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The effect of academic business studies in Germany and America in the modern era

Robert R. Locke [University of Hawaii, USA]

J.-C. Spender, a leading authority in management theory and management education, after previewing this paper, noted that it clarifies for the first time that there are two models in business studies "(A) German management and German management education, which differs substantially from (B) the Anglo American model now considered to be the 'one true way.'" Both models have their origins in educational events that occurred over a hundred years ago: in Germany beginning in 1898 in the Commercial Business School (*Handelshochschule*) created in Leipzig, expanded by 1910 to five more (Berlin, Mannheim, Munich, Frankfurt on the Main, and Cologne), then by 1920 to two more (Nuremberg and Königsberg), to be multiplied thereafter; in America the Wharton business school (reputedly, though not, the first) in 1881, and then a host of others affiliated with private and public universities founded in the next twenty years to be expanded significantly in subsequent decades. Of the two, Spender continues, "(A) is the 'elder statesman' of Western management theorizing and education." Since," Spender concludes, "(B) cannot be remedied by more of the same (from within itself), it is high time that (B) folks study the (A) tradition" (email to author, 9 January 2018).

In this article I clarify how the two models came to differ from each other by mid-20th century, primarily because of how they related to the study of economics (*Volkswirtschaftslehre* in German) in each country, and how this different relationship subsequently led to the disfunctionality of business school education in American democracy, while a different relationship between economics and business economics in Germany inherited from the early decades of the 20th century well served the long-term interests of the nation's economy and democracy after World War II.

Economics and academic business school education in the U.S. 1900-1970

A good place to begin to clarify this relationship in America is with the Conflict about Methods (*Methodenstreit*), i.e. which methods should be used in the study of economics, a conflict that erupted in late 19th century Germany. Carl Menger of the Austrian school attacked Gustav von Schmoller of the German Historical School in the former's book (Menger, 1883). Menger thought the best method of studying economics was through reason that produced general theories applying to broad areas.

The discussion among economists merged into a more general investigation into the philosophy of knowledge. The neoKantian Wilhelm Windelband, as the 19th century closed, argued that science (*Wissenschaft*) could be divided into two main branches, sciences of the spirit (*Geisteswissenschaften*) and sciences of nature (*Naturwissenschaften*). He distinguished between the two in terms of their aim and method. Whereas *Naturwissenschaften*, he specified, use a 'nomothetic' or generalizing method, since they seek to discover law-like and general relationships and properties, social or cultural sciences

(*Geisteswissenschaften*) employ an ideographic or individualizing procedure, since they are interested in the non-recurring events in reality and the particular or unique aspects of any phenomenon. Wilhelm Dilthey carried the debate further; he contrasted *Naturwissenschaften* and *Geisteswissenschaften* in terms of their subject matter – positing a fundamental distinction between the realms of 'nature' and of 'human spirit' – with each sector the prerogative of a separate category of sciences.

In the *Methodenstreit* among economists, neoclassical economists sought to identify their discipline as a nomothetic natural science. Stanley Jevons, inventor with Karl Menger of marginal-utility analysis, described their scientific goal: "all branches and divisions of economic science must be pervaded by certain general principles. It is to the investigation of such principles – to the tracing out of the mechanics of self-interest and utility, that [economics] is devoted" (Jevons quoted in Fullbrook, 2007, 162).

Fullbrook describes how the architects of nomothetic neo-classical economics matched their new discipline isomorphically with Newtonian mechanics:

> In neoclassical economics, 'bodies' translates 'individuals' or agents,' 'motions' translates 'exchange of goods,' 'forces' translates 'desires' or 'preferences,' which when summed become 'supply and demand;' 'mechanical equilibrium' becomes 'market equilibrium,' this being when the difference between supply and demand is zero, and 'physical systems' translates 'markets.'…All exchanges were said to magically take place at the prices that equated demand and supply (Fullbrook, 2007, p. 162-163).

No viable natural science meant much unless it could be expressed mathematically. That was the glory of Newtonian mechanics. In the nineteenth century, mathematicians started to work on the social sciences. In 1854 George Boole (1815-64) in *The Laws of Thought* used mathematics to analyze the logic of language, and Léon Walras mathematized neoclassical economics. With this achievement, he stated in his *Elements of Pure Economics,* economics had become a "science, which resembles the physico-mathematical sciences in every respect" (Walras quoted in Fullbrook, 2007, 163).

Max Weber refused to accept the claim that disciplines dealing with historical constellations (the ideographic or individuating procedure of the *Geisteswissenschaften*) are generically different from the natural sciences, even though the latter try to deal with recurrent events and discover general laws or regularities of high probability. In his view, cultural studies are distinctive only in that they originate in the investigator's sense of what is culturally significant. But once a question has been accepted as significant, it is necessary to formulate concepts that will present the relevant evidence "systematically and in greater unity than has ever existed in the actual course of development;" these "ideal types" can then be employed as reference points for the analysis of behavior since they seek to discover law-like and general relationships and properties. Weber, through Talcott Parsons, greatly influenced sociology in the U.S., but not nomothetic neoclassical economics (Cummings et al., 2017, chapter 4, "The Birth of Organization Science: Or What We Could Learn from Max Weber").

The discussion among economists spread to the U.S., where the newly founded business schools were locating in universities. University economists seriously questioned business schools' scientific intent. The Harvard Business School, founded in 1908, taking its cue from the Harvard Law School, adopted a case method of instruction. Students read and discussed

résumés of actual business cases, designed by the HBS faculty to give them a taste for real business problems. At Wharton the business professors found most of their curriculum in the business world. Stephen A Sass, Wharton's centennial historian (Sass, 1982), noted that in the interwar period, the neoclassical economists had been cool to the practical thrust of Wharton's business programs and had little interest in the managerial arts and science that were taught in those parts of the school (270-71). Traditional academic subjects were included in Wharton's early business school curriculum (chemistry, physics, etc.), but, inasmuch as the courses were not developed with business problems in mind, these subjects had no obvious relevance to the subject matter taught in the practical courses (accounting, finance, sales, etc.). The business program itself, therefore, for a long time, reflected the gap between economics as nomothetic or ideographic sciences and business school undergraduate education as vocational practice.

The objections to the vocational orientation came from historical and institutional as well as neoclassical economists. Thorstein Veblen, in *The Higher Learning in America: a Memorandum on the Conduct of Universities by Business Men* (1918) feared the deleterious effects that the creation of business schools would have on educational values in higher education. In this he and other historical and institutional economists (Weber, Schmoller, etc.) differed little from nomothetic neoclassical economics.

The knowledge disparity between nomothetic economics and business school vocationalism increased in the midcentury as economists' confidence in the prescriptive value of scientific methods grew. The commission that the Chicago businessman Alfred Cowles founded in 1932 made important contributions to the development of econometrics. The Second World War dramatically intensified intercourse between science and operations management. Initially Americans learned from British scientists and engineers who began work in 1936 on the "operational use of radar." The experts realized that they "needed unbiased scientific assessments of the efficacy of radar" and "how to implement the systems in service" (Locke, 1996, 26-28). The success of British wartime operational research is legendary; more important for this story, the British passed on much of what they learned to the Americans when they entered the war. The Americans, with their superior resources, surged ahead. Examples of science gone to war are legion: the economists Stacy May and Robert Nathan applying statistical analysis to war production programs; F.L. Hitchcock elaborating transportation theory to deal with the complicated problem of moving vast amounts of men and material efficiently. The Cold War perpetuated this scientific trend. The management teams the Pentagon organized in order to maximize the input-output ratios for the new immensely complicated and expensive weapon systems looked to science for solutions. Post World War II defense generated significant management applications, among them linear programming, which George B. Danzig and his associates at the Rand Corporation developed for the Air Force in 1947.

Despite Walras' claim to have turned neoclassical economics into a discipline, which "resembles the physio-mathematical sciences in every respect," the analytical toolkit they developed in the 19th century proved to be of limited prescriptive value to policy makers and corporate managers. Postwar military planners and the economists who worked with them at Rand believed the new toolkit that operations research provided would finally enable them to transform neoclassical economics into a prescriptive science. At Rand in 1948, the economist Kenneth Arrow used the toolkit in his work on Rational Choice Theory. His book *Social Choice and Individual Value* (1951) was the "first real classic" on what "is now taken as a given in economics and has spread out into many neighboring disciplines" (Bellah, 2000, 7).

The neoclassical economists Joseph Dorfman, Paul Samuelson, and Robert Solow applied linear programming to their subject as well (in *Linear Programming and Economic Analysis*, 1958). In 1954, Kenneth Arrow and Gerard Debreu announced that they had achieved a mathematical solution of general equilibrium, "the theoretical core of neo-classical economics," which Edward Fullbrook states "has become the central showpiece of academic economics ever since" (Fullbrook, 2007, 165; Arrow and Debreu, 1954).

The great reforms of business schools of the 1960s and 1970s were brought about by these neoclassical economists who sought to end the reign, in elite schools anyway, of "unimaginative, non-theoretical faculties teaching from descriptive practice-oriented texts to classes of second-rate vocationally-minded students."(Quoted in Jeuck, 1973, 284) Mathematics requirements were raised, new scientifically qualified staff employed, in order to introduce "the analytic, normative, mathematical, and scientific mode of instruction" (Jeuck, 287). I describe the introduction of the new paradigm in operations research (Locke, 1989, Chapter I). But the best treatment of how the new paradigm entered U.S. business schools is Chapter 6 "Disciplining the Business School Faculty: The Impact of the Foundations," 233-290, in Rakesh Khurana's 2007 book (Princeton University Press).

The triumph of nomothetic thinking in neoclassical economics, when it entered the reformed business schools, wiped out vocationalism – in the interests of prestigious "fundamental" nomothetic research and teaching. Ironically the triumph also eliminated the historical economists and institutionalists, who had themselves denigrated business school vocationalism, from economics departments and the reformed business schools' faculties. It also led to the creation of elite business schools where the professors and their MBA students, armed with the new prescriptive techniques, formed the ranks of a group of symbolic analysts who, in the era of financialization of the world economy, command high salaries and bonus incomes. Khurana's study of Harvard Business School MBAs shows the elite school trend. He cites a survey of first jobs for graduating HBS students: between 1965 and 1985, students' entry into financial services and consulting "rose from 23 percent to 52 percent" of graduates (Khurana, 2007, 328–29). The same shift happened in "other elite schools, such as Wharton and the business schools at Stanford and the University of Chicago." By 2005 "among the 180 principals and managing directors in the 20 largest investment firms, 73 … [held] an MBA from one of the six elite schools (Harvard 51, Chicago 7, Columbia 6, Stanford 5, Dartmouth's Tuck 3, and Northwestern 1" (p. 349).

The German model (A), Spender's "elder statesman of Western management theorizing and education", 1900-1945

If vocationalism long prohibited the creation of a focused discipline in U.S. business schools, in Germany academic tradition required it. From the beginning, business studies professors in the new *Handelshochschulen* (HHS) had not only sought to define the content, scale, and scope of a new discipline, but to acquire all the academic accoutrements (research seminars, Ph.D. research and *Habilitionsschift* programs necessary at the tertiary (*Hochschule*) level to respond to the German idea of knowledge (*Wissenschaft*), as dynamic not static, driven by research.

At first they did not use the term business economics. Some referred to the new studies as commercial (*Handelslehre*), others to the development of a *Privatwirtschaftslehre*, as opposed to economics (*Volkswirtschaftslehre*). Professor Schmalenbach in Cologne and his followers

did everything they could to extend their studies into industry (to broaden the new discipline from commerce to industry, to make it a *Betriebswirtschaftslehre* (BWL)that was not limited to commerce (*Handel*), and he, with the support of men like Nicklisch in the Berlin HHS, imposed his view. "Schmalenbach's contribution", Alfred Issac wrote in 1922, "is to have helped the factory take its rightful place in business studies" (Issac, 1922). By 1938 business economists held nineteen chairs in *technische Hochschulen,* from which they developed a new subject in management studies, the *Diplom Wirtschafts-Ingenieur* (Economics Engineer). Prion, after he joined the faculty in the Technische Hochschule Charlottenburg (Berlin) introduced the degree in 1924, from where the program subsequently spread to other *technische Hochschulen* and technical universities. *Dipl. Wirt.-Ing*. degree holders from engineering schools were and are especially prized as agents in consultancies working with industrial firms.

Concurrently, they sought to create the academic accoutrements that would permit them to define and develop a discipline. The first generation of professors did not have BWL degrees because the field of study had not existed in academia. Nor were the commercial schools able to promote the new field because they were not empowered to grant research doctorates. But faculties of business economics when incorporated into new civic universities at Cologne and Frankfort on the Main did. Eugen Schmalenbach, in the first, and Fritz Schmidt, in the second, seized on the opportunity to train the second generation of BWL professors in the field they were developing and to feed them into academic chairs in the BWL educational sector.

Inevitably, business economists and economists would differ about the validity of a new discipline; they did in another *Methodenstreit* that broke out in 1912. The economists M. Weyermann and H. Schönitz (whose 1912 study provoked the conflict), claimed that business economics had two faces, one as science (*Wissenschaft*), where knowledge is an end in itself (*Selbstzweck*) that scientists promote through disinterested work, the other as a technical study of all the possible economic prescriptions and knowhow imposed from the outside, i.e., from nomothetic or ideographic science or from the firm (e.g., to maximize a firm's performance). Eugen Schmalenbach in Cologne argued against the science outlook (*Wissenschaft*). He famously claimed that BWL was a technology oriented *Kunstlehre*, a discipline of praxis-related knowhow, whose task is to present practical applicable knowledge, which attempts to answer questions about what are the optimal means to employ (Aim-Means relations) in business and industry. Accordingly, a *Kunstlehre* in its presentation is concerned first of all with overcoming the discrepancy between the given and the desired situation in firms; secondly, it is concerned with the efficiency of the means employed.

Accordingly, what made the *Methodenstreit* in economics different from that in business economics (BWL) was the view of the latter as a technological *Kunstlehre*. The business economists in their *Handelshochschulen* had to answer to the needs that business and industry posed from the outside. Willi Prion, who earned his doctorate in Cologne, made this perfectly clear in the midst of the BWL *Methodenstreit* in a letter to Schmalenbach published in the *Zeitschrift für Handelswissenschaftliche Forschung* (vol. 3, 1912-13, pages 231-42)*, the* oldest academic business journal in Germany, founded by Schmalenbach in 1906 and still published with Schmalenbach's name on the title page. Prion chastised Schmalenbach for misleading people with polemics against the scientific outlook (*Wissenschaft*):

> All who have anything to do with *Handelshochschulen* know that all [of them], in Cologne, as in Munich, Berlin, Leipzig or Mannheim, attempt exactly the

> same way to promote one end: to make the businessman (*Kaufmann*) effective in business, to show him how a business is set up and conducted, how the organization of the accounts, of the business or of the plant is done, how financing is achieved in commercial life, what role the balance sheet plays for business and for the general public, how purchases, sales and calculations are made in various businesses, what role bills of exchange, checks, stocks play in commercial and economic life, how the conditions of existence of the individual firm, their legal constitution, their effect on economic life in general, etc., take place. All the business schools teach that to their students and all teach it, in principle, in the same way (letter excerpts quoted in Locke, 1984, 2006, 157-58, my translation).

There was not much chance that professors or students would become disinterested scientists in these schools. All agreed that business economics, BWL, had to be a technology whatever its scientific aspirations, that is, to answer to and reflect the needs of business and industry posed from outside *Handelshochschulen*.

Although Weyermann and Schönitz were willing to concede that BWL had a scientific face, most economists whether in the nomothetic or the ideographic camp believed that economics had to be academic not practice driven, and their opposition to business economics as a *Kunstlehre* was far from passive. The issue became for university economists one of purely professional *Interessenpolitik* as they set out to block the penetration of business oriented economic studies into their sanctuary. In 1909 Gustav von Schmoller objected to the appointment of an industry connected, nonacademically qualified (according to university lights) candidate to an economics professorship in Leipzig University, and raised the matter before the already famous *Verein für Sozialpolitik* in its Vienna meeting; Lujo Brentano and Max Weber followed suit at the meeting of the Association of German University Professors. Both groups denounced this attempt to appoint a *Tendenzprofessor* (purpose professor)_in Leipzig. And the attempt did not succeed (Locke, 1984, 119-21).

German economists' opposition to BWL as a *Kunstlehre*, did not have the same effect on the development of business studies in German academia that the aggressive activist agenda of nomothetic neoclassical economists and mathematical modelers had on the hapless American business schools during their reform in the 1960s and 1970s. German economists, especially of the dominant historical school, were not actively working in business and industry in the economy they described; their knowledge was not functionally useful to people in praxis. BWL professors, on the other hand, were activists *par excellance*, who sought in their interaction with business and industrial firms and through the education of their students to drive their agenda. In *The End of the Practical Man*, I describe the creation of this new academic discipline up to 1940 in three chapters: "German Business Economics: The Theoretical Achievement"; "German Business Economics: The Educational Achievement"; and "German Business Economics: The Institutionalization of Management" (Locke, 1984, 2006, 155-294).

That agenda differed from the American in one important respect. German BWL drew a distinction between studies of use to management (*Lehre für Management*) and studies of management (*Lehre von Management*). Unlike U.S. business schools, with MBA programs that welcomed post-experience students into their ranks and developed executive management programs, German BWL students learned little about 'management' as a generic subject. Faculties of business economics did not offer the MBA, and German firms

were not interested in hiring them. One could learn specialist skills in schools (even then there was much to be learned about them on the job), but how to manage was not one of them; it had to be learned in the firm. As Peter Lawrence explained (Lawrence, 1980), Germans did not appreciate "the general processes of communication, decision-making, coordination, and control," the sort of managerialism taught in American business schools.

The firm-centered development of German academic BWL reflected the outlook of practicing managers, who, much like military leaders, who welcomed the educational system needed to develop the logistics, technology, and the esprit de corps of the armed forces, understood, in a world of bounded rationality filled with unknowns, a *Lehre von Management* could not be one of them.

This hardly meant that the development of a *Lehre für management* had to be narrowly focused, and to understand why, when it was being created in the first decades of the 20th century, German ideas about knowhow and knowledge have to be taken into consideration.

The late Ian Glover observed that "in Anglophone countries, two cultures, the arts and sciences, are recognized" (Glover, 2013). But a pejorative distinction is made in both cultures between "fundamental" research and applied science, that is, for example, physics is studied in the prestige universities as a "fundamental" science, engineering treated as an applied science for the less brilliant and gifted. Nomothetic neoclassical economics in the two-culture environment assumes the mantle in the elite universities and business schools of "fundamental" research.

Glover went on to note that [in Germany] rather than two cultures there are three: arts (*Kunst*), science (*Wissenschaft*), and *Technik,* which he defines as "the many engineering and other making and doing subjects, representing practical knowhow (*Können*)," but also including by the late 19th century scientific knowledge (*Wissen*). Glover's point is that we cannot find *Technik* in Anglosaxonia, because it is not part of their approach to knowledge. Mine is that the culture of *Technik* provided a broader milieu in which engineers and business economists in late 19th and 20th century Germany could integrate the work world than that provided by reformed U.S. business school education. Nothing illustrates this better than the way German engineers and business economists reached out to each other after the turn of the century.

Professors of business economics worked in the German Commission for Technical Education (*Deutscher Ausschuss für Technisches Schulwesen*) that added business economics to engineering studies during the first decade of the 20th century. They worked in specialized associations of German engineers (German Mechanical Engineers, German Electrical Engineers, German Chemical Engineers) and others (German Association of Graduates of *technische Hochschulen*, German Association of Graduates in Business Economics) on projects too numerous to mention here (see Locke, 1984, pp. 269-282). They also became heavily involved in the work of the Frankfort Society for Efficiency Training (*Gesellschaft für wirtschaftliche Ausbilding, e.V. zu Frankfurt am Main*), a private organization founded in 1903 that brought leading professors of engineering and business economics and government officials together with industrialists and businessmen for the purpose of promoting performance "…where the question of good administration in the broadest sense of the word plays a role in state, municipal, and private enterprise" (Locke, 1984, p. 270).

The Frankfort Society became intimately associated with the new business faculties. Its library and archives were in fact amalgamated with those of the Frankfort School of Commerce in 1911, thereby providing better holdings for members of both institutions. The Frankfort Society also supported the annual meetings, begun in 1907, of professors of business economics teaching in *technische Hochschulen* (whose numbers were increasing rapidly); in 1908 it directed industry's attention to cost accounting by conducting an essay competition on the subject. The best essays, which described actual costing systems, were published in Schmalenbach's journal. The Society sponsored *ad hoc* conferences, which alerted businessmen and industrialists to problems in business economics. Schmalenbach sought out the engineers as partners, in the sense that he wanted to teach nontechnical administrative skills (accounting, merchandizing, sales) to people in industrial as well as commercial firms. He was successful. In my research, I discovered Schmalenbach and the beginnings of academic German business studies, through references to his work in German engineering periodicals.

The business economists also worked in the Reich Trust for Efficiency (*Reichskuratorium für Wirtschaftlichkeit*, RKW). Founded in 1922, in the political turmoil of the Weimar Republic, the RKW functioned much like the Frankfort Society, although on a much greater scale, bringing organizations and educational agencies together in a common endeavor that sought to inform the interested public about the best way for a defeated Germany to accomplish economic efficiency. One member of the Trust wrote:

> Just ten years after its foundation there were about 4,000 co-workers from employer and employee, industrial and commercial circles, from various branches of science and government, who, with 50 regular employees, bore the principal burden of its 150 committees and work groups, dispersed all over Germany (Büttner, 1973, 11).

The Trust's committees and work groups were usually headed by prominent businessmen. C. F. von Siemens, for instance, was the RKW's first president; its second, Karl Köttgen, was a member of the Siemens-Schuckertwerke AG board of directors, and Eduard Mösler, who presided over the Committee on Administrative Efficiency, was a member of the board of a bank, the Diskontogesellschaft AG. But the real work of the RKW was in the hands of the business directors of the committees, subcommittees, and research institutions.

Between 1922 and 1926 engineers monopolized the work. Sometimes RKW committees were composed solely of engineers. Then in 1925 the Trust created the Committee on Administrative Efficiency that reflected the growing stature of business economics in Germany's mental capital mix. Eleven of this committee's members were professors of business economics (Tiburtius, Seyffert, Schmidt, Schmalenbach, Rössle, Nicklisch, Mahlberg, Kalveram, Hummel, Geldmacher, and Bucerius). In addition, business economists with academic connections (Bötheme, Müser, and Klinger of the Association of German Business School Graduates, Eicke and Schlüter, assistant professors in business schools) were on the panel.

This committee's work encompassed various aspects of business administration, including accounting, general administration, sales and distribution, finance, and office management. The transformation it brought to the work of the RKW can be shown in the realm of cost accounting after it was removed from the jurisdiction of the engineering-dominated Committee on Administrative Efficiency and transferred to a subcommittee chaired by Schmalenbach.

Under his guidance the subcommittee's investigations broadened into commercial and business as well as industrial cost accounting (RKW, *Jahresberichte* – 1931).

Subsequently the RKW added other committees to handle commercial and monetary aspects of the efficiency movement, for example, on banking and distribution, and it also made formerly independent business research institutions part of its purview, for instance, the Research Center for Commerce in Berlin, the Institute for Research on Consumer Goods in Cologne, and the Institute for Research on the Marketing of Finished Products in Nuremberg. Prominent business economists were no less involved in the work of these committees. Schmalenbach's student Alfred Meier became business director of the Schmalenbach-chaired subcommittee on cost accounting; Ruberg, a member of the subcommittee on merchandizing, and Rössle, a member of the RKW board in Bavaria. Hirsch, Tibertius, and Kühn successively ran the Research Center for Commerce in Berlin; Schäfer, another of Schmalenbach's students, directed the Institute for Research on Marketing of Finished Products in Nuremberg; Bucerius was scientific advisor in another RKW-affiliated institution, the German Small Trade and Artisan Institute.

Schmalenbach's subcommittee developed standardized charts of accounts, published in 1927. These *Kontenrahmen* contained flow charts, which "…helped in representing not only accounting plans but also organizational relationships, that is, the flow of paper work, production flows, and the like." Käfer stated that Schmalenbach's work "was the basis for all later German uniform charts and influenced considerably the national charts of accounts adopted in other European countries" (Käfer, 1967, p. 73). Moreover Schmalenbach's 1927 Chart of Accounts became the framework in which subcommittees of the RKW expedited work on the industrial accounting systems of specific industries. Schmalenbach's committee published, in the RKW monograph series, uniform accounting schemes for the lignite, mechanical construction, iron foundry, weaving, inland shipping, brewing, drop forge, and brick making industries.

The business economists also pushed the management techniques of comparative firm analysis. The RKW, prompted by business economists who had worked on the subject, was especially intrigued by inter-firm comparisons within industrial branches. These 'branch investigations' did not look at all the firms within an industry but concentrated on a few, selected according to certain objective criteria (size, location, organization structure, etc.). They became yardsticks against which other firms could measure their industrial performance. The RKW then increased the scope of comparative analysis. Initially comparisons had been made between industrial firms; then, Hirsch, in the Berlin Research Center for Commerce started to do comparative analysis for commercial firms. Bredt and Birnbaum, supported by the Association of German Wholesale Cloth Merchants and the RKW, carried out a comparative firm analysis in the textile wholesale trade.

By the end of 1932 the RKW had completed investigations on a number of industrial and commercial branches plus several branches of retail and wholesale trade in agriculture. The results were not published, in order to encourage firms that feared publicity to agree to investigation, but they were communicated to all firms within an industry, including in some cases those not studied, in order to guide them towards better management practice.

The broad contacts that engineers and business economists enjoyed through their participation in the culture of *Technik*, also promoted the vertical integration of society. The German engineering association – *Verein Deutscher Ingenieure* (VDI) – founded in 1856 had

a lot to do with it, because, although it supported the development of trade schools into *technische Hochschulen* in order to meet the scientific demands of the Second Industrial Revolution (1850-1930), it consistently pitched a large tent. If professors from *technische Hochschulen* headed the VDI, it always included in its membership craftsmen, machinists, and graduates from sub-university engineering schools. Moreover, the technical institutes were institutionally tied to the technical trade school system primarily because they educated their teachers. *Diplom-Ingenieure* formed the sub-university trade school teaching staffs, reaching down to the German apprenticeship system, since entry into a sub-university technical school required the completion of an apprenticeship program.

The *Handelshochschulen* had an even closer formal relationship with nontechnical commercial schools through the degree they established of *Diplom-Handelslehrer.* Candidates for the degree received the same education in business economics as those aspiring to become *Dipl.-Kaufleute* plus additional instruction in pedagogy, for those who held the commercial teacher's diploma from a *Handelshochschule* had the exclusive right to teach in sub-university commercial schools. Through the *Diplom-Handelslehrer*, academic business economics established a permanent relationship with the sub-university level commercial schools and a link, through them, as *Diplom-Ingenieure* had within the technical trade schools, to the practical world of nontechnical commercial training, because entry into the sub-university sector of commercial education usually required the incoming student to have completed an apprenticeship training program. BWL, thereby, became part of a great interconnected nontechnical educational arc, from *Hochschulen* to apprenticeship training, within the context of the third culture of *Technik*.

Nonetheless it is important not to exaggerate the presence of the culture of *Technik* in Germany in the first half of the last century. It existed in a society run by elites that did not accept cooperative cultures if they meant the elite had to share power with subordinate orders. Neither, when the century began, the emperor nor the aristocrat that ran the German army had any intention of giving up their power. Nor, when the imperial power collapsed in the throes of a lost war, could the cooperative culture that the engineers and business economists shaped, assert itself in the financial and economic crises of the Weimar Republic or the totalitarian culture of the National Socialism dictatorship that succeeded Weimar, embedded in the regime's concept of the *Führerprinzip*. The firm-centered tradition in German business economics just described, and the nomothethic science that ensconced itself in U.S. business schools are important here for what they tell us as traditions about problem solving in our world.

Nomothetic economics and the retention of firm-centered, praxis relevant business studies in Germany after 1945

Germans call 1945 Zero Hour (*Stunde Null*). Under military occupation, the universities closed. Although they had much to learn from the victorious Americans about management education and management, unlike the British, the French, and other Europeans, the Germans had their own traditions in business economics, which spilled over into the postwar period.

They spilled over first of all in human form. The membership of the Schmalenbach Society, founded in 1932 in the name of the premier professor of business economics, shows the continuous work of prominent economists across the chasm of 1945. Among the first five

postwar presidents of the Schmalenbach Society were Willy Minz, Walter Krähe, and Fritz Hardach, all of whom, after studying with Schmalenbach in Cologne, worked with the RKW in the inter-war period. The nine members of the Society's board of directors in 1960 counted, besides these three, Löffler, Hax, and Potthof, that is, men who had participated in the work of the Schmalenbach Society before the war. Furthermore, the membership directory in 1960 lists Banse, Beste, le Coutre, Cordes, Eich, Hasenach, Kosiol, Meier, Mellerowicz, Münstermann, Rosgowski, Schäfer, and Thiess, men who had contributed a lot prewar to the development of German business economics.

Nor was their 1960 membership in the Schmalenbach Society simply an honorary distinction granted to a discarded generation in recognition of prior service. These men emerged from the war, leading in their domain. Walter Cordes survived the dissolution of the United Steel Trust to become director of a steelwork and a member of the board of director of the August-Thyssen-Hütte; Fritz Hardach had returned from the war to become a member of the directorate of the Hütten- und Bergwerk AG in Essen; Walter Krähe became business director of the Ruhrkohle-Treuhand-Gesellschaft in Essen; Albert Meier, member of the board of the Treuhand Seminar Vereinigung AG in Frankfort, was business head in the consultancy Coopers & Lyland GmbH in the same city; Willy Minz became a member of the board of the Rheinisch-Westfälische Treuhand AG in Cologne; Erich Potthoff joined the board of the Zentralverband deutscher Konsumgenossenschaften in Hamburg; Albert Meier, Auffermann, and Potthoff, in addition to other engagements, worked as independent business consultants.
Others reasserted themselves in academia. Hax and Banse followed Schmidt and Kalveram in their chairs at Frankfort on the Main; Theodor Beste moved from a position behind the Iron Curtain to one in Cologne. Hasenack, after working on the dismantlement of Ruhr industries immediately after the war, became a professor of business economics in Göttingen. Münstermann held a similar chair at Mainz University, and Mellerowicz, in Prion's footsteps, became professor of business economics in the Technical University, Charlottenburg (Berlin). Le Coutre held a business economics professorship in Mannheim. Schäfer remained in Nuremberg as professor of business economics and director of the *Institut für Wirschaftsbeobachtung*, where he had done so much before the war to further rational management in the retail and wholesale trades.

The Cologne centered group, as important as it was, only tells part of the story, for it leaves out people whose education in business economics took place outside Cologne and who worked in regions elsewhere in Germany. This includes the most famous man in the postwar scenario, Ludwig Erhard, Konrad Adenauer's minister of economics, architect of Germany's postwar economic 'miracle,' who had worked on the rationalization of German business in the Institut für Wirtschaftsbeobachtung, an affiliate of the RKW, under Schäfer.

The presence of these men kept the BWL tradition alive. Some among them actively cultivated it. Professor Wilhelm Hasenack, who held a chair in BWL in Göttingen after 1950 and had earned his doctorate under Schmalenbach in Cologne and then finished his *Habilitationsschrift* under Prion in the Technische Hochschule Charlottenburg, wrote a series of biographical death notices published in the *Zeitschrift für betriebswissenschaftliche Forschung* (Research Journal in Business Economics) about the accomplishment of the prewar generation. Within their bailiwick, the research followed the lines of specialist prewar BWL since nothing in their inherited studies involved nomothetic model building.

But Germany had lost control of its destiny; the Americans with their nomothetic ideas about economics and management were now in charge. Those who had opposed Schmalenbach's

view that BWL was a *Kunstlehre*, revived the *Methodenstreit*, in order to turn BWL into a science (*Wissenschaft*). The chief architect of this view, Erich Gutenberg, ally of the German neoclassical economist Erich Schneider, in his very influential 1951 book pushed for the adoption of the *mathematisch-deduktive Methode* in BWL, as the Americans were doing in the reform of their business schools at the time and proselytizing all over the world.

However, there were several obstacles in Germany, aside from the continued presence of the prewar generation in education and praxis, that tempered the adoption of a nomothetic outlook in BWL. Some were the consequences of defeat and occupation. Germans were forbidden to have a computer industry; they were also forbidden to work in atomic energy, and they lacked a powerful, aggressive military establishment that could sponsor think tanks, like the Rand Corporation, which worked on the decision models that so impressed U.S. neoclassical economists after the war. And in addition they also did not have the symbiotic linkups between private firms and a military that fostered new management techniques like P.P.B.S (Planning, Programming, Budgeting Systems), which was installed first in the Pentagon after McNamara left Ford Motors to become secretary of defense in 1961.

These are the negatives; among the positives is the firm-centered discipline BWL inherited from the past. Managers in German firms, struggling to reestablish themselves, were suspicious about the usefulness of a BWL professorate that tried to make management a science. The issue was not BWL as a *Kunstlehre* but BWL as *Wissenschaft*. The encounter in 1965 between the businessman Hans Dichgans and a group of twenty BWL professors to thrash out their differences reveals the serious nature of their relational problem. Dichgans complained that academic business economics was no longer a *Kunstlehre* willing to be judged on how well it accommodated business. “Everything must the more so serve an abstract idea of higher science. Our young professors have less and less contact with praxis” (quoted in BWL, 1965, p. 1427, my translation). He recommended that more professors work for extended periods in business and industry and that their students prepare for business rather than academic careers. Students “should learn enough in a three-year course to qualify for a beginning position in the economy, from which they could improve their knowledge through post-experience education” (*Ibid*.).

The professors were not indifferent to the call for more contact between BWL and praxis, but they could not imagine how it could be done as Dichgans outlined. To the suggestion that professors acquire more practical experience, Professor Wolfgang Kilger of Saarbrücken University replied that for both academics and practicing managers the crucial years in a career occurred between ages thirty and forty. Since it took a student four years to become a *Dipl.-Kaufmann*, two to complete a doctorate, and three to write a *Habilitationsschrift*, the qualification needed to be appointed to a university chair, it was not possible for the prospective professor to complete his/her education before age thirty. As a young professor, he/she then had to devote effort to academic science to advance discipline and career – so there was not much time to work in business. The professors also objected to Dichgans’ suggestion that the *Habilitationsschrift* be eliminated as a requirement for a professorship (as engineers did in their *technische Hochschulen*), in order to attract more people from business into academia. One stated “a person who had worked years in accounting was ill-suited to teach academic accounting”. Another pointed out “business does not understand reality, which is getting more complicated every day.” It stands to reason, another professor intoned, that *Praktiker* needed the professors and their science because of its abstractions, or, as still another professor explained, precisely because the scientists are interested in generalities, not like the *Praktiker*, in particulars. Schmalenbach and his followers, with their focus on BWL

as a *Kunstlehre*, would never have framed the debate in such terms, but under Gutenberg's influence they now did.

Those imbued with the importance of nomothetic science to business in venues like *Universitätsseminar der Wirtschaft* (University Seminar on the Economy), the Koblenz Corporate School of Business, the Otto Bisheim Business School, and certain faculties involved in the construction of market and finance architectures, actively persisted in their advocacy.

But a different outcome from the one they sought for BWL prevailed. People in praxis in league with BWL academics devised an education system that let academics keep control of their bailiwick and *practicing managers keep the theory boys out of their hair.* The system divided the education process in terms of its ability to improve a student's capacity to learn, (his or her *Fahigkeit*), which the academics assume through theoretical training and a schooling of the mind (*Denkschulung*), and the training needed after business school graduates join a firm to make and keep them ready for the job (their *Fertigkeit)*, jurisdiction over which people in praxis assume.

Undergraduate students concentrate on a functional specialty (accounting, banking, marketing, etc.), not management. After initial employment in lower level positions within a firm, the graduate Dipl.-Kaufmann is not put on a fast-track management career to the top like MBAs recruited from elite business schools in the U.S. Advancement in a German firm-centered world does not depend much on the degree people earned or the place where they got it, what counts more is their knowledge of their specialties (*Fachkentnisse*) on the job and their performance (*Leistung*) BWL graduates can end up in top management, based on these criteria, but so can graduates from sub university schools in which the *Dipl-Handelslehrer* teach, or people who have only completed apprenticeship training.

The center of gravity for post-experience education was not in academia. Top management, not the faculties of business economics, organized the *Baden Baden Gespräch,* in which participants learned about general management from practicing managers. Although professors might be asked to participate in the gatherings, promising younger managers were learning about how to manage from their successful superiors; professional associations like engineering societies sponsored short term courses on various subjects, which BWL graduates might attend or in which they might teach if invited. Business and industry sponsored the creation of post-experience nonacademic teaching networks, like that of the Wuppertaler Kreis, which thrived after the war. Dr. Wipperman, business agent for the Wuppertaler Kreis, observed that he or members of his staff do not work with, or show much enthusiasm for working with, faculties of business economics in post experience management education (interview, Cologne, July 18, 1984). To them the academic viewpoint was too theoretical and the professors too divorced from praxis.

The ability of the people in praxis to control post-experience education conjures up Schmalenbach's definition of business economics as a *Kunstlehre*, a discipline that is tied to something outside itself, in this case not to nomothetic science that is reminiscent of the post-reform regime of business school education in America but to a firm-centric education that shuns a *Lehre von Management*.

The dysfunctionalism of U.S. (B) management education model compared to the functional success of the German (A) model post WWII

This discussion covers educational, economic, and social examples of each model's relative prowess in its own area. In model (B) education, two particular events upset the Anglo-American greater academic community (a) the failure of nomothetic economic and business studies to become prescriptive sciences and (b) the consequences, compared to those in model (A) with its different academic traditions, of the elimination of the ideographic tradition in economic studies for model (B) business studies. A third (c) is the reaction of people in both models to the crises in manufacturing in the fourth quarter of the 20th century, which greatly affected outcomes in industrial reform.

I discussed (a) the failure of nomothetic science to succeed as prescriptive science as it pertained to operations research in chapter 2, "The New Paradigm Revisited," Locke (1989). Khurana, after thoroughly describing the implementation of the nomothetic New Paradigms in U.S. business schools, ignores its prescriptive failure, but the pages of the *Real-World Economics Review* and the journals of the World Economics Association are filled with articles about it. Practicing managers, who live in a world of bounded rationality, incomplete information, and management unknowns, realized the futility of establishing economics and business studies on nomothetic science.

The problem, however, is not the failure of economic departments and business schools to create a prescriptive science, but the refusal of nomothetic neoclassical economists and mathematical modelers in them to admit the failure, and their actions after they gained a monopoly of the sinews of institutional power, that produced dysfunctionality in Anglo American higher education. That dysfunctionalism is expressed in their constant battle with people in academia who realize the prescriptive failure of the nomothetic science project, with which readers of the *Real-World Economics Review* blog are painfully familiar, and a dysfunctionalism that results in education from their narrow minded refusal (b) to accept the importance of the ideographic tradition in economic and business studies during the current crisis in U.S. management capitalism.

The elimination of ideographic economics from the economists' ranks is particularly poignant, inasmuch as the nomothetic neoclassical economists' attitude towards ideographic economics seriously compromises any attempt of economists to evaluate capitalism's shortcomings. This includes Veblen's view that modern capitalism produced a set of socially beneficial tendencies but also a set of parasitical forces. Among the beneficial tendencies he counted "workmanship, industry, the machine process, and technological progress" (Schatzberg, 2006). On the parasitic side, he listed "predation, business enterprise, absentee ownership, and other pecuniary institutions" (*ibid*., 499) For business schools, Veblen's stress on the parasitical side of pecuniary institutions is especially significant, since the financilization of the economy has been carried out by nomothetic thinking finance professor in business schools in league with private financial and banking firms governed through director primacy, Veblen's parasitical forces. In *The Theory of the Leisure Class: an Economic Study of Institutions* (1899), Veblen also laid out a social critique of conspicuous consumption as a function of social class and of consumerism, derived from the social stratification of wealth. Schatzberg observed that the institutionalist Seligman, who defined economics as the study "of the social conditions necessary for the sustenance of life," (Schatzberg, p. 498) opened therewith the discipline to the ethics of social criticism. The disappearance of

historical and institutional economists ended this sort of analysis among economists of the U.S. capitalist culture.

More importantly, the recent concentration on finance and investor capitalism in business schools at the expense of manufacturing eliminated the possibility of business schools playing any serious role in solving the manufacturing crisis. They actually opted out of the effort. Robert S. Kaplan, former dean of Carnegie-Mellon Business School and then a Harvard Business School professor, after reviewing articles published in leading operations management journals and examining research and teaching in top business schools, found that only one to two percent of the U.S. business schools had "truly been affected, as of early 1991, by the Total Quality Management revolution that had been creating radical change in many U.S. and worldwide businesses," and was integral to the Japan Production System (Kaplan, 1991, p. 1; Ishikawa, 1985). He concluded that "American business school research and teaching contributed almost nothing to the most significant development in the business world over the past half century – the quality revolution." U.S. MBA education proved to be at best neutral in that the neoclassical economic theory and prescriptive sciences it devised and taught had very little to do with a people-oriented management processes American production engineers outside business schools sought to introduce into manufacturing.

In fact, the financial reporting systems created in business schools and the people that ran them in praxis frustrated any reform of the production process. H. Thomas Johnson, after evaluating U.S. automobile production management, noted:

> Successful [U.S.] managers believed they could make decisions without knowing the company's products, technologies, or customers. They had only to understand the intricacies of financial reporting … [B]y the 1970s managers came primarily from the ranks of accountants and controllers, rather than from the ranks of engineers, designers, and marketers. [This new managerial class] moved frequently among companies without regard to the industry or markets they served … A synergistic relationship developed between the management accounting taught to MBAs in business schools and the practices emanating from corporate controllers' offices, imparted to management accounting a life of its own and shaped the way managers ran businesses (Johnson and Bröms, 2000, 57).
>
> At first the abstract information compiled and transmitted by these computer systems merely supplemented the perspectives of managers who were already familiar with concrete details of the operations they managed, no matter how complicated and confused those operations became.
>
> Such individuals, prevalent in top management ranks before 1970, had a clear sense of the difference between "the map" created by abstract computer calculations and "the territory" that people inhabited in the workplace. Increasingly after 1970, however, managers lacking in shop floor experience or in engineering training, often trained in graduate business schools, came to dominate American and European manufacturing establishments. In their hands the "map was the territory." In other words, they considered reality to be the abstract quantitative models, the management accounting reports, and the computer scheduling algorithms (Johnson and Bröms, 2000, 23).

In Germany the monopolistic hegemony that nomothetic neoclassical economics and mathematical modeling gained in U.S. business schools could not occur. The Germans never bought into nomothetic neoclassical economics to the same extent as Americans, for an interest in ideographic-institutional economics, since it is their tradition, has continued, especially in universities located in the former German Democratic Republic, which through their isolation escaped Americanization during the Cold War. Witness the dissertation on Friedrich List that Arno Mong Daastøl successfully defended at the University of Erfurt in 2011. It is a thorough work that not only comprehensively covers List but traces the presence of Listians within a community of ideographic economists into the 21st century.

Nor did business economists housed in the German (A) model of management education try like U.S. business schools to ignore, or worse, if inadvertently, to play a spoiler role when German manufacturing like American faced an existential threat. On the contrary, the intense effort in the first half of the 20th century that BWL professors made to integrate business with technical studies in their degree programs (especially the *Dipl.-Wirt-Ing.* degree program in technical universities), and the work they had done with engineers in the Frankfort Society and the RKW, promoted an active participation in these late 20th century reform efforts.

BWL Professor Horst Wildemann, teaching courses primarily to engineering students on work-process innovation in the Munich Technical University, led a substantial group of over 100 research consultants (30% with BWL degrees, 50% with Dipl. Wirt-Ing. degrees, 20% Dipl.-Ing.), which included 35 graduate assistants. Their work was heavily oriented to mathematical modeling and computer simulations; their task to help German firms meet the Japanese challenge by adopting the Japanese *Kata*-like production culture and its techniques. By 1994 Wildemann's team had already introduced Japanese production processes in 200 European (mostly German) firms, including Daimler-Benz, Grundig, Philips, and Volkswagen. At Volkswagen, his group spent three years teaching small-group quality control management techniques in five-day courses to over 2,500 managers (Locke, 1996, pp. 199-201). Through them 30 to 50 percent of German industry had by 1994 successfully implemented Total Quality Management, including Just in Time, *Kaizen*, and/or other Japanese work-process techniques. Notice the educational composition of the work teams. BWL through its *Diplom Wirtschafts-Ingenieur* engineering education tradition made a significant contribution to what turned out to be a successful German response to the Japanese challenge (interview with Professor Dr. Horst Wildemann, Munich, 24 July 1994).

The success of this German effort to save their manufacturing industry, in which BWL educational tradition embedded in the (A) model expressed itself, and the relative failure of the Americans, in which the nomothetic neoclassical economic led reforms of elite U.S. business school expressed itself, can be discerned through comparative analyses of the top twenty firms in each country, ranked by revenues in 2012.

In the U.S. these firms were:

1. Exxon
2. Wal-Mart
3. Chevron
4. ConocoPhillips
5. General Motors
6. General Electric
7. Berkshire-Hathaway
8. Apple
9. Ford
10. Hewlett-Packard
11. AT&T
12. Valero Energy
13. Bank of America Corp
14. McKesson
15. Verizon Communications
16. JP Morgan Chase & Co
17. Fannie Mae
18. CUS Caremark
19. IBM
20. Citi Group

(Source: Stahl, 2013, 59)

In Germany the top twenty firms were:

1. Volkswagen
2. E.ON
3. Daimler
4. Siemens
5. BASF
6. BMW
7. Metro
8. Schwarz
9. Deutsche Telekom
10. Deutsche Post
11. Aldi Group
12. BP Europa SE
13. Robert Bosch
14. RWE
15. Rewe Group
16. Edeka Group
17. Audi
18. Thyssen Krupp
19. Deutsche Bahn
20. Bayer

(*ibid*., 61)

Some firms on each list are classifiable under the same rubric, e.g., retail giants (in the U.S., Wal-Mart and McKesson; in Germany, the Aldi and Edeka Groups). Others are famous oil and energy firms, mostly on the U.S. list. But there are two big differences between the lists that are of interest here. One is that among the top twenty U.S. firms there are many drivers of financialization (Berkshire-Hathaway, Fannie Mae, Bank of America, JP Morgan Chase Co, Citi-Group, and GE Financial), or U.S. firms that are the creation of financialization (Hewlett-Packard: IPO 1957; Apple: IPO 1980). On the German list, there are none, i.e., not one is a financial institution, not one is a stock market IPO creation.

The second significant difference gleaned from a comparison of the top twenty German and U.S. firms pertains to manufacturing. Few of the manufacturing firms on the U.S. list were famous before World War II (Ford, GM, GE), but such firms dominate the list of the German top twenty, many of them prominent even before World War I (Deutsche Post, Robert Bosch, Daimler, BASF, Thyssen Krupp, Bayer, and Deutsche Bahn). Whereas the efforts of business economists to save firms that had been resurrected after WWII succeeded, the old stable industries that dominated the U.S. economy in 1960 had disappeared by the 2000s, thanks in large part to the role business schools played in financialization. Was this dysfunctionality? Considering the misdistribution of wealth that has occurred in the U.S., the nomothetic thought patterns, derived from the operations research methodologies adopted by neoclassical economists and employed by firms in financial market modeling, are a disastrous consequence of their victory over the ideographic economists post World War II.

A final point is about the catastrophic effect that the elimination of ideographic thinking in economics had on firm governance, again especially during our era of financialization. Americans have a proprietary conception of the firm and a simple idea of its purpose,

meaning that the firm is a money mill in which success is measured by return on investment and managers are agents of the capitalist investors, deemed efficient when they maximize profits and stock market valuations climb. The nomothetic neoclassical economics taught in business schools spawned a form of management thought that ignored the fate of other stakeholders in a firm, especially in times of economic crisis. Hedge fund operators and buyout firms specialized in the elimination of legacy costs, like union retirement plans and medical benefits, which wiped out defined revenue pension plans in private U.S. firms between 1980 and 2000; business school graduates devised derivative packages and mathematical financial marketing schemes that, in the subprime mortgage housing crisis, ushered millions into bankruptcy. Nomothetic neoclassical economics proved inadequate to analyzing the shortcomings of the instruments it had employed in the economy and society, and employees had no power to defend themselves.

The social dimension of the BWL educational model projected into the German Federal Republic

For the first generation of German BWL professors, social issues came up in their discussions about firm efficiency (*Wirtschaftlichkeit*). For Americans it has to do with a firm's *Rentabilität* as a money mill (*Geldfabrik*), which was easy for the accountants to measure. Wilhelm Rieger at the Nuremberg HHS and his followers accepted that. Professor Heinrich Nicklisch, in HHS Berlin, demurred. If he accepted the efficiency principle, the efficiency yardstick was not the greatest income to the capitalist at the least expense, but the greatest benefits to the community. Nicklisch, one of his students wrote

> stressed the creative character of human work, refused, correspondingly to accept the liberal wage system as a proper basis for wage payment, demanded profit-sharing for workers and employees, fought the idea that profits were justified when the capitalists did not work, and favored the workers' participation in management expressed in the regulations and business committee laws of 1920 and article 165 of the Weimar Constitution which set up workers and economic councils at the firm, district and national level of the economy (Nicklisch, 1921).

Nicklisch's reference to workers' and employees' participation is the key point, for even if BWL professors agreed that efficiency had to be more than the greatest return to the investors, as Schmalenbach and others did, thereby disagreeing with Rieger, they did not know how, technically, to measure firm efficiency in terms of satisfying community instead of just investors' interests. Therefore, many fell back on a stakeholder concept of the firm, in which employee and worker interests would be legally spelled out and defended by giving them a voice in firm management.

Emperor Wilhelm II had incorporated the concept into a speech in 1890, asking for the creation of worker-representative bodies within factories that would defend employee interests in negotiations with employers. The resultant *Law for the Protection of Labor*, which the reformist Friedrich Lange sponsored in the Reichstag, granted workers joint consultation rights (*Mitberatungsrecht*) on social matters. This was not co-determination (*Mitbestimmung*), but the law authorized the organization of plant committees in all factories covered by the Industrial Code of 1869 if they had more than 20 employees (Schuchman, 1957, 14).

Employers were reluctant to accept co-determination, which the people who drafted the Weimar Constitution tried, as Nicklisch mentioned, to enshrine in the basic law. Since Hitler did not embrace it in his brutal regime, Germany had to await the restoration of national sovereignty in the *Bundesrepublik* for the co-determination laws (1950-51, extended by legislation in the 1960s) to be passed and institutionalized.

American management schools took up human rights issues in the name of efficiency, exemplified by Harvard Business School's Elton Mayo studies of the Western Electric Company's Hawthorne Works, in Cicero, Illinois, that began in 1924. But the business schools' human rights investigators, including those specifically involved in the Hawthorne studies, never thought human rights in firms included the participation of employees in firm governance; on the contrary, the human rights movement in U.S. business school education was anti-union, anti-employment participation throughout. It was interpreted as an expression of management enlightenment evoked by the Harvard Business School investigations. (See Ch. 6 the "Discovery of the Human Worker," in Cumming et al, *A New History of Management*.)

In Germany, the U.S. general in control during the occupation, Lucius Clay, did everything to forestall the passage of co-determination legislation. After the laws passed, American businessmen attacked them continually. During a visit to the Ford plant in Cologne, after co-determination was legislatively extended in 1976, Henry Ford III stated that the law violated management's right to manage.

The co-determination laws, because they affected almost everybody in the work world, required a broad spectrum educational effort about them in order to be operative. The most important of union-involved education in this respect was undoubtedly IG Metall's education center at Sprochhovel, opened in 1971. In the first two years of operation, Sprochhovel welcomed 25,000 visitors into its seminars, among them 2000 works councilors and youth representatives in seminars just on labor's legal rights under co-determination. (See, Locke, 1996, Chapter on German obstinacy, which describes the "Emergence of the German Management Alternative.") Professors and students of BWL participated; they designed special courses on co-determination for their students; they taught post-experience courses about it to managers, works councilors, and members of supervisory boards in nonacademic venues. Did they succeed in helping to create a different German management culture from the American? BWL Professor Alfred Kieser, of Mannheim University, thinks they did, and he told a story when I interviewed him in 1994 that illustrates how much.

At a restaurant in Rome, Kieser was disturbed by a raucous party in a nearby room, fellows of the rough and tumble type. Inquiring about them, he was told that they were a delegation of the American Federation of Labor. Kieser, when telling the story, sought less to disparage the Americans than to emphasize how in a room of German managers and works councilors it would be impossible today to tell the managers from the employee representatives (the works councilors); both sides wear the same clothes, carry the same briefcases, speak the same language, and in many cases have the same education. Kieser's *Ideal-type* picture of an employee-manager setting, is a far cry from the ideal-type of U.S. union leaders portrayed in films like *On the Waterfront* (Professor Dr Alfred Kieser, interview in Mannheim BWL faculty, 14 July 1994).

But did co-determination succeed as management? U.S. managers and business school professors generally do not believe employee participation can produce "efficient"

management. BWL Professor Horst Wildemann, involved in the transformation of German manufacturing in the 1980s and 1990s, disagrees. In four years at Volkswagen he worked closely with works councils and IG Metall shop stewards. The works councilors in his words were "very intelligent people," who fully appreciated the need to improve work processes, but also understood the impact that the changes would have on jobs numbers in the workplace and on the need to reduce work time and pay. He noted that his group taught the new techniques to the shop stewards at the same time that they taught them to management, and that the union (IG Metall) not only promoted the implementation of Just-In-Time and other work processes but often led management instead of following it in their adoption (interview with Professor Dr Horst Wildemann, in his Munich home, 21 July 1994).

If the BWL tradition as a *Kunstlehre* has succeeded so well in promoting good firm governance, within the framework of co-determination, the triumph of nomothetic science in U.S. business schools, under director primacy firm governance, has not.

Conclusion

So what, as Spender suggests, can "folks" involved in the Anglo-American (B) model of management and business school education learn from the older German (A) model? They cannot learn from model (A) that the nomothetic mathematical models have spectacularly failed. Since the housing and financial crises of 2007-2008 everybody knows that, even some of the chastened modelers. But,they can learn, against a background of the cooperative failure of elite U.S. business schools to participate vigorously and fully in the renewal of manufacturing in the 1980s, and the failure of business school conceived nomothetic investor models of financial markets to which business school energies had turned, that German business economists, in a tradition of collaboration with industrialists and engineers, made a significant contribution in praxis to sustaining the wherewithal, and even reshaping it, of German industry.

They can also learn how important systems of business studies can be in determining economic, social, and political outcomes.

In the U.S. MBAs from the top business schools are part of a privileged order increasingly working in the finance and investor sector of the economy or working for it; they have joined the ranks of the top 10 percent of income earners, who are responsible for the gap increasing between the rich and the poor. The prosperity of the MBA elite does not depend so much on their knowledge as the power to decide who sets wages, salaries, and bonuses. That power resides in the shareholders, to some extent, but principally in director primacy management that determines who gets what, and the bulk of the what goes to management. Two features of the system that is immersed in stock market casino capitalism: (1) The business schools and their graduates do not challenge but promote it. (2) Those who work in firms without a voice in decision making, are victims of it.

Director-primacy firm governance produces the shocking differentials in pay between top managers and non-management employees in U.S. firms, the greatest in modern economies, and policies that reward shareholder at the expense of employees like stock buyback schemes. The wealth disparity gap they promote is responsible for dissolving the social cohesion essential to the survival of American democracy.

Susan R Holmberg, director of research at the Roosevelt Institute, in an article written with Mark Schmitt, "The Milton Friedman Doctrine is Wrong: Here's How to Rethink the Corporation," stated that Americans will not be able to fix the problem of the increasing gap between the incomes of the very rich and the middle classes until they address the nature of the corporation. Holmberg and Schmitt suggest Americans adopt the German system of co-determination.

Why the business schools did not fix the problem with co-determination has just been explained, why the Germans did can be gleaned from a good look at the (A) model. BWL exists in an inclusive culture of *Technik,* not one of financialized elitism. The presence of BWL graduates in many echelons of a firm who are well-schooled in co-determination rights permits them to participate on both sides of governance, as employee representatives on works councils or as representatives of management in order to achieve good results for an equitable distribution of the rewards of enterprise to all firm stakeholders, and to spare their firms and country the worst inequities of director-primacy MBA capitalism.

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Author contact: blocke@hawaii.edu, lockehotel@gmail.com

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