

Influence of American Labor Management and Management Education in Germany after World War II: Human Relations and American-Style Management Education Methods

Toshio Yamazaki*

Professor, Faculty of Business Administration, Ritsumeikan University, 1-1-1 Noji-higashi, Kusatsu, Shiga, 525-8577, Japan

*Corresponding author: Toshio Yamazaki, Professor, Faculty of Business Administration, Ritsumeikan University, 1-1-1 Noji-higashi, Kusatsu, Shiga, 525-8577, Japan, Tel: +81-77-561-4865; Fax: +81-77-561-3955; E-mail: tyt01363@ba.ritsumei.ac.jp

Received date: April 07, 2014, Accepted date: May 31, 2014, Published date: June 10, 2014

Copyright: © Yamazaki T. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Post World War II, European enterprises and industries, as well as their overall economies, were developed by deploying and adapting US technology and management methods; this practice was also observed in Germany around the same time. American management methods were introduced and implemented under the US-led productivity movement. The major American management methods implemented in Germany were those for management education and human relations as an American labor management method. In Germany, however, many factors influenced the introduction of American management methods.

This paper analyzes influence of human relations and management education in Germany after the war. It first discusses the deployment of human relations in relation to the problems of transformation of labor relations and those in the management system. It next considers the deployment of American management education in relation to universities' role in management education, eligibility criteria for executive management, and the manager promotion system in German enterprises. These discussions explain the influence of American management methods and the various factors that restricted the deployment of American-style methods in management education. The overall influence of the American drive for human relations and management education in Germany was determined by a complex matrix of several factors. Amidst this, progress was particularly dependent on each program's effectiveness and the amount of resistance from executives and educators traditions, and traditions, values and cultural factors of German business management that emphasize technology, quality, and production or the institutional factors such as framework of industrial relations and educational system.

Keywords: Human relations; Labor relations; Codetermination system; Management education; Productivity movement; Role of university; Training within Industry (TWI); Business school

Research Problems

In this paper, we will focus on human relations (HR below) and management education in the deployment of American management methods and systems after World War II through the early 1970s and subsequent transformations in business management. The deployment of American management methods and systems varies widely between a specific management system and method as well as between industries and corporations. Thus, in addition to analyzing the overall situation, it is important to examine the differences and various factors influencing each industry and corporation.

In general, there is an extremely broad scope of transfer of American business culture in Germany, extending into all functional areas of management. In particular, elements of management philosophy and language, skills, technology, know-how, and specialized methods and processes are some of the aspects that have been adopted. However, unlike science and technology, for management, organizational know-how and techniques generally require extensive adaptations to the conditions of the importing country [1]. For example, even in a German subsidiary of a US company, despite the former's subordinate relationship with the latter,

the deployment of American-style innovations encountered many difficulties and did not go smoothly [2]. Thus, there are significant issues such as German corporate attitudes, responses, and the nature of the actual deployments in response to American management methods and systems; changes in business management itself with the deployment of management education; and the effect of German business management characteristics on specialized processes.

After World War II, the role of middle management in the function of management and top management functions increased. In such an environment, reforms in management education became critical issues in Germany. The United States viewed reforms in management education in Europe as particularly important for the American-led productivity movement. Deployment of HR was regarded as a priority for the US, in Germany's efforts to adopt US management models as part of the productivity movement. Thus, the deployment of HR and American management education was important during the 1950s and 1960s.

The reforms in management education were influenced by pragmatic business schools and the type of education-oriented universities found in American-style education systems and practices. However, the deployment of American-style methods conflicted with German universities' form of management education. Several characteristics of Germany's deployment of American-style management education stand out. It was evident that in Germany, which has an extensive history of management studies, universities did

not train executives and managers. Corporations, executive management education, philosophies of and objectives for top management education, as well as the industry intentions they reflected, the internal promotion system and other factors had a great impact in Germany.

Along with commonalities with the US, what types of unique developments emerged? From a structural analysis perspective, this research elucidates the overall view of changes in business management that accompanied the deployment of American management methods. These changes included the adaptations of systems to local conditions based on an overall structure of and relationship with German capitalism in business management. This being said, it is important to consider the implications on various economic and social conditions by US intentions and postwar German corporations' strategic intentions, business management traditions, management values, common labor practices, labor relations, and market structures.

American management methods often based on the principles of efficiency and productivity improvements and others that were related to business policy conditions or environmental factors (e.g., systems and practices, management values, and management culture). Therefore, it is important to consider the relationships between both aspects, analyze them, and understand them in regard to the deployment of American management education methods.

Many studies approach this theme from the perspective of economic and business histories (See books and articles cited in this paper). However, these studies do not always identify which elements of American and German management methods were combined, how they were hybridized, and which factors determined the hybridization. This paper attempts to explain the details of hybridization and the process of modifying US management methods. It is very important to elucidate how German-style business management and its particular characteristics, conforming to German and European conditions while still bearing on the German management style, surfaced during the deployment of the American management method from the perspective of structural analysis. We will consider the problems stemming from the German method of conforming to the American method, impacted by traditional and cultural factors in business management as well as institutional factors, and its relationship to the structural characteristics of German capitalism. In this paper, we will explain how were the German management style and characteristics created and what was the significance of these developments. Through clarifying how the modified management education and labor management in post-war Germany reproduced business culture and management values, the paper contributes to recognition of the foundation of business strategies and the mode of corporate behavior based on management values emphasizing on technology, quality, and function which are compatible with market structure in Europe.

Regarding an analytical framework, the author establishes the idea of "re-framing," using which we analyze the various problems in deploying American management methods that created conditions that facilitated business management changes in the postwar era. Re-framing, that is, the framework for analyzing various problems with the deployment of US management methods is explained below. Re-framing in this text refers to business management methods and systems that are defined by structural characteristics of a country's capitalism and how these are adapted, modified, and made compatible with the structural characteristics of capitalism in a country to which it is transferred. Among these, market structure is deeply connected to

re-framing. In addition, management values, business management traditions, and cultural factors and definability from an institutional perspective are also closely related to re-framing. Business management traditions and culture interrelated with business management standards and values. Decisions on where to place value, that is, production, technology, quality, or marketing policies, which are more directly tied to profit, specifically short-term profit, greatly affect corporate behavior. In addition, institutional factors include legal systems comprising all types of regulations; labor relations; educational systems; and system for specialized skills. A country's educational system is closely related with the cultivation of executives and managers and that of skilled workers. Thus, the receiving nation's capitalistic characteristics are amended or modified to an adaptable form when the originating country's management methods, created for its own capitalistic structural characteristics, are introduced and spread throughout a foreign country using that country's methods. Accordingly, re-framing is the process of structural adaptation in response to different environmental conditions and a method of structural analysis, whereby the overall structure of business management is foundational.

We discuss the deployment of HR as an American labor management method and the implementation of management education in Deployment of human relations and Deployment of American management education, respectively.

We present conclusion of the the bottom of the paper.

Deployment of Human Relations

Social and economic background of human relations deployment

We will first consider human relations. Looking back on the decade between 1948 and 1958, the Management Technology Council reports on electrical manufacturer Siemens & Halske AG state the importance of the HR movement in their psychological climate [3]. A research group traveling in the US pointed out the important role of labor relations, or human relations, in American economic life in approximately ten years after the 1940s [4]. Thus, we will first look at the social and economic background of HR deployment.

The US had observed a common problem among OEEC member nations wherein they eliminated restrictive practices by labor unions and strengthened development of the now free labor unions [5]. The US technical assistance plan, which was provided to improve productivity, was also considered closely related to the formation of labor relations. From the American perspective, HR was critical in responding to the clear insufficiency and slow development of post-war Germany, and was thus an important type of "development assistance" [6]. HR was therefore considered the most important pillar among the many projects the US initiated as part of the US Technical Assistance and Productivity Program (USTA&P), and of course the US strongly supported it. During this time, US employers' associations and the US government itself supported building labor relations through HR to avoid instability on the shop floor and conflicts with labor unions [7].

Likewise, from the German perspective, HR methods were accepted as a way to establish harmonious relations with various groups within a corporation. America's superiority in productivity could not be explained by better technology and a rationalized management organization alone; rather, one factor viewed as important in its

productivity and high profitability was the stable labor relations resulting from its HR methods. The reports of nearly every study trip to the US are firm on this point [6,8]. For example, according to one official in the Federation of German Industries in 1954, there was a collegial environment existed between US management and labor that was not seen in German corporations [9]. In West German corporations, American HR concepts attracted attention as a means of liberating Germany from its pre-war ideological burden [10].

New methods of HR did not immediately take hold in this kind of climate. However, HR did have a tremendous impact, and the idea of the importance of workers as human beings can be seen in the period's newly Germanized HR concepts [11].

Efforts of human relations deployment and their characteristics

Next, we explore the efforts to deploy HR. The primary route for learning about HR and transferring that knowledge was international conferences and study trips to the US, in addition to educational programs.

First, with regard to international conferences, the first talks between German and US management personnel took place in August 1951 at Baden-Baden. They discussed various HR issues, and the improvement of human relations became a theme of modern research [12]. At the 1954 10th annual International Management Congress as well, the improvement of human relations as a management methodology was a major theme [13], and efforts to deploy HR grew internationally. In the European Productivity Agency's Project 312 of the mid-1950s, the Agency proposed the organization of a two-fold project: a debate of industrial-social research on HR in industry and an international seminar [14,15].

Among the study trips to the US, the RKW (National Board for Economy and Efficiency), for example, discussed HR in their Productivity in the USA report in one of their 1953 study trips [16]. Additionally, an RKW study trip from March to April, 1954, included RKW representatives in addition to members from the German Federation of Trade Unions, REFA, Braunschweig Engineering College's Institute for Industrial Psychology and Personnel management, Max Planck Institute for Industrial Psychology, and the German Ministry of Labor, among others [6]. A 1956 report pointed out that the US economy had seen strong results from its use of HR, which was far more advanced than Germany's, and noted the possibility of importing basic HR concepts [17]. In looking at HR education programs, in addition to Germany's RKW, the REFA, Braunschweig Engineering College's Institute for Industrial Psychology and Personnel Management, and others contributed to HR, for which special programs were instituted [6].

Further, among corporate HR efforts, the managers of human resources and welfare departments were the first to work on HR issues. P.G. v. Beckerath, the head of Bayer's welfare department in 1951, embraced both the factory communities of 1920s' Germany and American HR methods [6]. This amalgamation of American-oriented thinking on human resource policy and welfare policy combined with pre-war ideas was also seen in Glanzstoff, where HR views merged with 1920s' labor research in "psychotechnology." This combination of HR with human resource methodologies conforming to pre-war traditions permeated Glanzstoff for a long term [6]. Siemens also took up HR issues in the early 1950s, strongly promoting healthy relations between superiors and subordinates and among workers. According to

a 1952 document, many observations stated in a publication regarding human relations based on American thinking provided opportunities for considering and examining unique methods [18-21]. Another document from the same company in the same year described particular interest in the results of US research in the field of psychological business management [22].

By the mid-1950s, HR had become a fashionable topic in European debates and conferences [23]. Scientific discussions on this theme, particularly discussions and publications in economics and sociology, reached their peak during the ten-year period from the mid-1950s to the mid-1960s [6]. All corporate efforts regarding human relations within management, employee information and education, and labor climate improvement were affected from the 1950s onward by the HR and TWI movements following US models. German corporations had previous experience in the creation of worker information, internal corporate education, and labor relations, and these aspects increased the likelihood of HR importation into Germany [6].

As publications focusing on workers began appearing in the early 1950s, new thinking on HR and cooperative relations spread by various means. Among those, the internal corporate newsletter, originally initiated by many corporations in the 1920s, was revived in the late 1940s and early 1950s as an important medium through which the new consideration of industrial workers could be shown. In 1951, there were approximately two hundred such newsletters published by West German corporations, but within two years that number swelled to four hundred [11]. In a 1955 publication [12], research by T. Pilker and others surveying steel corporations to which the Montan Codetermination Act (an act for the coal, iron, and steel industries) was applied, stated that at the time of the survey, corporate newsletters and the like had not yet become an effective means of disseminating extremely important information [24]. By 1957, however, 441 different corporate newsletters were being published, with a total distribution of approximately five million copies. Particularly within medium- and large-sized corporations, these newsletters were a superior means of communication for management, clarifying management actions toward workers and facilitating the exchange of ideas between labor and management [25].

These corporate newsletters were an attempt to understand all aspects of worker life in terms of HR concepts. Many newsletters were titled so as to suggest to employees that the corporation was attempting to embrace the technical concept of "human relations." "The Factory and Me" (Hoesch AG); "Our Factory" (Bayer AG); "My Factory" (Chemische Werke Kalk G.m.b.H.); "Touch" (Brown, Boveri & Cie AG); and other similar titles implied to workers an identity with no special interests [26]. One of Opel's corporate newsletters published in 1949 raised the issue of encouraging employee trust in corporate management in non-decision making contexts. From portraying the ideal worker to displaying photographs of employees considered to be role models by the corporate leadership [27], corporate newsletters were used as a means to improve labor and human relations and promote competition among workers.

Even in this area, German corporations, particularly in connection with ideas for work communities, depended on pre-war traditions and experience wherein the German Technical Training Institute (Dinta) promoted the spread of corporate newsletters. However, in the 1950s, most wartime and post-war magazines that had previously suspended publication had begun anew, and German corporations aligned themselves with US models. At this time, the means of disseminating internal management information became more diverse, and some

corporations used periodically published notices, informational pamphlets, a few even using video in addition to labor discussions, retraining seminars, and newsletters [6].

This approach applied HR theory more broadly for an ideological and psychological impact. Unlike previous methods, its use was intended to affect workers, their families, and their surroundings in every aspect of life. Rationalization, new technology related to the productivity movement, increased labor intensity, threat of mass layoffs, and the resulting stronger pressure on wages were all veiled within HR [26].

Among these efforts, at least a few elements of the American model were adopted by German corporations. They affected communication between lower-level supervisors, such as foremen and supervisors, and employees, as well as information structures and labor climates within corporations. The knowledge and actions of those implementing the American model for labor relations simultaneously reproduced a corporate structure in the context of German legal regulations, modifying the original model. Thus, the American model of HR complemented the formation of labor relations within German corporations [6].

Limitations of human relations deployment and their factors

HR deployment, as shown above, had a great impact on the labor climate in German corporations as well as in labor relations. However, in the areas of technology and production, there was a strong trend in favor of the American model, and while from the early 1950s onward US know-how was broadly introduced into Germany, the opposite was true of HR's introduction regarding the amount of emphasis placed on discussing and implementing HR themes. In actuality, because of the attitudes of employees and their representatives, discussions on codetermination beginning at the end of the 1940s, and societal and managerial traditions in German labor relations, only a minuscule fraction of the American HR model ended up being implemented in German corporations. C. Kleinschmidt attributed the utter failure of German corporations in implementing American HR and labor relations strategies to the realities of German management in the 1950s [6]. In a 1958 report of observations of Europe, two Japanese persons observed that the basic policy of activities included in the theme of "human beings and labor" was expressed in a foreign language as "human relations," but noted that this was not necessarily suitable to the US method [28].

Many cases of great resistance by both corporations and labor against deployment of HR are recorded. For example, at Bayer, certain board members and personnel in the engineering department resisted having foremen education courses because they felt it unnecessary. Until the 1960s, most board members of large corporations in the German chemical industry had a different mindset from HR, and chemists were a primary example of those who distanced themselves from HR. Technical departments were particularly skeptical of combining human resources and welfare departments because of the common disputes over authority, making it necessary to separate the technical departments from HR; these attitudes were in resistance to HR. Similar opposition could be seen in other corporations, and there was resistance from employee representatives and labor unions. Codetermination was also an issue in which German and US traditions and influence played a role [6]. However, in the 1950s, education initiatives for foremen were undertaken in which debates ensued amongst the participants; among the educational courses were lectures, film screenings, and exchange of information and

experiences. One of the important topics raised in these debates was personnel management issues concerning foremen and subordinates [29-33].

Original management models, such as the Harzburg model, also exerted a strong influence. In contrast to the authoritarian management style, this model proposed delegating not just labor but authority and responsibility of everything related to the work in an effort to greatly lighten the load of those in various management positions [34]. Many corporations found this model attractive; after the 1950s and 1960s, it was widely adopted in Germany [6].

Further, because HR methodologies were promoted with the US intent for labor relations reform in mind, they met with strong skepticism and opposition in Germany. In the US, various efforts to increase productivity through technical assistance were closely linked with labor relations initiatives in promoting HR and TWI, and HR plans within German corporations were a significant part of comprehensive political objectives, or "missions" [7]. For those reasons, the Germans' skepticism and opposition were naturally severe.

Great changes to the labor relations framework arising from the Codetermination Act inhibited the spread of HR. Although German businessmen had an interest in management models for direct communication between management and employees as a "management partnership," labor relations were actually shaped by the strong influence of legal regulations and state intervention. These cultural and political differences between the US and Germany underpinned the extraordinary differences in labor relations [6].

For large German corporations, the codetermination debate was particularly heated in the early 1950s, when it was thought that US development would provide an attractive alternative to the German model for labor relations, which was based on the strength of labor unions. However, within the areas of TWI and "foreman training" or "worker conferences," the 1951 Montan Codetermination Act and the 1952 Works Constitution Act impeded a broader adaptation of American-style HR. The 1951 Montan Codetermination Act and the 1952 Works Constitution Act prescribed the rights of worker's participation in the supervisory board. The latter also provided the rights of worker's participation at the plant level through the works council. These two laws are characteristic of the failed attempts to create labor relations in German corporations along the lines of those in the US. Instead, a German model for labor relations was created, based on legal regulations and rooted in the traditions of corporatism, with labor unions being an integral part and labor relations embedded therein. This model recognized far greater rights of codetermination than the American model in employee education, remuneration, labor safety, and various other issues of corporate social policies (Betriebliche Sozialpolitik). As a result, attempts to adopt Americanization in HR steadily decreased in German corporations from 1955 onward. This new framework for labor relations in Germany, based on the restraint imposed by labor unions and codetermination rights, became a meaningful alternative to the American model.

Thus, we see that German corporations' deployment of HR did not lead to widespread adoption even as a labor relations model. In 1963, Hartmann noted that HR, after being imported into Germany as a trendy strategy in the early 1950s, lost its luster and was seen simply as an almost unimportable product of US economic culture [2]. By the end of the 1950s, the post-war craze for new values and a society

modeled upon the US abated. Many of the efforts to deploy these reforms disappeared, HR being a prime example [35].

Hence, the deployment of HR in corporations first concentrated on various issues that could not be automatically solved by legal regulations or formal regulations of codetermination. Such niche operations occurred in relations between foremen and subordinates, and improvement of “human relations” and the “labor climate” were the issues at hand [6]. These attempts to apply HR at the corporate level, where management cooperation and discussions of codetermination were more critical, were limited, and even for the German personnel system, the use of partial knowledge from HR schools of thought was selective at best [10].

As the above-mentioned observations regarding HR deployment reveal, these HR management methodologies and the labor relations activities based on them were set against the background of the historically powerful, pragmatic management culture of the US, whether in the practical application of management principles like “efficiency improvement” or corporate activity mechanisms, or within the labor climate. Thus, management methodologies and practices that place the highest value on the principle of “efficiency improvement” were not necessarily appropriate for Germany. This is because of management philosophies on personnel composition issues, with managers generally coming from technical fields, as well as German management traditions in and the resulting emphasis on technology and quality. Further, because of the US’ strong political motive of labor relations reform, the push for deployment and transfer of HR were not at all aligned with Germany’s conditions for acceptance. In post-war Germany, labor relations derived not from management methodologies as in the US, but rather from systems embedded in the law. This point is deeply connected to post-war German capitalism, as can be seen in the phrases “Rhineland model of capitalism” and “coordinated market economy” [36,37].

Deployment of American Management Education

Next, we consider the deployment of American-style management education. We discuss American initiatives in transforming management education and the role of German universities within the education, in the below Management education reform and American initiatives and role of German universities in Management Education and their limitations, respectively. We also consider the deployment of American methods for top management education and TWI, in the below Deployment of American methods for top management education and Deployment of TWI, respectively. Furthermore, in the below Limitations in the deployment of American-style management education and their factors, we clarify the various factors that defined that state of affairs.

Management education reform and American initiatives

First, we examine American initiatives in management education reforms. The process of exporting American-style methods in this field to Western Europe [5] followed three steps: (1) creation of the US Technical Assistance & Productivity Program (USTA&P); (2) combination of American universities and European management reforms; and (3) internationalization of American-style management education. The USTA&P was initiated to directly place American technology specialists and management consultants in corporations interested in implementing management and production reforms; they also provided factory observation opportunities and retraining

seminars. Moreover, until business schools similar to those in America were established in Western Europe, programs run by productivity centers in each country, along with the USTA&P, played the important role of providing education. To combine American universities and European management innovations, the USTA&P constantly collaborated with American colleges and universities that were interested in providing management education courses for visiting teams, in response to the increasing numbers of managers in Europe. American universities played a decisive role in providing organization and support for TWI programs. The USTA&P’s programs for management education dramatically increased contact between American and European students and scholars. Since 1958, these programs opened paths to continually disseminate management knowledge through universities and corporations. The remarkable growth of foreign students in America further internationalized American-style management education. Beginning in the 1960s, Europe became the center of academic exchange between America and foreign countries [38].

The American perception of conditions at the time was that European executives were resistant to constructive changes, unaware of their roles in providing long-term planning, and tended to participate in many day-to-day activities of the corporation; thus, changing their attitudes was considered imperative [39]. In such an environment, USTA&P’s aim was to implement an American model of management research and executive and managerial training for European professors and universities [40]. USTA&P was initiated to promote effective communication between leading industrialists and executives in America and Europe, in alliance with business associations, employer associations, and employer organizations, such as the National Management Council (NMC) and the National Association of Manufacturers (NAM) in America, through workshops and seminars conducted in collaboration with several prominent universities in America [40,41]. For example, in the early 1950s, proper management education programs were conducted within the USTA&P framework in cooperation with the International Chamber of Commerce, OEEC, the European Productivity Agency (EPA), and each country’s productivity center. Executives representing leading corporations such as Eastman Kodak, P&G, Ford, DuPont, and GE, as well as those from NMC, various universities, and research organizations participated in the program [6]. The transfer of the American model into Germany was considered for executive education and retraining projects, with the assistance of the Mutual Security Agency (MSA) and Foreign Operations Administration (FOA). The MSA had already planned to create a management education center by 1953 [6].

From Germany’s viewpoint, intensive research focusing on management education began between 1949 and 1950 in groups of delegations sent to America [42]. Several special delegations for technical assistance planning in the 1950s considered education in this field as one reason for the American economy’s superiority [43]. This perspective provides the background for Germany’s deployment of American-style methods.

Thus, although the initiative shown by America was important, American support for the EPA diminished after 1956; thereafter, the Ford Foundation increased its involvement [44]. This foundation had since the early 1950s been involved in the organizational and financial aspects of management education in Europe and, through the proliferation of focused education and research programs, had worked as a cultural intermediary in efforts to standardize management

education and professional requirements. The primary goal of the Ford Foundation was to transfer the basics of America's "organizational synthesis" into Europe, rather than export educational curricula and programs [45].

Role of German universities in management education and their limitations

We have shown that America's initiatives in transforming post-war management education were significant. In the 1950s and 1960s, the transfer of American-style management education into Europe varied greatly by country, and no country remained unaffected by it [46]. This level of influence owes a great deal to traditional management education within German universities.

Viewed historically, there are three different models for management education systems: German, Latin, and American. Management education in the German model was conducted outside universities in one of two higher education institutions, the engineering college and the commercial college. In the Latin model used in France, Italy, and Spain, while overall education focused on law, economics, and organization management, micro aspects such as schools providing opportunities to systematically learn business management were neglected. The American model of management education, however, was set up from the beginning as an element of the overall system of higher education. The emphasis was on actual decision making in market conditions, and business schools played an important role. The response to and absorption of American thinking into management education was primarily dependent on that country's education system [46].

In terms of education systems, German universities focused on academic research rather than specialized education. The differences between the Germans, who emphasized theory and science, and the Americans, with their tendency toward pragmatism, impeded the deployment of American-style methods in German universities. In the German system, a person's compensation and promotion were determined by the type of school from which he/she graduated. Also, Germany had two qualification categories: "capable of work" ("Berufsfähig"), obtained from educational institutions, and "ready for work" ("Betriebsfertig"), obtained during on-the-job training (OJT). Since business managers believed in the core pragmatic values provided during OJT, they could apply only limited pressure to modernize curricula [46]. Efforts to change this style of education faced stiff opposition from within schools, who rejected replacing theory with practicality [47].

In Germany, there are two types of college. The one is "commercial college" and the other is "engineering college". The Fachhochschulen in Germany are colleges which are educational facilities for higher education in the special region of science. The Handelshochschulen are "commercial colleges". However, German commercial colleges had not attained the status of providers of basic, broadly shared education for executives, as did American business schools. This more narrowly focused perception developed because the education obtained in German engineering colleges was recognized by manufacturing executives. Since Germany's commercial colleges concentrated primarily on business economics rather than management, unlike American MBA programs, it was not considered a tool for nurturing executives. In the American model education aimed at management development, which differentiated between education for operational functions and that for management functions. In general, it was highly

unusual for engineers in America to fill important executive roles [48]. On this point, the American-style method regarding the function of management was not conducive to the German environment, where those with an engineering background were often leaders.

In addition, as observed in disputes concerning business administration methods, business economics needed to become a scholarly endeavor to be recognized as an academic field in universities. Furthermore, in choosing to either become pragmatically useful in management practice or maintain the traditional methods, standards of theoretical science or elements of a scientific nature inevitably received priority. In such an environment, the relationship between higher education and management practice was always tenuous. To complicate matters further, the difficult postdoctoral thesis, required to be promoted to a research professor in a university, along with the long research program it entailed, reduced any possibility of long-term work experience before becoming a professor. As a result, academicians with a high level of scholarly ability, but no actual experience in management were promoted to a professorship [47].

Against this background, industry voiced its demands for reforms in the university system. However, the traditional German university system remained largely intact after 1945, and the academic persona was even reinforced. As a result, the business world sought alternative solutions, the most powerful of which was the American model [43].

Deployment of American methods for top management education

Here, we examine the deployment of American-style management education methods in greater detail. First, we consider education and retraining for executives. German executives took a different path from that of America's, given the value Germans placed on acquiring what they considered to be executive attributes. They focused their studies on law, business economics, and, in particular, engineering, as they had done prior to entering the workforce, and their executive development education was primarily short training courses, wherein they researched specialized topics instead of general management issues [47,49]. Most of the content of American-style executive development programs was missing in German universities, and only a few had begun offering short-term seminars for executives in 1966; most of these followed American examples of education for top management. These courses, which reflected the demands of the business world in their non-traditional content and education methods as well as their pragmatic orientation, were held outside the university system. Their adherence to an outline dictated by industry was an important characteristic. Executive development programs supplemented university training as well as the in-house selection process of top management both within and outside of corporations [43]. For example, among the brief three- to five-day training courses held by various associations for incumbent executives, certain German university professors individually conducted retraining and re-education lectures in specialized areas in their spare time. However, most lecturers were incumbent executives themselves, and this sort of retraining was different from the American model in that they conducted lectures outside of academia [47]. Documentation for a 1956 technical assistance project mentioned that, though top management education in America was predominant within universities, such type of education in Germany was conducted outside of universities [50].

In this manner, private corporations and industrial associations took the initiative in advancing management education. Efforts by industrial associations included two management debates held in Baden-Baden in 1951 and 1952, and Baden-Baden seminars from 1955, and activities of the loosely aligned group known as the Wuppertal Circle [50-53]. The Baden-Baden seminars not only included debates to discuss American-style management methods and promote their introduction at an industry level but also provided as a forum for the exchange of ideas and theories on retraining and re-educating executives. They supplemented commercial colleges' educational offerings by building at least a partial bridge between academic and practical experience [6,52-54]. A working group established by the Federation of German Industries in 1953 reviewed many case studies from Harvard Business School and other international sources. However, the working group eventually chose not to imitate those case studies, deciding instead to work toward transmitting knowledge and developing methods unique to Germany through the exchange of ideas between two generations of top management [55]. Germany tended to establish formal programs for executive development within each industry. One important reason for this approach was that the true role of this type of training was to instill entrepreneurial spirit, attitudes, and values [35,56].

RKW was also involved in the deployment of methods for top management education. For example, in November 1953, 33 top executives from Berlin and their aides gathered in RKW's Berlin branch office to listen to and debate on American management consultants regarding "management development." Seeing this as an opportunity, a seven-week seminar was conducted. This event was in response to the need for better education for executives and managers in many organizations [57]. Consulting and intermediary institutions also participated; for example, Carl Duisberg-Gesellschaft, which was responsible for personnel development, developed a German-American exchange program in collaboration with Harvard Business School [58,59].

Along with these additional corporate efforts, in the 1950s, many German corporations began to institutionalize their management education [43]. Internal corporate education rose to a new level and was largely based on the American model. In addition to internal management seminars, wherein the American case method was used in discussions and debates, Bayer conducted staff training, in which board members shared their experiences with-in their area of expertise. However, it became clear in the mid-1960s that the business community's efforts and private initiatives, with their focus on the sharing of experiences and use of materials lacking in scientific methods, were insufficient. Thus, renewed interest arose in the establishment of business schools [6].

Germany's attempt to establish its first business school center, which followed the American model, failed due to the decentralized structure of its education system [6]. Nevertheless, the latter half of the 1960s finally saw a German business school established, and the Universitätsseminar der Wirtschaft's founding in 1968 also played an important role. However, other than the College for Business Management at Koblenz, the era had no other institutions of this sort [6,60].

The use of American education materials in courses designed for top management education in universities and specialized courses began in the 1960s and increased rapidly [1], however, business schools failed to become a ubiquitous phenomenon at that time. In Germany, the topics studied by executives at universities were neither

related to their being selected for promotion, nor was it important for their development. Executive selection remained traditionally grounded in actual experience and results, with most executives working at one company for long periods before being promoted to the top. These practices were an important factor in the strength of resistance to the American model and in delaying the introduction of business schools [43,61].

Deployment of TWI

Next, we examine the deployment of TWI. TWI education courses based on American education materials were useful intermediaries for promoting stability in industrial and labor relations with management, improving relationships between superiors and subordinates, guidance for subordinates, and work methods and technological knowledge [6].

Occupation authorities implemented TWI in Germany, organizing education courses for leaders of employee education in September 1948. Interest in the TWI program was heightened by many enthusiastic individuals, and the program spread further with the support of a few companies such as Bosch. It is important to note that these companies attempted to promote harmonious relationships in the workplace, and courses were conducted for both management and employee representatives. By mid-1953, 160 sessions of trainer education courses had been conducted, and about 80,000 individuals had participated in approximately 8,000 education courses [52].

Because American corporate involvement in the USTA&P management education project had ended, American universities began cooperating to pick up the slack [40], and in 1951, American universities began organizing and conducting TWI programs. University participation played a decisive role in the USTA&P campaign to improve management education and support management retraining in postwar Europe [40]. Further, with the support of this program, thousands of European scholars and executives gained the unparalleled opportunities of observing and learning at American universities and corporations. Upon their return, they brought back these American management techniques with them [40].

The RKW also contributed to management education and retraining by visiting America in response to an invite by American professionals [62-64] and conducting their own TWI education courses [65,66]. REFA also contributed to the implementation of TWI, and in 1954, incorporated TWI activities within its education programs [67,68]. Having REFA personnel engaged in the TWI program shows the extent of REFA's public involvement in education [69]. The long-term cooperation between REFA and TWI also demonstrates how highly TWI education material was valued in the development of REFA employees [70].

In this historical context, when we explore TWI implementation in detail, we find three TWI courses held by the chemical industrial firm, Henkel, during work hours: job instruction, labor relations, and job design (or job improvement). Among those, job design was the most intensive, and these courses were used for the first time in 1964 within the framework of in-company retraining [71,72]. Bayer had also implemented TWI courses in 1950. The purpose of the TWI system was to simply and quickly train employees and make supervisors, particularly foremen and gang bosses, proficient in appropriately and humanely managing employees [73,74]. In addition to the educational purposes of the system, Bayer also emphasized the importance of methods for creating and maintaining good relationships with those in

the factory [73]. Thereafter, TWI was developed to cover human relations problems in depth. TWI participants agreed that leadership and involvement by those in personnel management are crucial for good management, and that TWI is an effective way to develop this leadership [74].

Similar programs on issues of human relationships and in-company retraining of middle management were undertaken at Glanzstoff, Volkswagen, Bahlsen, Continental, and other corporations. The American influence was clearly evident in TWI courses and foreman training courses, implemented during the 1950s. Beginning in the latter half of the 1950s, the foreman training and retraining courses used by these corporations were different in both form and content compared with their pre-war equivalents [6].

The severe shortage of young managers in the 1950s led to the idea of adopting American methods for the systematic training of managers. R. Meine, head of human resources at Siemens, sought to strengthen the continuous education program and work training based on the American model, and concentrate all of Siemens' education activities. In 1956, Siemens began preparatory management training for young employees and managers. In 1959, they began week-long master classes, with the objective of providing advanced instruction to lower and middle management [42]. The textile manufacturer Spinnerei und Weberei Offenburg AG had no formal training program until 1954, when they began exploring the use of the TWI program [75].

Limitations in the deployment of American-Style management education and their factors

On the basis of the aforementioned considerations, we next examine the various factors that restricted the deployment of American-style methods in management education.

The TWI program was first seen in supervisor and foreman education, and emphasized methods for better communication that could improve the labor climate by implementing more effective information policies. However, TWI was often met with a lukewarm reception [6]. It originated in America, and never took hold as firmly as it did in Germany. Although it was tailored to the German environment, the number of TWI programs implemented under the USTA&P in Germany was clearly lower than in other European countries. West Germany held only 134 TWI courses from the fall of 1948 (in the western region) to the summer of 1952, whereas the Netherlands for instance held more than 6,000 courses and the UK more than 30,000 in the same period. The TWI courses had relatively few participants from German corporations [6] and institutions such as business schools, which supported executive development effectively in America, did not gain popularity and were not Americanized. At the time, individual organizations conducting retraining and re-education for German executives and managers remained separated, and saw limited change. The elements that did change were the types of retraining and the content within corporations. For example, week-long or several-week seminars were held for specialists and operational personnel in middle and upper management to learn about and discuss the latest American-style management methods [6].

As we examine the relationship with America from the European perspective, we notice that, for example, the EPA's improvements to management education were not an American product, but were an adaptation and fusion of European methods. B. Boel points out that

“even in the 1950s, US-European relations in the field of management education were not a one-way affair” [44]. The overall influence of the American drive for management education in Europe was determined by a complex matrix of several factors. Amidst this, progress was particularly dependent on each program's effectiveness and the amount of resistance from executives and educators [76].

The effects of attempting to transfer and implement the American model of management education into Europe during the period of the Marshall Plan and the productivity movement, apart from a few exceptions, were very modest. Converting traditional forms and replacing them with modern management education methods took another decade, and the impact of this process was smallest in German-speaking nations [46]. The direct transfer of programs from the American model, such as TWI and top management education, was also unsuccessful in German corporations because of their traditional views on managerial social policies. Within the field of management education, American development aid also had relatively little effect [6]. As C. Kleinschmidt noted, when compared with American and Western European expansion, education and retraining for German executives and managers adhered to a “special path.” This “German stubbornness” is the primary cause of the poor acceptance of the American-style business school model, its low probability of adoption, and the total emphasis on theory rather than practical work in the commercial colleges' economics-focused education. It has been proposed that the German's chosen path could even be seen as a German model, an alternative to American-style management [6].

These observations elucidate that the American style was not always appropriate, given the nature of extant education systems and traditions, such as the role universities play within management education, the education and characteristics sought in executives, corporate promotion systems, and executives' internal labor markets arising from them. Based on this point, management values and a management climate emphasizing technology and with a relatively long-term perspective was already well-rooted in Germany even after the war. They functioned counter to a personnel policy, thoroughly grounded in a doctrine of efficiency that reflected management values and a management climate based on American pragmatism. Even in the face of strong American influence, the German system could not be transformed overnight. The most important factor behind changes to management education and executive management education was the country's overall education system and the strength of its management education system, along with cultural factors such as management styles and traditions for learning that could transcend national borders [48].

Through the reproduction of management values and business culture based on the exchange of ideas between different generations of top management and the companies' internal promotion systems, the modified management education in Germany has built the foundation of business strategies and the mode of corporate behavior emphasizing on technology and quality which are compatible with market structure in Europe. Thus, it has helped overall success of Germany in the global economy, particularly in the European markets that emphasize technology, quality, and functionality. However, in the 1990s, executive and manager development and education found in American-style business schools have attained unprecedented importance. The problem then arises that the global competition and market principles beginning in the 1990s, wrought dramatic changes to the conditions that supported German management values and management styles, causing a resurgence of Americanization.

Conclusion

We discussed the deployment of human relations and American management education and their influence on business management in Germany. On the basis of the aforementioned considerations, we next present conclusion of this paper.

There were many aspects of American-style management that did not necessarily conform at the time to the conditions in Germany. These included productive forces as well as conditional and environmental factors that supported market adaptation measures, in particular, aspects with American characteristics, such as the culture and relationships shared among labor and management, value for management, management style, and management tradition/culture. Therefore, in many cases, there was strong resistance and opposition that prevented the introduction of these aspects, and it was only possible to introduce them by modifying them in the process. These problems were most prominent in the areas of human relations and management education, which together were the most emphasized in America to transfer to the European countries under the productivity movement.

There were certain limitations in adaptation, and hence Germany did not completely adapt the American management model. While modifying the American management model to accord with the circumstances in the country, Germans developed their own style of management that had specific developmental characteristics. A mixed form was created due to the hybridization of the American and German management practices and factors, and by the late 1960s to the early 1970s, it was no longer possible to draw fine distinctions between aspects that were originally German and those that were foreign. This was because American management practices had been widely absorbed into German companies' thinking and behavior [6].

In relation to the aspect of hybridization and considering the discussion results in this paper, there was a mix between American orientation of corporate personnel policies and social policies introduced by human relations with the German orientation of the prewar works community philosophy. Management education fostered manifestations of fusions, such as that in the transfer of knowledge and exchange of opinions between different generations and the network of managers centered in business and industrial associations, using of American educational materials and methods.

The important aspect concerning these types of traditions, values and cultural factors of German business management is the influence of management values that emphasize technology, quality, and production. This type of management orientation is observed in a high proportion of engineers, who are also directors and managers, and in individuals at relatively high positions within their respective companies. In addition, their designations and size of roles regulate the methods of German-style management. In Germany, knowledge, skills, and expertise related to production are emphasized; there are many engineers who have higher levels of expertise and more vocational qualifications than other professional managers. Management values and this type of thinking, which emphasize technology, support the important role of engineers in industrial management. The philosophy of emphasizing technology also affects the disposition of typical German companies in general, and is related to top management ideas concerning goals and the methods for achieving them [77].

The impact of this situation can be seen in the introduction of many management methods and values. For example, American pragmatic

management forms the background for the introduction of management methods such those in human relations and industrial relations. This method emphasizes the management principle of "increased efficiency" in corporate behavior mechanisms for management practices and the labor environment. Hence, there were certain aspects of the various types of American measures that were strongly incompatible with German traditions and management values, emphasizing technology, quality, and production, as well as with managerial philosophy related to personnel structure, populated by managers with technological backgrounds.

A look at the introduction of management education methods also reveals that methods such as TWI were unsuccessful due to the tradition of the German companies' managerial social policy and actual management behavior; this was because the education methods were not necessarily compatible with German management values and personnel philosophy. In Germany, management values and culture with long-term orientation and emphasis on technology existed, and differed from the management values based on the American vogue of pragmatism, reflected in radical "efficiency-first principle" personnel policies. Even under strong American influence, these German management values and culture could not be reversed immediately.

Examining the institutional factors impacting the German-style of adaption in the process of Americanization, we first see that aspects of industrial relations were an important issue. The deep-rooted differences between the United States and Europe in terms of understanding and implementing working participation in the management process were one of the hindrances in the Americanization of European economic life [46]. In Germany, the legally prescribed co-determination system was one of the most important factors. The labor agreement that was complementary with co-determination at the plant and top management levels formed the framework of industrial relations during the post-WWII period. Thus, the politically motivated attempt by America to promote the introduction of HR to transform industrial relations was unsuccessful. The traditional German-style industrial relations, emphasizing technology and skills, was an important background factor in the quest to design a method compatible with the German adaptation of American management style and system. This can be said to have had a strong influence on the view of management of companies as well as the issues of management, in general, based on the "efficiency principle."

One of the institutional factors that impacted the Americanization process after WWII was the education system. The traditions and nature of the German university educational system tended to focus on the reasoning and understanding of the topics and exerted great influence on management education. The institutional characteristics of these German universities played a major role in the introduction of a more practical American-style management education method.

Looking at the context of market structure characteristics, the labor market structure characteristic is influenced by labor market factors, such as talents needed by the managers and directors and the companies' internal promotion systems. Hence American-style business schools for management development training were incompatible within German. These labor market characteristics became the factors defining German-style management training. In addition, the structure of commodity markets and consumer behavior emphasizing technology, quality, and functionality in Europe became the factors fostering top management education based on the network of managers.

References

1. Dyas GR, Thanheiser HT (1976) *The Emerging European Enterprise. Strategy and Structure in French and German Industry*. The Macmillan Press, London.
2. Hartmann H (1963) *Amerikanische Firmen in Deutschland*. Westdeutsche Verlag, Köln, Opladen.
3. Siemens Archiv Akten, 64/Lt350, Betriebstechnische Tagung 1958, 10 Jahre Aufbau — Rückblick und Vorschau.
4. Der Arbeitgeber (1950) "Human relations" in der deutschen Wirtschaft. *Der Arbeitgeber* 10: 12-13.
5. Takagi K (1962) *Nishi Yoroppa ni okeru Seisansei Undo (The Productivity Movement in Western Europe)*. Nihon Seisansei Honbu, Tokyo.
6. Kleinschmidt C (2002) *Der produktive Blick. Wahrnehmung amerikanischer und japanischer Management- und Produktionsmethoden durch deutsche Unternehmer 1950-1985*. Akademie Verlag, Berlin.
7. Kleinschmidt C (2004) *America and the Resurgence of the German Chemical and Rubber Industry after the Second World War*. Hüls, Glanzstoff and Continental. In: Kudo A, Kipping M, Schröter HG (eds) *German and Japanese Business in the Boom Years. Transforming American Management and Technology Models*. Routledge, London, New York, pp 161-174.
8. Lawrence P (1980) *Managers and Management in West Germany*. Croom Helm, London.
9. National Archives, RG469, Mission to Germany, Labor Advisor, Subject Files, 1952-54, A Letter about Human Relations Seminar to Mr. C. Mahhder (3.2. 1954).
10. Hilger S (2004) "Amerikanisierung" deutscher Unternehmen, Wettbewerbsstrategien und Unternehmenspolitik bei Henkel, Siemens und Daimler-Benz (1945/49-1975). Franz Steiner Verlag, Stuttgart.
11. Wiesen SJ (2001) *West German Industry and the Challenge of Nazi Past, 1945-1955*. The University of North Carolina Press, Chapel Hill.
12. Bundesarchiv Koblenz, B102/37023, Management Development and Human Relations. OEEC- EPZ-Projekte im Rahmen der Technischen Hilfeleistung (8.3.1955).
13. Bundesarchiv Koblenz, B393/ 17, Xth Interational Management Congress. In: *Manageme Methods of Improving Human Relations*, Sao Paulo, 1954.
14. National Archives, RG469, Off African & European Operations Regional Organizations Staff. European Productivity Agency (EPA) Project File, 1950-57, Productivity and Applied Research Committee. Human Relations in Industry. E.P.A. Project No.312 (28.12.1954).
15. National Archives, RG469, Off African & European Operations Regional Organizations Staff. European Productivity Agency (EPA) Project File, 1950-57, Productivity and Applied Research Committee, Human Relations in Industry, E.P.A. Project No.312 (26.10.1955).
16. RKW (1953) *Produktivität in USA. Eine Eindrücke einer deutschen Studiengruppe von einer Reise durch USA (RKW-Auslandsdienst, Heft 20)*. C. Hanser, München.
17. Bramesfeld E, Herwig B, Honnacker A (1956) *Human Relations in Industrie. Die menschlichen Beziehungen in der Industrie. Beobachtungeneiner deutschen Studiengruppe in USA (RKW-Auslandsdienst, Heft 41)*. C. Hanser, München.
18. Siemens Archiv Akten, 12799, "Human Relations" im Haus Siemens (22.1.1952).
19. Siemens Archiv Akten, 12799, "Human Relations" (25.2.1952).
20. Siemens Archiv Akten, 12799, Human Relations (16.11.1953).
21. Siemens Archiv Akten, 12799, Bericht Nr.2 über die Besprechung zwischen WL ZEL Berlin und BR ZEL am 30.9.53 (27.10.1953).
22. Siemens Archiv Akten, 12799, Rationalisierung als betriebspsychologische Aufgabe (Januar 1952).
23. National Archives, RG469, Off African & European Operations Regional Organizations Staff. European Productivity Agency (EPA) Project File, 1950-57, Human Relations in Industry. E.P.A. Project No.312, Stage A Florence Discussions (21.3.1955).
24. Pirker T, Braun S, Lutz B (1955) *Arbeiter Management Mitbestimmung. Ein industriesoziologische Untersuchung der Struktur, der Organisation und des Verhaltens der Arbeiterbelegschaften in Werken der deutschen Eisen- und Stahlindustrie, für das Mitbestimmungsgesetz gilt*. Ring-Verlag, Stuttgart, Düsseldorf.
25. Bundesvereinigung der Deutschen Arbeitgeberverbände (1957) *Jahresbericht. BDA, Köln*.
26. Kauders M (1960) *Westdeutsche Werkzeitungen und ihre Rolle als Instrument zur Verarbeitung der "Human Relations" in den Monopolbetrieben nach 1945*. *Jahrbuch für Wirtschaftsgeschichte*. 1960 II : S.9-46.
27. Neugebauer A (1997) *Etablierung der Sachzwänge. Werkzeitschrift und soziale Wirklichkeit nach dem Zweiten Weltkrieg*. In: Heyl B, Neugebauer A (Hrsg) *ohne Rücksicht auf die Verhältniss Opel zwischen Weltwirtschaftkrise und Wiederaufbau*. Brandes & Aspel, Frankfurt am Main, S.195-216.
28. Osikawa I, Takagi K (1959) *Yorropa Seisansei Tsushin (European Productivity Report)*. Nihon Seisansei Honbu, Tokyo
29. Bayer Archiv, 221/6, Meisterarbeitsgemeinschaft (25.6.1956).
30. Bayer Archiv, 221/6, Auswertung der Ergebnisse der Zweiten Meisterarbeitsgemeinschaft (20.7.1956).
31. Bayer Archiv, 221/6, Meisterarbeitsgemeinschaft (5.9.1955).
32. Bayer Archiv, 221/6, Meisterausbildung (9.7.1953).
33. Bayer Archiv, 329/737, Die Schrift von Sozial- und Personal Abteilung an Zwiste am 1.Dezember 1954.
34. Obst P (1970) *Das "Harzburger Modell" in organisatorischer Sicht*. *Zeitschrift für Organisation* 39: 80-82.
35. Hartmann H (1959) *Authority and Organization in German Management*. Princeton University Press, Princeton, N. J.
36. Albert M (2001) *Capitalisme contre Capitalisme*. Ed. du Seuil, Paris.
37. Hall PA, Soskice D (eds) (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press, Oxford.
38. McGlade J (1998) *The Big Push: The Export of American Business Education to West Europe after the Second World War*. In: Engwall L, Zamagni V (eds) *Management Education in Historical Perspective*, Manchester University Press, Manchester.
39. OEEC (1954) *Problems of Business Management. American Opinion, European Opinion (Technical Assistance Mission, No.129)*. OEEC, Paris.
40. McGlade J (1998) *The US Technical Assistance and Productivity Program and the Education of Western European Managers, 1948-58*. In: Gourvish TR, Tiratsoo N (eds) *Missionaries and Managers: American Influences on European Management Education, 1945-60*. Manchester University Press, Manchester, New York.
41. McGlade J (1998) *From Business Reform Program to Production Drive. The Transformation of US Technical Assistance to West Europe*. In: Kipping M, Bjarnar O (eds) *The Americanization of European Business. The Marshall Plan and the Transfer of US Management Models*. Routledge, London, New York.
42. Feldenkirchen W (2004) *The Americanization of the German Electrical Industry after 1945. Siemens as a Case Study*. In: Kudo A, Kipping M, Schröter HG (eds) *German and Japanese Business in the Boom Years. Transforming American Management and Technology Models*. Routledge, London, New York.
43. Kipping M (1998) *The Hidden Business School: Management Training in Germany since 1945*. In: Engwall L, Zamagni V (eds) *Management Education in Historical Perspective*, Manchester University Press, Manchester.
44. Boel B (1998) *The European Productivity Agency and the Development of Management Education in Western Europe in the 1950s*. In: Gourvish T, Tiratsoo N (eds) *Missionaries and Managers: American Influences on*

- European Management Education, 1945-60. Manchester University Press, Manchester, New York.
45. Gemelli G (1996) American Influence on European Management Education. The Role of the Ford Foundation. In: Amdam RP (ed) Management, Education and Competitiveness. Europe, Japan and the United States. Routledge, London, New York.
 46. Schröter HG (2005) Americanization of the European Economy. A Compact Survey of American Economic Influence in Europe since the 1880s. Springer, Dordrecht.
 47. Locke RR (1996) The Collapse of the American Management Mystique. Oxford University Press, New York.
 48. Amdam RP (1996) Introduction. In: Amdam RP (ed) Management, Education and Competitiveness. Europe, Japan and the United States. Routledge, London, New York.
 49. Locke RR (1989) Management and Higher Education since 1940. The Influences of America and Japan on West Germany, Great Britain, and France. Cambridge University Press, Cambridge, New York.
 50. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, Projekt 329/1 — 329/4: Ausbildung von deutschen Lehrkräften auf dem Gebiet der Betriebsführung in USA (24.11.1956).
 51. Förderung des Unternehmensnachwuchses. Jahresbericht des Bundesverbandes der Deutschen Industrie 1. Mai 1954-30. April 1955, Köln, 1955: S.99-103.
 52. Förderung des industriellen Führungsnachwuchses. Jahresbericht des Bundesverbandes der Deutschen Industrie 1. Mai 1955-30. April 1956, Köln, 1956: 86-88.
 53. Die Förderung des industriellen Führungsnachwuchses. Jahresbericht des Bundesverbandes der Deutschen Industrie 1. Mai 1958-30. April 1959, Köln, 1959: 85-87.
 54. Kleinschmidt C (1998) An Americanized Company in Germany. The Vereinigte Glanzstoff Fabriken AG in the 1950s. In: Kipping M, Bjarnar (eds) The Americanization of European Business. The Marshall Plan and the Transfer of US Management Models, Routledge, London.
 55. Kipping M (2004) 'Importing' American Ideas to West Germany, 1940s to 1970s. In: Kudo A, Kipping M, Schröter HG (eds), German and Japanese Business in the Boom Years. Transforming American Management and Technology Models. Routledge, London, New York.
 56. Granick D (1962) The European Executive. Weidenfeld & Nicolson, London.
 57. National Archives, RG469, Mission to Germany, Labor Advisor, Subject Files, 1952-1954, Field Statistics, Management Development in Berlin.
 58. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division Subject Files of the Chief, 1953-1956, Carl Duisberg-Gesellschaft für Nachwuchsförderung e.V., Halbjahresbericht der Geschäftsleitung für die Zeit vom 1. April bis 30. November 1955.
 59. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, A Letter from Carl Duisberg-Gesellschaft für Nachwuchsförderung e.V.
 60. European School of Management and Technology (2009) USW Netzwerk 30.
 61. Jahre-Managerfortbildung in Schloss Gracht. <http://www.esmt.org/deu/usw.-netzwerk-30-jahre-Managerfortbildung-in-schloss-gracht/>. Accessed 3 June 2009 (Accessed 3 June 2009).
 62. Engwall L, Zamagni V (1998) Introduction. In: Engwall L, Zamagni V (eds) Management Education in Historical Perspective, Manchester University Press, Manchester.
 63. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, Council for International Progress in Management (USA), Inc (11.12.1953).
 64. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, TA09-217, Program for the TA-B-Project 09-217 Top Management.
 65. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, Berlin Top Management Team (7.10.1953).
 66. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, Durchführung des TA-B-Projetes 09-216 Management Training.
 67. National Archives, RG469, Mission to Germany, Productivity and Technical Assistance Division, Subject Files of the Chief, 1953-1956, Management Program for Berlin Management Training Team (22.6.1953).
 68. Pechhold E (1974) 50 Jahre REFA. Beuth, Berlin, Köln, Frankfurt am Main.
 69. REFA-Nachrichten (1954) 30 Jahre REFA. Vortrag von Herrn Min. -Dir. i. R. Dr. Kurt Magnus auf der Mitglieder-Versammlung in Bad Dürkheim. REFA-Nachrichten 7: 73-76.
 70. REFA-Nachrichten (1955) Zur Übernahme der deutschen TWI-Arbeit durch den REFA. REFA Nachrichten 8: 16.
 71. Jaeckel B (1961) 10 Jahre REFA-Bundesverband. REFA-Nachrichten 14: 221-226.
 72. Henkel Archiv, K160, Betriebliche Ausbildungs- und Bildungsarbeit (5.7.1960).
 73. Henkel Archiv, K160, Niederschrift über die Meisterbesprechung Nr.11 vom 17.11.64.
 74. Bayer Archiv, 210-001, TWI (Training within Industry)-System.
 75. Bayer Archiv, 221/6, TWI (Training within Industry)-Kursus.
 76. National Archives, RG469, Productivity & Technical Assit Division Labor Advisor Subject Files 1952-54, TA-Work, Labor and Human Relations Survey Report for Spinnere und Webrei Offenburg A.G. (3.3.1954).
 77. Gourvish T, Tiratsoo N (1998) Missionaries and Managers: An Introduction. In: Gourvish T, Tiratsoo N (eds) Missionaries and Managers: American Influences on European Management Education, 1945-60. Manchester University Press, Manchester, New York.