the legalization by the jurisdiction and the legitimization of cartels and monopolies by

[35] "Die Monopolbildung kann durch den Staat selbst provoziert werden, etwa durch seine Patentpolitik […]. Erst begünstigt der Staat die Entstehung privater wirtschaftlicher Macht und wird dann von ihr teilweise abhängig" (Eucken 1952/2004: p. 183).

[36] "Der Austausch von Lizenzen erleichtert die Kartellbildung; die Gefahr, die ein Mitglied im Falle des Ausscheidens läuft, das Recht an gewissen Patenten zu verlieren, kittet viele Kartelle zusammen. Auch beim Aufbau der modernen Konzerne sind Patente geradezu entscheidend geworden, und zwar für ihre Ausdehnung und für den Kampf gegen Außenseiter" (Eucken 1952/2004: p. 268).

[37] As we have seen, a change in the attitudes of German economists occurred in the nineteenth century. Until around 1870 many German economists were advocates of the free-trade and anti-patent movement; since the 1870ies and especially with the foundation of the *Verein für Socialpolitik* and the growing influence of the German Historical School however, more and more economists were in favor of patent protection, cartels and state interventionism especially in the field of social policy.

the Verein and the Historical School. Both aspects – the legalization as well as the legitimization – paved the way for the accelerating concentration process; hence the market and competitive forces were extremely limited (Eucken 1952/2004: p. 269).

As a consequence, Eucken pleads for a radical reform of patent policy and the implementation of a radically new patent legislation. The aim must be to overcome the closing and compartmentalization of markets. Concretely, Eucken brings up for discussion the shortening of the period of patent protection and the extension of licensing. Eucken's model of licensing includes a system which obliges the patent owner to 'grant licenses to each and every(!) eagerly interested person' (p. 269).[38] The reform of patent legislation has to be accompanied by a severe fight against market power concentration and the monopolization and cartelization of the economy. This implies the dissolution of monopolies, cartels and the like and an efficient state-run monopoly control including a monopolies and mergers commission and a cartel office. The aim is to open markets and to lower the entry barriers to markets (p. 290).

4. Concluding Remarks

As my review of patent laws from a theoretical-historical and history of economic thought perspective has shown, Eucken picks up the arguments of the nineteenth century anti-patent movement (cp. especially Eucken 1932: p. 298; 1946/1999: p. 36; 1950/1965: p. 107; 1952/2004; 2001: pp. 27) – although his conclusions and implications are less radical compared to those of the anti-patent advocates. Nevertheless, Eucken draws on the arguments presented by the *Kongress deutscher Volkswirthe* and others – namely the free-trade argument and the 'patents as obstacle to progress argument'. Only one major argument of the patent controversy is missing: the 'inventions as an intellectual common property argument'.

At the heart of Eucken's argument are of course the free-trade argument and the (assumed) linkage between patents, privileges and monopolies (i.e., patent privileges/patent monopolies). This kind of argument may be relabeled as the *(anti-)protectionism* and *(anti-) re-feudalization argument*. But what is the reason for criticizing patents as monopolies and the inherent monopolistic character of patents? The great drawback of market-dominating, engrossing and forestalling monopolies and cartels – Eucken (1947/2008: p. 139 and pp. 145; 1952/2004: pp. 265; 1999: pp. 25; 2001: pp. 13, pp. 79 and pp. 85) speaks of *Marktmacht*, *Marktbeherrschung*, *Machtkonzentration* or *Vermachtung*, which are the German translations for the just mentioned terminology – is the rising of commodity prices while at the same time the quality of goods and services decreases. Moreover, monopolies tend to diminish the division of labour, they tend to increase poverty and decrease the wealth of a nation, and they discourage industry and improvements in the form of technological innovations (i.e., patents among others as an obstacle to progress). They are mutually incompatible with a liberal economic policy. Furthermore and even more important is the fact that monopolies, cartels, etc. threaten personal liberty, a value which is at the heart of Ordoliberalism.

According to Eucken (1948a: pp. 73; 1949: p. 27), individual liberty consists of the Kantian notion of autonomy, self-legislation and self-determination highlighting the importance of the Kantian philosophy in general and the Categorical Imperative in particular. Liberty is constitutive for humanity (cp. Eucken 1948a: p. 73; 1952/2004: p. 176 and pp. 369) and it is strongly related to human dignity: Each person is an end in itself and no instrumental means to an end (cp. Böhm 1950: p. XXXV; Eucken 1948a: pp. 75). Furthermore, freedom is necessary in order to overcome tutelage, dependency and immaturity (Eucken 1948a: p. 74).

[38] "… System einzuführen, nach dem der Patentinhaber verpflichtet ist, die Benutzung der Erfindung gegen eine angemessene Lizenzgebühr jedem ernsthaften Interessenten zu gestatten."

Eucken abhors the stereotyping process (*Vermassung*), the mental uniformity, nihilistic soullessness, and the mental vacuity and void resulting from the at that time societal crisis (*Gesellschaftskrisis*) (cp. Eucken 1926; 1932). Freedom has to be protected by the law-giving bodies of the state, pointing at the interrelatedness of freedom and the rule of law (cp. Eucken 1949: p. 27; 1952/2004: p. 48 and p. 176). The jurisdiction – together with ordoliberal *Ordnungs*- and *Wettbewerbspolitik* and a clear-cut definition of the state's tasks – is responsible for averting the threefold dangers threatening liberty: private powers of producers, semi-public and corporatist powers of societal collectives and the powers of the state (cp. Eucken 1952/2004: p. 177). Eucken clearly criticizes the totalitarian interventionist state of the industrialised age and its unification of economic and political powers (cp. Eucken 1948a:p. 75). It is the aim of all ordoliberal representatives to implement a constitutional design with adequate restrictions and sanctions that maximizes individual liberty and the freedom of external (legal) compulsion and disposal, while at the same time protecting privacy and minimizing the abuse of socio-economic power.[39]

In this regard Eucken abhors the combination of (patent) monopolies, exclusive privileges (of inventors), the re-feudalization of the economy and the growing market-dominating power of market actors. The risk of abuse which accompanies the granting of exclusive patent privileges is by far too high. Additionally, patents are an instrument of protectionism. So here we can detect the linkage between patents, monopolies, exclusive privileges and protectionism. Eucken as one of the leading figures of the twentieth century movement against privileges, monopolies and protectionism speaks up against patent laws in its present form; in this regard, he implicitly draws on the argument of the opponents of patent laws in the nineteenth century. The aims of the nineteenth century anti-patent movement – namely the abolition of the patent system as a system of inventor's protection, the reduction of patent protection and free-trade in inventions (i.e., transfer of the free-trade argument to intellectual property rights) – are quite similar to Eucken's ones, although he is less radical compared to John Prince-Smith and other advocates of the free-trade school (e.g. Eucken does not plea for the entire abolition of patent legislation; instead he proclaims a radical and encompassing reform of the patent jurisdiction). In sum, Eucken implicitly joins the anti-patent movement in presenting similar (free-trade and anti-feudalization) arguments; however, he does not provide the reader with necessary reform measures.[40] This is a further parallel to the anti-patent movement and probably one of the major reasons for the sudden disappearance of the free-trade movement in the 1870ies.

Remarkably, most of the here presented arguments defending or opposing patents are still used today whenever the meaning and significance of patent laws is debated. Thus, the patent controversy of the nineteenth century and the (counter-)arguments presented by Eucken are still relevant in the present context.[41] Thus, we can close this paper on patent laws with

[39] Cp. Klump/Wörsdörfer 2010.

[40] A further question concerning German neoliberalism is the issue whether Eucken's Ordoliberalism is compatible with the modern capitalistic system since it contains some anti-capitalistic momentums, e.g. the plea against patents and the protection of intellectual property as well as the plea against multinational corporations, stock companies, limited liability companies, etc.?

[41] Contemporary and topical questions involve the following ones: Is the modern patent system fostering the monopolization and concentration of the economy – at the cost of small and medium sized enterprises? Are Apple, Facebook, Google, Microsoft and other patents-pegged corporations facilitating the re-feudalization of the world economy and fuelling the cartelization process? Are patents adequate instruments of promoting the intended economic goals or is it possible to reach these goals in a less expensive way? Are patents the cheapest and most effective instrument to stimulate industrial progress? Are there any alternatives to patents to protect inventions and innovations? Are there any mechanisms other than patent laws protecting intellectual property? (cp. Moser 2005)? Are patents directing research and development into the economically most productive areas?

quoting again Machlup and Penrose (1950: p. 10): "Indeed, little, if anything, has been said for or against the patent system in the twentieth century that was not said equally well in the nineteenth."

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Finally, are they promoting the transformation towards a knowledge-based economy – from an imitation-based industry towards a highly innovative society?

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