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THE PRINCIPLE OF COMPETITION
A COMMON LAW OF EVOLUTION
FOR BIOLOGY, ECONOMICS
AND COMMERCIAL LAW?

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SUMMARY

This paper has been written en hommage of F.A. von Hayek who is going to celebrate his ninety-first birthday on May 9th, 1990. It takes the development of German antitrust law, being heavily influenced by American law, as an example for the evolution of modern business law, which was starting originally from some kind of a market structure analysis and is turning recently to the concept of competition as a discovery process. It also elaborates some basic methodological possibilities and limitations of the interdisciplinary cooperation between biology, economics and law.

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**The Principle of Competition
A Common Law of Evolution for Biology,
Economics and Commerical Law?**

"It ought to be freely admitted that the market order does not bring about any close correspondence between subjective merit or individual needs and rewards. It operates on the principle of a combined game of skill and chance in which the results for each individual may be as much determined by circumstances wholly beyond his control as by his skill or effort. Each is remunerated according to the value his particular services have to the particular people to whom he renders them, and this value of his services stands in no necessary relation to anything which we could appropriately call his merits and still less to his needs."**

I. The Principle of Competition in German and European Commercial Law, Particularly Antitrust Law

A. The Development at the End of the 19th Century and the Case Law of the German Reich Supreme Court

In 1859, when Charles Darwin with scientific exactness first proved and formulated the mechanism of evolution, the law of natural selection, in his work "On the origin of the species," the commercial and legal science discussion of the necessity of an antitrust law was still in its infancy. At that time, nobody would even have entertained the idea of allowing Darwin's biological conclusions to fructify the form of a system of competition. Instead, the respected Association for

Social Policy, for example, occupied itself with questions of the compatibility of patent monopolies and cartels with the then still relatively new legal principle of freedom of trade.¹ It thus also corresponded to the prevailing opinion in economic theory² at that time when, before the turn of the century, the Reich Supreme Court³ stated:

"Contracts of the type at issue can thus, from the aspect of the public interest protected by freedom of trade, only be objected to if in an individual case under special circumstances doubts arise, namely if it is obviously aimed at achieving a factual monopoly and the usurious exploitation of consumers, or these results are indeed factually achieved by the agreements and arrangements made."

It is therefore not surprising that, at that time, cartels became an important foundation of the whole of commercial life in Germany, since the basic industries were practically all in cartels. The formation of cartels primarily occurred in the field of homogeneous goods,⁴ e.g. coal, iron and potash. Although, in 1875, there were only four cartels, there were already 106 in 1890, and as many as 385 in 1905, with about 12,000 companies participating.⁵ The economically and politically significant Rheinisch-Westfälische coal syndicate of 1893, for example, is famous. Cartel organization law, i.e. essentially company law, almost completely repressed

any rudiments of an antitrust law to encourage competition.⁶ In commercial life this meant:⁷ Collective reason took the place of individual entrepreneurial freedom of choice, cartels and syndicates dominated market activity to such an extent that competition was practically excluded; production, prices and profits were levelled and stabilized on the part of commerce, so that real competition, a rivalry of enterprises to obtain acceptance by consumers, no longer occurred. Above all, this should be viewed against the background that in the U.S. antitrust law had already come into existence in 1890 with the Sherman Act, i.e. with a prohibition of a competition-restricting contract, trust or conspiracy, and in 1940 with the Clayton Act and the FTC Act.⁸

In Germany this legal situation also corresponded with the opinion prevailing in political economic doctrine:

"Altogether it could be said that until 1914 the German national economy reflected a surprisingly uniform opinion: The necessary existence of cartels was not questioned, merely individual measures. This was also true of critics, such as Bücher, Brentano and Adolph Wagner. The proper formation of cartels and syndicates provided the best protection against the formation of trusts, which were objected to. Antitrust legislation, which was to be gradually undertaken based on thorough information, was merely intended to prevent concrete abuses but not to create generally enforceable laws and

not, in principle, to threaten the existence of cartels and syndicates."⁹

B. The Weimar Republic and the Nazi Regime

A renaissance of theoretical liberalism among national economists occurred only after World War I and as a consequence of the great depression in the 1920s.¹⁰ These economists, together with public pressure, eventually forced the legislature to act; the Cartel Regulation of November 2, 1923, was enacted,¹¹ which, however, only contained a relatively ineffective prohibition of abuses. This emergency measure can even be indirectly viewed as a type of legalization of cartels, so that subsequently the organization of the German economy in compulsory cartels by the Compulsory Cartel Act of 1933 under the Nazi regime can actually be viewed as a logical consequence of this economic policy. At that time, it was particularly clear that the concentration of economic power in the hands of a few enterprises could only promote the achievement of the monocratically set goals of a tyrant; cartel law not only has the function of establishing a framework for an economic order, but also serves the economic separation of powers and decentralization in a constitutional state oriented to a market economy.¹² Biologically speaking, only a certain variety and variability of entrepreneurs and enterprises appear to further the process of evolution.

C. The Act Against Restraints of Competition

After World War II,¹³ the Allies' decartelization laws were first enacted in 1947 and contained a cartel and monopoly prohibition. After initial criticism, the so-called Josten Committee¹⁴ began work in 1948 on the preparation of a cartel law, which was presented to Ludwig Erhard, who was then administrative director of the economy, on July 5, 1949, as a "Draft of a Law on Securing Competitive Performance and of a Law on the Monopoly Office," or "Josten Draft" for short. The ordoliberal approach of the Freiburg School¹⁵ was clearly recognizable in this draft, e.g. because the model of "complete competition" was discarded.

Due rather to a procedural conflict with a memorandum of the Bipartite Control Office of March 29, 1949, and due to a material difference with the new governmental concept of a "social market economy" according to Müller-Armack,¹⁶ this draft, and thus an almost absolute prohibition of cartels without any area of exception, could not prevail. However, the new Minister for Economic Affairs, Ludwig Erhard, wanted to secure his market economy course precisely by a statutory anchoring of freedom of competition, and therefore regarded the proposed competition law as the culmination of the market economy order - as nothing less than the constitution of the economy.¹⁷

Beginning in 1949, the cartel specialist in the Ministry for Economic Affairs, Dr. E. Günther, therefore had to prepare a total of 15 drafts, in which a continual oscillation between the principles of a "per se" prohibition and a more general abuse-clause was apparent regarding cartels, until at last, in 1951, the Act Against Restraints of Competition could for the time being be passed by the Cabinet. Due to the absence of merger and deconcentration provisions, the Allied High Command submitted an allied draft of an Act Against Restraints of Competition of November 28, 1951, drawn up by the U.S., which had the consequence that the area of exception in Sec. 1 of the Act Against Restraints of Competition was considerably reduced in the German draft and a merger control inserted. The ensuing government draft of June 13, 1952, contained only three exceptions from the general prohibition of cartels in Sec. 1, namely cartels in times of economic crisis, rationalization cartels and export cartels. The introductory remarks to the protocol on the reasons for the law¹⁸ explain the unlimited ordoliberal founding concept of this draft: "The Act proceeds from the economo-political experience confirmed by economic science research, that the competitive economy is the most economical and simultaneously the most democratic form of economic order, and that the state should only guidingly intervene in the market process to the extent that it is necessary to maintain the mechanism of the market or to supervise such markets in which the market form of complete

competition cannot be achieved." The "market form of perfect competition with the market price as a guiding factor of the commercial process" is also mentioned in other places, so that the stamp of the Freiburg School is manifest.¹⁹

Nevertheless, this government draft was sabotaged within the ranks of the Christian Democratic Union/Christian Socialist Union and the Free Democrats, as well as by industry, particularly by the Association of German Industry, so that the "strong state" demanded by the ordoliberalists proved itself incapable, during its first period of legislature, of cementing a keystone of the "social market economy" in the law. In the next federal government, Erhard even had to threaten his new Minister for Special Affairs, Franz Josef Strauß, that he would resign, in order to be able to present once again the Bill with its principle of prohibition of cartels before Parliament. Moreover, the Association of German Industry managed to have the merger control struck out entirely, and in 1955, against Erhard's will, two further drafts which eventually neutralized each other were introduced before Parliament: the so-called "Höcherl Draft" which followed a pure principle of abuse, and the so-called "Böhm Draft" which provided for a pure principle of prohibition with a strict provision on admissibility. Böhm based this on the fact that "because of the negotiations with the Association of German Industry the Bill ... can now only be seen as a disguised law against

abuse."²⁰ At the first reading there was a politically surprising majority of votes from the left wing of the Christian Democratic Union, together with sections of the Free Democratic Party and the entire Socialist Party, which called for a narrower version of the definition of market domination and introduction of merger control. For political reasons, in January 1957, the party leaders of the Christian Democratic Union then intervened and established a party committee chaired by Pferdmenges, with Erhard, Böhm and Höcherl as members, which laid the groundwork for a compromise that could be supported by all factions of the Union. The provisions on merger control were thus deleted again, and the definition of market domination was widened. The Act Against Restraints of Competition which finally entered into force on January 1, 1958, no longer quite resembled what the Freiburg School had in mind, despite the occasional use of ordoliberal terminology and the model of the market form of complete competition as advocated by W. Eucken. Not only were the ordoliberals greatly disappointed, but also the proponents of the "social market economy," including Ludwig Erhard: "My concept of the Cartel Law, which was of course also expressed in the Bill, quite certainly does not correspond to the solution now prepared."²¹

It should be emphasized that the legislature avoided defining competition,²² i.e. a normative model of German policy on competition. Thus, it consciously or

unconsciously left room for further scientific debate by economists and jurists on the "nature of competition," which has still not been concluded,²³ and should perhaps never be quite concluded, so that sufficient space remains free for the evolutive competition of the scientific diversity of opinion on cartel law.

D. The Amendments to the Act Against Restraints of Competition and the Fundamental Discussion from the Aspect of Competition Theory

a) The Amendments to the Act

Since 1957 the Act Against Restraints of Competition has been further developed by a total of four amendments,²⁴ and a fifth proposed amendment is currently under legal policy discussion.²⁵ The second amendment in 1973 was particularly significant in content because it brought with it the creation of a merger control under Secs. 23 et seq., which had already been discussed for far too long, the fundamental repeal of vertical price fixing under Secs. 15 et seq., and the introduction of a prohibition of concerted practices under Sec. 25. The Monopoly Commission was also newly established. The third and fourth amendments essentially only led to tighter merger control and surveillance of abuse by market dominating enterprises.²⁶

Only a few years after the introduction of the Act Against Restraints of Competition, discussion of a new model for competition policy began, because it was recognized that the concept of complete competition was too unrealistic. Stronger emphasis was laid on the dynamic function of competition and the consideration of goals set by growth policy which, principally influenced by Karl Schiller, had also found expression in the Stability Act of 1967 with its magic quadrangle, steady and adequate economic growth, price stability, relatively high employment and balance of foreign trade.

b) The Kantzenbach-Hoppmann Controversy

At that time the concept of functional, effective competition as advocated by E. Kantzenbach²⁷ became the center of controversy on competition theory, which in the late 1960s, i.e. already before the second amendment to the Act Against Restraints of Competition, was at least for a time also adopted by the Federal Cartel Office and the Ministry for Economic Affairs.²⁸ Influenced by J.N. Clark,²⁹ Kantzenbach proceeds on the assumption of five economic functions of competition: three static - functional distribution of income according to market performance, supply according to consumer demand, and optimal allocation of production factors; two dynamic - flexibility of adaption of production capacity and technical progress. Before this structural-theoretical background, Kantzenbach³⁰ believes competition cannot

develop optimally either by atomistic competition in a market with many small participants or in a tighter market with a few dominant participants; competition policy should therefore aim at the establishment and development of widespread oligopolies in all markets; only then could an optimal intensity of competition be achieved.

This type of formulation of a workability concept of competition has primarily³¹ been almost passionately criticized, indirectly by von Hayek³² and particularly emphatically by Hoppmann.³³ This as yet not conclusively debated Kantzenbach-Hoppmann controversy is of particular interdisciplinary interest to us because it can be regarded as the turning point of German competition theory to an evolutionary open system³⁴ which is cybernetically self-regulating and self-reproducing.

While Kantzenbach proceeds on the assumption of the categorical, i.e. inherently ex ante determined, aim function of competition, thereby postulating certain relationships between market structure, market practice and market results, Hoppmann links his interpretation of competition, which may be designated as neoclassic, to the concept of economic freedom and freedom of competition according to Adam Smith.³⁵ Of course, if Adam Smith's concept of freedom primarily concerned combatting mercantilism, Hoppmann, strongly influenced by the interpretation of competition as a spontaneous system

according to von Hayek, takes a system theory and social theory approach and to that extent fully concurs with Mestmäcker³⁶ and Fikentscher.³⁷ This freedom of competition according to Hoppmann embraces both freedom of choice of the consumer ("consumer sovereignty") and freedom of the supplier in the development of competition-promoting innovations and imitations. Correspondingly, the market is the theater of the players in competition (suppliers and demanders equally³⁸), who interact spontaneously within a general legal framework on the basis of certain rules of conduct.

c) The Influence of von Hayek

Basically, von Hayek already suggested this evolutionary concept of economic theory in 1946,³⁹ which he later further developed and refined in his theory of "competition as a process of discovery."⁴⁰ Von Hayek was initially against any presumption of knowledge, which implied the model of perfect competition:⁴¹ "But this knowledge, which is presumed to exist and can presumably be relied upon, is one of the main points for which the facts can only be discovered in the course of the process of competition. This seems to me to be one of the all-important points where the theory of the balance of competition from the very beginning assumes the main problem to be non-existent which only the process of competition can solve."⁴²

The following passages which describe the substance of this model more closely are thus found in the "process of discovery":⁴³

"In contrast to this it is useful to recall that everywhere where competition is of service to us this can only be justified by the fact that we are unaware of the essential circumstances which determine the actions of those involved in competition. In the field of sports and examinations, in poetry and not least in science, it would plainly be senseless to arrange a competition if we knew beforehand who the winner would be. Therefore, as mentioned in the title of this lecture, I would like to consider competition for once as a process of the discovery of facts which without its existence would either remain unknown or at least not be utilized....

We are used to defining the order which produces competition as a balance - not a very fitting expression, because a real balance presumes that the relevant facts have already been discovered and that therefore the process of competition has reached a standstill. The concept of order, which I prefer to that of balance, at least in economic policy discussions, has the advantage that we can meaningfully say that an order can be realized to a greater or lesser degree and can also survive changes. While a balance never really exists, it is still justified to maintain that the type of order, of which the theoretical balance represents a kind of ideal form, is realized to a high degree.

This order mainly manifests itself in that the expectations of certain transactions with others, upon which business persons' plans are founded, are fulfilled to a great extent. This mutual accommodation of individual plans is realized by a process which, since the natural sciences have also begun to deal with spontaneous orders or self-organizing systems, we have learned to describe as negative feedback. Indeed, as informed biologists are now also aware, long before Claude Bernard, Clark Maxwell, Walter B. Cannon or Norbert Wiener developed cybernetics, Adam Smith had just as clearly seen the idea in his *The Wealth of Nations*. The invisible hand which regulates prices apparently demonstrates this notion. What Smith said was essentially that in a free market prices are determined by negative feedback."

In later works,⁴⁴ it clearly emerges that von Hayek quite generally prefers the "English liberalism" to any, what he calls, "French constructivist rationalism" because only the former leads to an "evolutionary interpretation of all cultural and spiritual phenomena" and is based on the appreciation of the "limitations of human powers of comprehension." Not "taxis," a manmade order, but "kosmos," a spontaneously developed order based on an evolutionary mechanism determines the passage of history:⁴⁵ "Man is never and never will be master of his fate. It is precisely his rationalism which marches on

and leads him into the unknown and unexpected, where he learns new things."⁴⁶

F.A. von Hayek's paternal grandfather was a biologist,⁴⁷ which makes it plausible that, like no other competition theorist before,⁴⁸ he embraced the theory of evolution in his ideas; this, but not only this, appears to me to be one of the most important reasons why von Hayek and Hoppmann have in the meantime emerged as victors in the controversy with Kantzenbach.⁴⁹

d) The Significance of the Chicago School

Conspicuous parallels to the Chicago School,⁵⁰ however, may also be found in von Hayek's work, whereby of course von Hayek long ago broke the chains of the narrow restrictions of a pure economic concept of efficiency. Nevertheless, methodological individualism, progression from the micro- to the macro-economy and the very long-term but ever dynamic-evolutive oriented manner of observation, may be set forth as common points of approach. Some beginnings of the property rights theory may also already be found in von Hayek's work:

"It has often been said that the aim of almost all private law ... is to demarcate protected areas or domains of the individual, which others may not violate. The law does not define these areas by appointing concrete things to certain persons but, as is usually

said, by abstract rules which allow us to derive from the circumstances what belongs to each person."⁵¹

Schumpeter⁵² may well be regarded as a common key figure, who has decisively influenced the development of economic theory in both Europe and the U.S.A.⁵³ What influence the basic principles of the Chicago School will eventually have on the future development of German and European cartel law⁵⁴ is at present still completely open. It is certain that the Chicagoans are actively adding fuel to the flames of the debates on privatization and deregulation which are currently catching fire everywhere in Europe. It is also certain that the Chicago School has enriched the methodology of law by a further, in my opinion very important, facet, namely the economic analysis of law, which in the meantime has also been able to capture a permanent place in the discussion of methods of thinking in law in Europe.⁵⁵ That this way of thinking is already bearing concrete statutory fruit in connection with the discussion on the fifth amendment to the Act Against Restraints of Competition may currently only be maintained with regard to the reduction of the areas of exception in German cartel law, pursuant to Secs. 99 et seq., of the Act. Any thoughts of protection of the retail trade structure diametrically oppose this doctrine.⁵⁶ Also the current issues connected with the creation and proper dimensions of a European merger control⁵⁷ are not concurrent with the Chicago school of thought, since the size of enterprises or market

concentration will accordingly be principally considered as evidence of inherent advantages for efficiency.

e) Contestable Markets

Last not least, the relatively new U.S. competition concept of contestable markets⁵⁸ should be mentioned which, like the Chicago School, has already influenced our thinking and judgment on cartel law to a certain degree in recent years.⁵⁹ For instance, consideration of the concept of "potential competition," which relatively soon led to an extension of the criteria of defining the existence of a market dominating position under Sec. 22 of the Act Against Restraints of Competition,⁶⁰ as well as quite generally the analytical concept of "no barriers of entry or exit" and the observation of "sunk cost" show that these U.S. approaches to an inherently closed theory of industry have already gained influence in German commercial theory and economics. A direct and immediate conversion to the practice of German cartel law has, of course, not yet taken place.

E. Summary of German Cartel Law

The German Act Against Restraints of Competition (GWB) neither positively provides for a certain definition of competition, nor is it based on a statically fixed model of competition. Without doubt, at the time of its enactment, the influence of the Freiburg School was particularly

significant;⁶¹ however, without this having led to a codification of the model of complete competition. The Act has rather been drawn up in a manner which is open and elastic enough to be able to integrate and at least try to duplicate the evolutionary process of commercial theory and economics. Open, general-clause-type legal definitions, e.g. "restriction of competition," "market-dominating enterprise," "abuse of market power," or "unreasonable hindrance" permit this, just as well as a relatively effective maintenance of the balance between the jurisdictional powers of intervention of the cartel authorities and private law claims of competitors.

F. The Competition Model of EC Cartel Law

Unlike German constitutional law,⁶² EC law contains an express obligation actively to maintain competition, since pursuant to Art. 3, lit. f, of the EEC Treaty, the activities of the Community inter alia also include: "The institution of a system ensuring that competition in the common market is not distorted;" further details may be derived primarily from Arts. 30 et seq., 36, 85 and 86 of the Treaty. The underlying principle is the creation of an internal EC market, a common market, governed by decisions made according to decentralized market economy criteria by its free and equal commercial subjects, i.e. by suppliers and consumers in equal measure.⁶³ The main supports of this structure are the four special pillars of market freedom under European law: free movement of

goods, services, capital and payments. Additionally, there are the legal aspects of freedom of market participants, namely freedom of action and freedom of establishment for all commercial subjects in the EC.⁶⁴ Beyond this, however, even under EC law, no detailed indications on the specification of the system of competition or the principle of competition are to be found, although the case law of the European Court of Justice must be qualified as the most important integrating factor of the Community until now.

In summary, the economic constitution of the EC can certainly not be described as neoliberal, as the agricultural market regulations are anything but conducive to competition. It is rather the case of a mixed economy based on a market economy,⁶⁵ whereby the competitive economy element clearly predominates overall.

II. The Principle of Competition: Evolutionary Biology, Economics, Commercial Law. An Interdisciplinary Explanatory Approach

A. Adam Smith as Economist and Sociobiologist?

Adam Smith, the father of the classic doctrine of economics, in his "Theory of Moral Sentiments,"⁶⁶ initially proceeded from the assumption of self-interest, man's self-love; all human aspirations are marked from the cradle to the grave by a striving to improve

individual financial standing and social prestige. This "egoism" is held in check by three barriers: human sympathy, voluntary recognition of common rules of ethics and justice, and national statutory law. In "The Wealth of Nations,"⁶⁷ a fourth barrier is perceived, namely economic competition, the struggle for acquisition and capital investment of other market participants.⁶⁸ The principle of competition becomes a dialectical instrument, it guarantees and controls the freedom of action of every individual in a community based on equality. In addition, Smith⁶⁹ outlined four social periods and stages of human development, four different types of productive activity of man in order to earn a living, with the corresponding different forms of property: hunting, nomadic herding, agriculture, and the "modern exchange or trade economy." At the lowest stage of development, the individual earns his living by hunting and gathering "the fruits of the earth;" communities are small and easily surveyed - an enlarged family. Private property is still relatively insignificant and does not require special state protection under threat of penalty.

Among nomadic tribes income is derived from the domestication of animals, which requires an increase in the size of family clans and the search for newer, broader grazing pastures. Herding leads to the private ownership of animals, a specific form of "possession," which may be increased relatively at will. Inequalities

arise therefrom as a matter of course in a community, as well as tensions between rich and poor, so that a common institution is required, a "civil rule" strong enough to enforce respect for a system of property.⁷⁰ Accumulated wealth can also be bequeathed, so that upper and lower class structures are not only formed by property itself, but also by birth; in this manner the prestige and power of individual families can be increased.⁷¹ At the third stage of development, the cultivation of acquired land ensues, succession is statutorily regulated, e.g. by the right of the firstborn and entail. A large landowner is economically relatively self-sufficient, whereas the economic and legal dependency of the landless is very great. Consequently, partriarchal relationships develop, since the feudal lord is lawmaker, judge and military protector to his vassals, and "jurisdiction" becomes "quite a respectable source of income."⁷²

In a "modern exchange or trade economy" the individual can earn the "necessary and pleasant things in life" by division of labor and specialization in production,⁷³ as well as the subsequent exchange of goods which can be converted to account by a monetary system. A commercial subject becomes decisively more independent and free in that he can demand a monetary payment for the concession and use of manpower, land and capital for use in production. A high degree of reciprocity in the form of the exchange price for certain market services from now on takes the place of one-sided dependency among the

various classes of the population in an agricultural feudal society.

The dynamics of this historical development are determined by fundamental changes in human behavior as man is constantly concerned about securing his existence and improving his financial and social position. Hunting and gathering are replaced by domestication of animals, land cultivation and finally by the great revolution in the form of the introduction of the "modern exchange and market economy." These changes in behavior have correspondingly led to far-reaching consequences for commensurate legal, social and political systems which needed to be newly developed. These analytical insights and the historical explanation of this development process constitute an extraordinarily intuitive "masterpiece"⁷⁴ by Adam Smith, because certain basic approaches to the theory of property rights⁷⁵ and sociobiology⁷⁶ have been simultaneously anticipated.⁷⁷

B. Evolutionary Biology and the Principle of Self-interest as a Factor in Competition

Sociobiology⁷⁸ as a special subdivision of evolutionary biology⁷⁹ and ethnology also presumes self-interest⁸⁰ when it tries to illustrate generally valid natural laws which may equally be applied to the behavior of humans, as well as other forms of life. Contrary to Darwin, however, competition - the struggle to survive - does not

primarily concern the survival of its own species, but ensuring and spreading as far as possible the genes of each individual example. The type and extent of social cooperation or competition depend on the number of identical genes, i.e. on the degree of kin-relationship between individuals. These considerations, as well as model economic approaches, e.g. the cost-benefit analysis, can likewise illustrate the reproductive strategies of lions and the formation of colonies of bees and ants.⁸¹

As already extensively discussed elsewhere,⁸² this principle of self-interest, and the fact that it is embedded in a system of competition, could be chosen as a starting point for an interdisciplinary examination from biological, economic and commercial law aspects, because it is also precisely the biologists who have long since freed themselves from the chains of their own specialization and are endeavoring to find socially relevant⁸³ statements: "Our societies are based on the scheme of mammals: the individual primarily fights for his own personal success in reproduction and then for that of his direct relations; cooperation going beyond that is reluctantly tolerated and constitutes a compromise entered into in order to be able to enjoy the advantages of belonging to the group."⁸⁴

The individual, vital biological interest of every form of life to survive, to reproduce and to improve its

circumstances⁸⁵ in a world of scarce resources necessarily leads to competition, to the competitive struggle of the "survival of the fittest." Furthermore, in Darwin's words: "Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows."⁸⁶ In legal science, Rudolph von Jhering was the first to apply these thoughts to the evolution of legal institutions: "With the same necessity by which, according to Darwin's theory, one species of animal develops from another, so one purpose of law evolves from the other, and even if the world were recreated a thousand times as it once was, after billions of years the world of law would always have to take the same form, because for the creations of the will in law the purpose has the same irresistible force as the cause for the formation of material."⁸⁷

The principle of competition can thus be viewed as a basic element of evolution, which man should above all always put to use when entering new territory. The principle of competition can indeed be put into operation as a particularly well-suited process of discovery when, in a dynamic and evolutionary open system, one strives to seek a newer, better tomorrow, which could or should replace the good, old today. This principle may be equally applied by biologists, economists and lawyers, even if the first speak of Darwin and natural selection, the second of Schumpeter and the process of creative

destruction, and the third of von Hayek and commercial competition as a process of discovery. The principle of competition should not however be put into operation when "trial and error" might constitute a danger for the survival of man and his society.

C. Natural Evolution in Biology - Cultural Evolution in Jurisprudence

Nevertheless, common interdisciplinary interests only go so far because the biologist has essentially only observed these laws of biological evolution; he did not invent these principles but only discovered them. The economist might perhaps even also point out certain framework conditions as an example, within which the principle of competition could lead to increased economic efficiency.⁸⁸ The lawyer, who is used to a socially relevant balancing of interests, will immediately pose the question of whether and to what extent this principle borrows from nature and tel quel can and may be applied to a social system. In other words, should state lawmaking and establishing of institutions try to emulate the laws of nature, or should not the cultural achievement of law rather attempt to establish a meta-level of legal culture. Shall and may state regulated competition correspond to the biological struggle for survival?

Without doubt, in the long run, a system of law, like a religion, should at least attempt diametrically to oppose the natural laws of biology and economics; it can neither turn back the wheel of evolution nor simply negate the commercially measurable consumption of assets, namely costs.⁸⁹ The law must initially proceed from the nature of the subject matter to be regulated and, after a more or less successful attempt at understanding the essence of things - the lawyer speaks here of the "nature of the case," but pursues much too little the tiresome business of law-in-action research ("Rechtstatsachenforschung")⁹⁰ - could then think about ordering it within the framework of "social engineering." This would be an almost natural scientific "approach" to a doctrine of legislature which, until now, can only rarely be encountered in the traditional and cultural science of jurisprudence.⁹¹ The lawyer namely tends to proceed from the abstract scheme of order familiar to him of a historically developed and thus not always optimal system of law, and tries to fit new developments into this scheme, which may be illustrated, for example, by the current discussion of adequate legal protection of computer programs⁹² or genetic engineering.⁹³

Natural evolution can thus be ranked alongside cultural evolution,⁹⁴ which above all is based on the fact that man can pass on information valuable to him not only through his genes. For this reason, von Hayek has also strongly attacked some sociobiologists,⁹⁵ because they want to

restrict themselves only to primary values, i.e. genetically anchored values, and to secondary values, i.e. the products of rational thinking, and thus neglect the much faster process of the development of cultural institutions:

"Culture is neither natural nor artificial, neither genetically transmitted nor rationally designed. It is a tradition of learnt rules of conduct which have never been invented and whose functions the acting individuals usually do not understand. There is surely as much justification to speak of the wisdom of culture as the powers of government, errors of the former are less easily corrected....That cultural evolution is not the result of human reason consciously building institutions, but of a process in which culture and reason developed concurrently is, perhaps, beginning to be more widely understood. It is probably no more justified to claim that thinking man has created his culture than that culture created his reason.....The structures formed by traditional human practices are neither natural in the sense of being genetically determined, nor artificial in the sense of being the product of intelligent design, but the result of a process of winnowing or sifting, directed by the differential advantages gained by groups from practices adopted for some unknown and perhaps purely accidental reasons. We know now that not only among animals such as birds and particularly apes, learnt habits are transmitted by imitation, and even that

different "cultures" may develop among different groups of them, but also that such acquired traits may affect physiological evolution - as is obvious in the case of language."⁹⁶

The competition of institutions handed down through society thus joins the competition of genes, e.g. competition between different commercial or legal systems. Similar to the way in which we have concretely examined this for the Act Against Restraints of Competition,⁹⁷ provision should therefore be made in all areas of law for special built-in room for evolutionary maneuver, i.e. legislators should consciously provide respectively for certain vents, certain avenues for further legal development, certain possibilities for trial and error immanent in the system. Another example, as for instance familiar under EC law,⁹⁸ would be from the beginning to resubmit new provisions to the legislature after a trial period in practice. All legal dogma should, of course, remain within the boundaries of the necessary legal certainty, be exposed to the diversity of opinions on competition, and at the same time always consciously feel obligated to evolutive dynamics and openness. There should be no unimpeachable sacred cows of law, also in the area of the Civil Code.⁹⁹ The principle of the division of powers, sufficient court instances and subsidiary undefined general clause-type legal concepts under substantive law¹⁰⁰ could at least ensure that sufficient discretionary room is available, which could

make an evolutive legal development possible in the practical application of the law. Above all, we lawyers should always remain aware that we ourselves must produce legal evolution in concurrence with the participating and concerned circles. To that extent, contrary to biology and economics, there are no self-effective mechanisms in law.¹⁰¹

III. Conclusion

The principle of competition, as a process of discovery in the area of biology, economics and jurisprudence, can likewise push the process of evolution forward. While, in nature and commercial life, it functions self-sufficiently in the presence of certain ecological and economic framework conditions, legal science must nurture and specifically promote its own autopoietic capacity for evolution. The competition of legal ideas and potential solutions must thus be institutionally anchored in a system of law. An interdisciplinary opening of jurisprudence, as well as the comparison of laws can be valuable aids. Even the current attempts to harmonize laws in Europe should be viewed insofar as a chance for the evolution of our legal system.

The principle of competition is as old as nature and man himself, and it is therefore surprising that it was first recognized as a legal institution in the 19th century,

and until today has not yet been applied in commercial law to the complete satisfaction of everyone.

Footnotes

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** F.A. von Hayek, "The Principles of a Liberal Social Order" 172, in *Studies in Philosophy, Politics and Economics* (London, 1967).

1 Cf. H. Pohl, "Die Entwicklung der Kartelle in Deutschland und die Diskussion im Verein für Socialpolitik," in Coing & Wilhelm (eds.) "Wissenschaft und Kodifikation des Privatrechts im 19. Jahrhundert" 206 et seq., Vol. VI (1979); F. Machlup, "Patentwesen," in "Handwörterbuch der Sozialwissenschaften" 231 et seq. (1962); cf. generally on the history of German antitrust law, Kartte & Holtschneider, "Konzeptionelle Ansätze und Anwendungsprinzipien im Gesetz gegen Wettbewerbsbeschränkungen - Zur Geschichte des GWB," in Cox, Jens & Markert (eds.), at 193 et seq. (1981).

2 F. Rittner, "Einführung in das Wettbewerbs- und Kartellrecht (UTB)" 113 (2d ed., 1985).

3 38 RGZ 155 (1897) - Sächsischer Holzstoff-Fabrikanten-Verband; see also 28 RGZ 238 (1890).

4 Even today prohibited cartels are particularly often encountered in the field of the production of homogeneous goods, e.g. cement, see

only "Der Spiegel," Issue No. 5/1989, p. 94: "Cement companies have once again been caught making impermissible agreements. Fines in the millions are now threatened."

5 Cf. Pohl, supra note 1, at 211, 215; see also W. Treue, "Expansion und Konzentration in der deutschen Volkswirtschaft (1866/71-1914)," in Coing & Wilhelm, supra note 1, at 26 et seq., Vol. II.

6 Cf. e.g. J. Flechtheim, "Die rechtliche Organisation der Kartelle" (2d ed., 1923).

7 Pohl, supra note 1, at 217.

8 Cf., instead of many others, M.D. Blechmann, "U.S. Antitrust Recht," in "Frankfurter Kommentar, GWB," Vol. 1 "Ausland A" (2d ed., from 1982); V. Emmerich, "Kartellrecht" 11 et seq. (5th ed., 1988).

9 Pohl, supra note 1, at 235.

10 Cf. the evidence of H.P. Becker, "Die soziale Frage im Neoliberalismus, Analyse und Kritik" 35 et seq. (1965); the work of Sraffa and later of J. Robinson and E.H. Chamberlin should be mentioned; in the U.S.A., see particularly J.M. Clark, "Toward a Concept of Workable Competition," 30 AER 241 (1940).

11 Emergency regulation of November 2, 1923, RGBL. I, 1067, 1090; cf. only R. Callman, "Das deutsche Kartellrecht" (1934).

12 Cf., particularly succinct, T.E. Kauper, "The Goals of United

States Antitrust Policy - The Current Debate," 136 Zgs 408 et seq., 416 et seq. (1980); Hoppman & Mestmäcker, "Normzwecke und Systemfunktionen im Recht der Wettbewerbsbeschränkungen" 7 et seq. (1974); Emmerich, supra note 8, at 5.

13 Cf. Point 12 of the Potsdam Conference of 1945: "At the earliest practicable date, the German economy shall be decentralized for the purpose of eliminating the present excessive concentration of economic powers as exemplified in particular by cartels, syndicates, trusts and other monopolistic arrangements."

14 For many years, Josten was the head of the cartel department in the Reich Ministry for Economic Affairs, and after 1946 was Commissioner for Price Adjustment in the State Price Co-ordinating Agency; among others, Franz Böhm served on the Commission; cf. Kartte & Holtschneider, supra note 1, at 202 et seq.

15 Cf. A. Heinemann, "Die Freiburger Schule und ihre geistigen Wurzeln," to be published (Verlag Florentz, Munich, 1990).

16 Cf. A. Müller-Armack, "Wirtschaftslenkung und Marktwirtschaft" 96 et seq. (1947); see also, summarizing, R. Blum, "Soziale Marktwirtschaft - Wirtschaftspolitik zwischen Neoliberalismus und Ordoliberalismus" 90 et seq. (1969); Müller-Armack was first head of department and then State Secretary at the Federal Ministry for Economic Affairs.

17 Cf. "Stenographische Berichte des 1. Deutschen Bundestages, 220. Sitzung vom 26.6.1952" 9749 A, 9750 D.

18 Cited according to Kartte & Holtschneider, supra note 1, at 207.

19 Cf. Kartte & Holtschneider, supra note 1, at 207.

20 Cf. R. Robert, "Konzentrationspolitik in der Bundesrepublik - Das Beispiel der Entstehung des GWB" 289 (1976).

21 L. Erhard, in "Stenographische Berichte des 2. Deutschen Bundestags" 13245 D; cf. further details in Kartte & Holtschneider, supra note 1, at 207 et seq. Cf. abstract of the legal-political possibilities of a "cartel legislation;" W. Fikentscher, "Wirtschaftsrecht" 232 et seq. (Vol. II, 1983).

22 Cf., on such a definition, Fikentscher, supra note 21, at 194 et seq., contra Emmerich, supra note 8, at 13 et seq.

23 Cf., summarizing current opinions from an economic point of view, I. Schmidt, "Wettbewerbspolitik und Kartellrecht" 1 et seq. (2d ed., 1987); from an antitrust law point of view, Fikentscher, supra note 21, at 186 et seq.; Emmerich, supra note 8, at 5 et seq.; W. Möschel, "Recht der Wettbewerbsbeschränkungen" 41 et seq. (1983).

24 From the new political economy point of view, cf. U. Jens, "Möglichkeiten und Grenzen rationaler Wettbewerbspolitik in Demokratien" in Cox, Jens & Markert, supra note 1, at 172.

25 Cf. governmental draft, 1989 WuW 209 et seq.; on the highly controversial assessment of the necessity of a further amendment, cf.

the various contributions in H. Helmrich (ed.), "Wettbewerbspolitik und Wettbewerbsrecht. Zur Diskussion um die Novellierung des GWB" (1987); P. Ulmer, "Standpunkte zur Novellierung des GWB," 1988 WuW 365 et seq.; the increasing "trade structure policy" is assessed particularly critically, see only W. Möschel, 1988 JZ 889: "The currently debated plans for a fifth amendment to the Act Against Restraints of Competition partially amount to a "retail trade protection law"; contra Monopolkommission, "Die Konzentration im Lebensmittelhandel," Special expert opinion, at 14 (1985), as well as Main expert opinion VII, at 17 (1988); Möschel, 1989 ZRP 371 et seq.; Emmerich, 1989 AG 261 et seq.; id., 1989 WuW 363 et seq.; unfair competition and cartel law should not be reduced to instruments of protection for certain existing trade structures; this would be contra-evolutionary, cf. M. Lehmann, "Wettbewerbsrecht, Strukturpolitik und Mittelstandsschutz," 1977 GRUR 580 et seq., 633 et seq.; Schricker & Lehmann, "Der Selbstbedienungsgroßhandel" 1 et seq. (2d ed., 1987): The evolutionary discovery process "competition" should also be effective at the trade level.

26 Cf. for details, Kartte & Holtschneider, supra note 1, at 210 et seq.

27 "Die Funktionsfähigkeit des Wettbewerbs" (2d ed., 1967); see also Schmidt, supra note 23, at 13; from a judicial point of view, see Fikentscher, supra note 21, at 191 et seq.

28 Kartte & Holtschneider, supra note 1, at 211 et seq., 213; see also W. Kartte, "Ein neues Leitbild für die Wettbewerbspolitik" (1969).

29 Cf. the summary by Kantzenbach & Kallfass, "Das Konzept des funktionsfähigen Wettbewerbs - workable competition," in Cox, Jens & Market, supra note 1, at 105 et seq.; see also concurring, Kartte, 1969 BB 54.

30 Cf., supra note 29, at 105, 108 et seq.

31 Cf. also the critical comments by Fikentscher, supra note 21, at 194, particularly footnote 193; Emmerich, supra note 8, at 11.

32 F.A. von Hayek, "Die Verfassung der Freiheit" 30 et seq. (1971); id., "Die Theorie komplexer Phänomene" 25 et seq. (1972); see also id., "Der Wettbewerb als Entdeckungsverfahren" (1968).

33 E. Hoppmann, "Das Konzept der optimalen Wettbewerbsintensität," 179 SNSt 286 et seq. (1966); id. "Zur ökonomischen Begründung von Ausnahmereichen," 187 SNSt 161 et seq. (1973); contra E. Kantzenbach, "Das Konzept der optimalen Wettbewerbsintensität," 181 SNSt 193 et seq. (1967); see also E. Kaufer, "Kantzenbachs Konzept des funktionsfähigen Wettbewerbs," 179 SNST 481 et seq. (1966).

34 Cf. on "autopoietic reproduction capacity" from a completely different aspect, namely a legal-sociological aspect, N. Luhmann, "Ökologische Kommunikation" (1986); cf. also S. Schmid, "Zur Einführung: Niklas Luhmanns systemtheoretische Konzeption des Rechts," 1986 Jus 513 et seq.

35 Historically a clear ideological link may be seen between A.

Smith, W. Eucken and E. Hoppmann, cf. only H.C. Rechtenwald, in "Würdigung des Werkes von A. Smith, Der Wohlstand der Nationen" (dtv.bibliothek, 1974), at p. LXII: "Smith's recommendations may be summarized in a few sentences. In Germany they have been more clearly summarized, further developed and complemented (e.g. by demands for an active state policy on competition and cartels), and practiced with great success after World War II within the framework of the socialist market economy." Hoppmann's concept of competition is thus defined as neoclassic, cf. only I. Schmidt, supra note 23, at 17. Von Hayek for his part also feels particularly indebted to W. Eucken, cf. his inaugural lecture in Freiburg in 1962: "Wirtschaft, Wissenschaft und Politik in Freiburger Studien" 2 et seq. (1969).

36 cf. Hoppmann & Mestmäcker, supra note 12, at 7 et seq.

37 W. Fikentscher, supra note 21, at 130 et seq.; id., "Wettbewerb und gewerblicher Rechtsschutz" 29 et seq., 163 et seq. (1958).

38 cf. M. Lehmann, "Das wirtschaftliche Persönlichkeitsrecht von Anbieter und Nachfrager," in "Festschrift Hubmann" 255 et seq., 264 et seq. (1985).

39 F.A. von Hayek, "Der Sinn des Wettbewerbs" 1946 lecture in "Individualismus und wirtschaftlicher Ordnung" 122 et seq. (2d ed., 1976); C. Joerges, "Verbraucherschutz als Rechtsproblem" (1981), would like to generalize this approach for the entire legal development and future development, when he speaks of "discovery process practice." The social biologist, E.O. Wilson, "Biologie als Schicksal" (1979), applies this principle to the natural sciences.

Mainly from a philosophical aspect, G. Vollmer, "Evolutionäre Erkenntnistheorie" (2d ed., 1983), should be mentioned.

40 F.A. von Hayek, "Der Wettbewerb als Entdeckungsverfahren" (1968); in this connection Schumpeter, "Prozeß der schöpferischen Zerstörung," should be mentioned, cf. "Kapitalismus, Sozialismus und Demokratie" 134 et seq., 135 (2d. ed., 1950): "Capitalism is thus of its nature a form or method of economic change and is not only never static, but can also never be so. This evolutionary character of the capitalistic process...."

41 On the differentiation between perfect and complete competition, see Fikentscher, supra note 21, at 187 et seq.

42 von Hayek, supra note 39, at 127; see also id., "Wirtschaftstheorie und Wissen," 1936 lecture in "Individualismus und wirtschaftliche Ordnung," supra note 39, at 49 et seq.

43 von Hayek, supra note 40, at 3,10; von Hayek thereby also resorts to the "brilliant first work" by Schumpeter, "Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie" (1908), and the concept of "methodological individualism" developed there (p. 97 et seq.).

44 Cf. e.g. F.A. von Hayek, "Grundsätze einer liberalen Gesellschaftsordnung" 11 et seq., Vol. XVII (ORDO, 1967).

45 Cf. F.A. von Hayek, "Recht, Gesetzgebung und Freiheit," Vol. 1: "Regeln und Ordnung" 59 (1980), von Hayek's "systematic development

of an evolutionary approach in social phenomena" may be found at 39 et seq.

46 von Hayek, supra note 45, Vol. 3: "Die Verfassung einer Gesellschaft freier Menschen" 236 (Epilogue) (1981).

At present, this conclusion should primarily be connected with the issue of statutory control of genetic engineering; cf. only, F.

↓ SC Nicklisch, "Rechtsfragen der modernen Bio- und Gentechnologie," 1989 BB 1 et seq.; from a philosophical point of view, H. Jonas, "Ist erlaubt, was machbar ist? Bemerkungen zur neuen Schöpferrolle des Menschen," Universitas 2/1987, 103 et seq., 115: "Our world from which all taboos have been completely removed must, in view of its new achievements, voluntarily raise new taboos;" summarizing, Damm & Hart, "Rechtliche Regulierung riskanter Technologien," 1987 KritV 183 et seq., 215.

47 His paternal grandfather taught constitutional law, his father was a doctor, and his brothers became natural scientists, cf. F. Machlup, "Würdigung der Werke von F.A. von Hayek" 12 (1977).

48 In American literature, cf., however, J. Hirshleifer, "Economics from a Biological Viewpoint," 20 JLE 1 et seq. (1977); id., "Evolution, spontane Ordnung und Marktwirtschaft," in Koslowski, Kreuzer & Löw (eds.), "Evolution und Freiheit" 77 et seq. (1984).

49 This can, for example, be illustrated by a glance into standard teaching material on cartel law, see, e.g., Emmerich, supra note 8, at 11 et seq.; Fikentscher, supra note 21, at 194; Möschel, supra

note 23, at 46 et seq.; from an economic viewpoint, cf. Schmidt, supra note 23, at 17 et seq.

50 Cf. only the summarization and criticism by Schmidt & Rittaler, "Die Chicago School of Antitrust Analysis" (1986) passim; I. Schmidt, supra note 23, at 22 et seq.

51 F.A. von Hayek, "Rechtsordnung und Handlungsordnung," 1969 Freiburger Studien 161 et seq., 174.

52 Cf. supra note 40; it may be said that Austrian economics have returned to Europe under the headlines of "economic analysis" and "public choice."

53 I could deduce the latter from a comment by H. Demsetz, at a public-choice conference, who believed that many U.S. economists had read "our Schumpeter," without then however later citing him; but see Commons, S.R., "Legal Foundations of Capitalism" (1924), who explicitly refers in the preface to Böhm-Bawerk.

54 Cf. e.g. W. Möschel, "Privatisierung, Deregulierung und Wettbewerbsordnung," 1988 JZ 885 et seq., 892 et seq.; but see also E-J. Mestmäcker, "Der verwaltete Wettbewerb" 34 et seq. (1984).

55 After an initially cautious reception, c.f. e.g. N. Horn, "Zur ökonomischen Rationalität des Privatrechts - Die privatrechtstheoretische Verwertbarkeit der "Economic Analysis of Law," 176 AcP 307 et seq. (1976), today there are only very isolated basically critical opinions, cf., K.H. Fezer, 1986 JZ 817 et seq.;

1988 JZ 223 et seq.; contra Ott & Schäfer, 1988 JZ 213 et seq.

On the economic analysis of German commercial law, see e.g. M. Lehmann, "BGB und HGB - eine juristische und ökonomische Analyse" (1983); Schäfer & Ott, "Lehrbuch der ökonomischen Analyse des Zivilrechts" (1986); M. Adams, "Ökonomische Analyse der Gefährdungs- und Verschuldenshaftung" (1985); P. Behrens, "Die ökonomischen Grundlagen des Rechts" (1986).

56 See supra note 25.

57 Cf. BR-Drucks. 22/89 of January 18, 1989, "Geänderter Vorschlag einer Verordnung (EWG) des Rates über die Kontrolle von Unternehmenszusammenschlüssen;" cf., Ebenroth & Hauschka, "Zusammenschlußkontrolle nach der geplanten EG-Fusionskontrollverordnung," 1989 ZRP 62 et seq.; cf. also Working group on cartel law at the Federal Cartel Office, Conference held on November 10, 1988: "Fusionskontrolle im Gemeinsamen Markt;" see also Monopolkommission, Main expert opinion 1986/1987, "Die Wettbewerbsordnung erweitern" 15 et seq. (1988).

58 Cf., fundamentally, J.S. Bain, "Barriers to New Competition. Their Character and Consequences in Manufacturing Industries" (4th ed., 1967); W.J. Baumol, "Contestable Markets: An Uprising in the Theory of Industry Structure," 72 AER 1 et seq. (1982); Baumol, Panzar & Willig, "Contestable Markets and the Theory of Industry Structure" (1982); summarizing, M. Spence, "Contestable Markets and the Theory of Industry Structure: A Review Article," 21 JEL 981 et seq. (1983); from a German standpoint, cf. e.g. M. Braulke, "Contestable Markets - Wettbewerbskonzept mit Zukunft?," 1983 WuW 945 et seq.; G. Aschinger,

"Contestable Markets. Ein neuer Weg zur Charakterisierung des Wettbewerbs und der Industriestruktur," 1984 Wist 217 et seq.; M. Hutter, "Welchen Beitrag leistet die Theorie "angreifbarer Märkte" (contestable markets) zur Formulierung unseres Leitbildes der Wettbewerbspolitik," economic dissertation lecture, University of Munich, 1986; see also C.C. von Weizsäcker, "Barriers to Entry: A Theoretical Treatment" (1980).

59 Cf. particularly the 6th main expert opinion of the Monopoly Commission 1984/5, "Gesamtwirtschaftliche Chancen und Risiken wachsender Unternehmensgrößen" 14 et seq. (1986), cf. also there the cautious negative opinion on the Chicago School: "It [the Monopoly Commission] cannot, at the present time, discern proven empirical facts which would encourage a fundamental reorientation of German competition policy according to the American example."

60 What must also be considered are namely: "the legal and real barriers to market entry of other enterprises;" after the still pending amendment to the Act Against Restraints of Competition, the flexibility of enterprises to adapt shall be considered more in future, cf. supra note 25.

61 See supra notes 15 et seq., 19.

62 See, critically, Lehmann, supra note 55, at 18 et seq.; on the doctrine of the so-called "open commercial constitution," cf., fundamentally, 4 BVerfGE 7 et seq., 17.

63 Cf. Fikentscher, supra note 21, Vol. I, at 545, 547 et seq.; E.J. Mestmäcker, "Europäisches Wettbewerbsrecht" 176 et seq. (1974); Gleiss & Hirsch, "Kommentar zum EWG-Kartellrecht" 26 et seq. (3d ed., 1978).

64 Cf., in detail, Fikentscher, supra note 21, Vol. I, at 539 et seq., 547 et seq.

65 Fikentscher, supra note 64, at 546.

66 1st edition (Millar, London, 1759), German version according to the latest edition, W. Eckstein (ed.), "Theorie der ethischen Gefühle" (F. Meiner, Hamburg, 1977); among others, this has also been influenced by his academic teacher in Glasgow, the philosopher Francis Hutcheson; but A. Smith was later, as a tax inspector in Scotland, also one of the first law-in-action researchers in his field, because he often went to markets where he very critically observed the behavior of the participants in the market; these observations were also included in the 6th edition of the "Theory" in 1789.

67 "The Wealth of Nations" (1776); German edition, Recktenwald (ed.), "Der Wohlstand der Nationen" (1974).

68 "The Wealth of Nations" (Modern Library Edition, 1937), at p. 342: "The quantity of grocery goods, for example, which can be sold in a particular town, is limited by the demand of that town and its neighbourhood. The capital, therefore, which can be employed in the grocery trade cannot exceed what is sufficient to purchase that

quantity. If this capital is divided between two different grocers, their competition will tend to make both of them sell cheaper than if it were in the hands of one only; and if it were divided among twenty, their competition would be just so much the greater, and the chance of their combining together, in order to raise the price, just so much the less. Their competition might perhaps ruin some of themselves; but to take care of this is the business of the parties concerned, and it may safely be trusted to their discretion. It can never hurt either the consumer, or the producer; on the contrary, it must tend to make the retailers both sell cheaper and buy dearer, than if the whole trade was monopolized by one or two persons."

69 cf. "The Wealth of Nations," supra note 67, at 603 et seq.; cf., in detail, Recktenwald, loc.cit., "Würdigung," at XLIV et seq.

70 cf. also the parallels in the public choice approach in I.M. Buchanan, "Die Grenzen der Freiheit. Zwischen Anarchie und Leviathan" 11 et seq. (Chicago, 1975; Tübingen, 1984); from a German standpoint, cf. R. Eschenburg, "Der ökonomische Ansatz zu einer Theorie der Verfassung" 10 et seq. (1977).

71 Smith, supra note 68, at 673: "The distinction of birth, being subsequent to the inequality of fortune, can have no place in nations of hunters, among whom all men, being equal in fortune, must likewise be very nearly equal in birth. The son of a wise and brave man may, indeed, even among them, be somewhat more respected than a man of equal merit who has the misfortune to be the son of a fool or a coward. The difference, however, will not be very great; and there

never was, I believe, a great family in the world whose illustration was entirely derived from the inheritance of wisdom and virtue.

The distinction of birth not only may, but always does take place among nations of shepherds. Such nations are always strangers to every sort of luxury, and great wealth can scarce ever be dissipated among them by improvident profusion. There are no nations accordingly who abound more in families revered and honoured on account of their descent from a long race of great and illustrious ancestors; because there are no nations among whom wealth is likely to continue longer in the same families.

Birth and fortune are evidently the two circumstances which principally set one man above another. They are the two great sources of personal distinction, and are therefore the principal causes which naturally establish authority and subordination among men. Among nations of shepherds both those causes operate with their full force. The great shepherd or herdsman, respected on account of his great wealth, and of the great number of those who depend upon him for subsistence, and revered on account of the nobleness of his birth, and of the immemorial antiquity of his illustrious family, has a natural authority over all the inferior shepherds or herdsmen of his horde or clan. He can command the united force of a greater number of people than any of them. His military power is greater than that of any of them. In time of war they are all of them naturally disposed to muster themselves under his banner, rather than under that of any other person, and his birth and fortune thus naturally procure to him some sort of executive power. By commanding too the united force of a greater number of people than any of them, he is best able to compel any one of them who may have injured another to compensate the wrong.

He is the person, therefore, to whom all those who are too weak to defend themselves naturally look up for protection.

72 Smith, supra note 68, at 674 et seq.

73 Cf. only the famous example of the pin by Smith, supra note 68, at 4 et seq.

74 According to the analysis by the economist, Recktenwald, supra note 67, at XLIX.

75 From a historical perspective, cf. only North & Thomas, "The Rise of the Western World. A New Economic History" 19 et seq. (1973).

76 On the "selfish gene," see infra, at B.

77 Von Hayek, "Die drei Quellen der menschlichen Werte" 8 et seq. (1979), believes that Charles Darwin's biological concept of evolution was influenced by his grandfather Erasmus, and thus by the ideas of Bernard Mandeville and David Hume on the cultural selection process; from Darwin's scientific notes we know that he had read Hume himself. A. Smith can also be regarded as a pupil of Hume, who was his closest friend in Edinburgh.

78 Cf., fundamentally, E.O. Wilson, "Sociobiology: The New Synthesis" (1975); id., "On Human Nature" (1978), German version: "Biologie als Schicksal. Die soziobiologischen Grundlagen menschlichen Verhaltens" (1979); cf. also, summarizing, I. Eibl-Eibesfeldt, "Die Biologie des

menschlichen Verhaltens. Grundriß der Humanethologie" 121 et seq. (1984).

79 Cf. also the survey by Meier (ed.), "Die Herausforderung der Evolutionsbiologie" (1988).

80 Cf., particularly succinct, Wickler & Seibt, "Das Prinzip Eigennutz. Ursachen und Konsequenzen sozialen Verhaltens" (1981); see also R. Dawkins, "The Selfish Gene" (1976), German version: "Das egoistische Gen" (1978); id., "The Blind Watchmaker" (1986), German version: "Der blinde Uhrmacher. Ein neues Plädoyer für den Darwinismus" (1987).

81 Cf. the details by Wickler & Seibt, supra note 79, at 85 et seq., 116 et seq.

82 M. Lehmann, "Jurisprudenz, Ökonomie, Soziobiologie-Humanwissenschaften. Über die Notwendigkeit und Möglichkeit einer interdisziplinären Grundlagenforschung," 1982 BB 1997 et seq.; id., "Evolution in Biologie, Ökonomie und Jurisprudenz," 17 Rechtstheorie 463 et seq., 466 et seq. (1986).

83 Cf., in particular, R.A. Alexander, "Darwinism and Human Affairs" (1979), who (Introduction, p. XV) expressly points out the parallel scientific direction of anthropology and evolutionary biology. Cf. also Hirshleifer, supra note 48.

84 Wilson, supra note 78, "Biologie also Schicksal" 186.

85 C. Darwin, "On the Origin of Species" 489 (Harvard University Press, 1964): "And as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection."

86 Darwin, supra note 85, at 490.

87 R. von Jhering, "Der Zweck im Recht," p. IX (Foreword) Vol. 1 (5th ed., 1916).

88 Cf., instead of many others, Kirchgässer & Pommerehne, "Das ökonomische Modell individuellen Verhaltens: Implikationen für die Beurteilung staatlichen Handelns" 1988 KritV 230 et seq.

89 The agricultural system of the EC which has been deprived of competition, almost taking it to the edge of economic ruin, may serve as an example here.

90 Cf., fundamentally, A. Nußbaum, in M. Rehbinder (ed.), "Die Rechtstatsachenforschung. Programmschriften und praktische Beispiele (ab 1914)" (Berlin, 1968); cf., as an exception which justifies the rule, Chiotellis & Fikentscher, "Rechtstatsachenforschung. Methodische Probleme und Beispiele aus dem Schuld- und Wirtschaftsrecht" (1985); German legal sociology also does not wish to dirty its hands with too much living law research, cf., for a critical opinion of this, A. Heldrich, "Die Bedeutung der Rechtssoziologie für das Zivilrecht," 186 AcP 74 et seq., 107 et seq. (1986).

91 The 1987 Amendment to the Act Against Restraints of Competition is partly prepared as consumer protection by law-in-action research, although only a fraction of the information acquired thereby has been put into effect by the legislature, cf. also M. Lehmann, "Die UWG-Neuregelungen 1987 - Erläuterungen und Kritik," 1987 GRUR 199 et seq., 211 et seq.

92 Cf. M. Lehmann (ed.), "Rechtsschutz und Verwertung von Computerprogrammen" (1988).

93 Cf. Beier, Crespi & Straus, "Biotechnologie und Patentschutz" (1986); see also "Biotechnologie und Gewerblicher Rechtsschutz, 1987 GRUR Int. 285 et seq.

94 Cf., particularly passionately, F.A. von Hayek, "Die drei Quellen der menschlichen Werte" (1979), English version: "Law, Legislation and Liberty" 153 et seq., Vol. 3 (1979); see also V. Vanberg, "Evolution und spontane Ordnung. Anmerkungen zu F.A. von Hayeks Theorie der kulturellen Evolution," in Festschrift E. Boettcher: H. Albert (ed.), "Ökonomisches Denken und soziale Ordnung" 83 et seq. (1984). Cf. also C. Vogel, "Gibt es eine natürliche Moral? Oder: wie widernatürlich ist unsere Ethik," in Meier (ed.), supra note 79, at 193 et seq.

95 Particularly the work of G.E. Pugh, "The Biological Origin of Human Values" (1977).

96 Von Hayek, supra note 94, at 155 et seq.

97 See supra note 61.

98 Cf. e.g. the obligation to prepare a report every 5 years on the new product liability in practice, cf. Council Directive of July 25, 1985 on the harmonization of legal and administrative provisions of the Member States on liability for defective products, OJ EC No. L 210/29, August 7, 1985, see Art. 21.

99 The big contract law reform of the Civil Code (BGB) now ensues via the Law on Standard Forms of Contract (AGBG), especially within the framework of the general clause on control of contents under Sec. 9; judges must therefore often feel completely incapable here; cf. on contract law reform, about which it has recently become almost depressingly quiet, H.A. Engelhard, "Zu den Aufgaben einer Kommission für die Überarbeitung des Schuldrechts," 1984 NJW 1201 et seq.

100 Cf. also the often practiced technique of Sec. 823 of the Civil Code: "...the life, body, health, freedom, property or other rights of a third party...."

101 Cf. M. Lehmann, supra note 82, "Rechtstheorie," at 476 et seq.