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Opportunities and Obstacles: Schering AG as Historical Subject

> In any culture, a deep structure of beliefs is the invisible hand that regulates economic activity. These cultural preferences, or values, are the bedrock of national identity and the source of economic strengths – and weaknesses.
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> Charles Hampden-Turner and Fons Trompenaars, *The Seven Cultures of Capitalism*

This is the story of the first hundred years of Schering AG, a well-known German pharmaceutical company with a leading position in hormone therapy and diagnostic imagery. I have chosen to cover the period from 1851 to 1950 in large part because it is the formative period of most multinational businesses and because many business economists, who make generalizations about commercial activity, tend to be less familiar with the pre-Bretton Woods – nearly all of my period – history of business. Although a large literature has developed around the effect of national cultures on business innovation and productivity, unfortunately, some works in this area ignore the turbulent pre-World War II period, as well as the political implications of different national systems of business. This work is designed not only as a detailed analysis of the mechanisms and results of change within one important German company, but also, as the title implies, to set those changes in the context of the conflicting demands made on Schering by the increase in national passions, during this period, set against international business imperatives, and of the special culture of German capitalism, which helped shape Schering's responses to these challenges.[1]

[1] Although this issue and approach in economic thinking goes back at least as far as Adam Smith and Ricardo, the late 1980s and 1990s witnessed a marked increase in the number and breadth of works dealing historically with wealth formation, competitiveness, and innovation among nations. See Michael Porter, *The Competitive Advantages of Nations* (New York: Free Press, 1990) and David S. Landes, *The Wealth and Poverty of Nations* (New York: Norton, 1998) to name a just few. Two relatively recent texts, *The Economics of Industrial Innovation* by Chris Freeman and Luc Soete (Cambridge, MA: MIT Press, 1997) and *National Innovation Systems: A Comparative Analysis*, Richard Nelson, ed. (Oxford: Oxford University Press, 1993), have shown the usefulness of a historical, comparative approach to innovation theory but have little to say about how firms apply different approaches and how the firms themselves interact with their political and social environments, as well as other firms. For more firm specific analyses, see Johann Peter Murmann's dissertation, "Knowledge

The focus of this book, however, is the first half of the twentieth century. There are many reasons for this choice. Many of the most important organizational and strategic issues, which are commonplace today, burst onto the business scene or came into prominence during the first half of the twentieth century. Contemporary business is hard to imagine without the great weight of financial markets, the importance of in-house research, the development of interconnected international subsidiaries, international strategic alliances, mass markets sustained by mass media, multidivisional corporate structures, and extensive political risk – including the clash of national and international orientations – all of which increased in importance after World War I, but which are rarely studied in their historical perspective.[2] Moreover, as business institutions became more complex around the end of the nineteenth century, there was a marked increase in the number and quality of documents relevant to any work that seeks to answer how and why business decisions were made.

Founded in the mid-nineteenth century, Schering, like many German chemical companies, was active on international markets long before the terms "globalization" and "transnational firm" were in fashion. Before World War I, Schering operated three production facilities outside of Germany, sold its products through a network of forty foreign agents in North America, Europe, and Asia, and was highly dependent on foreign raw materials for its key products. Today over 80 percent of its sales and nearly 60 percent its workforce is outside of Germany. Its president, through virtually the whole period during which this book was conceived and written, was Italian.

But by recent standards it is a small global player even in the pharmaceutical industry. With sales in 1999 of Euro 3.7 billion and profits of nearly Euro 300 million, it ranks as Germany's twenty-second largest manufacturing

and Competitive Advantage," (New York: Columbia University, 1998), and Wolfgang Wimmer's dissertation, "Gesundheitswesen and Innovation der Pharma-Industrie in Deutschland, 1880–1935" (Freie Universität Berlin, 1993). Wimmer's work, which deals with the development of Bayer, Hoechst, and Schering's research capacity, was particularly helpful to this book by showing some of the limits of Schering's research activities compared with those of its larger rivals.

2 For a fuller discussion of the role of nationalism and international in forming both business dilemmas and strategies in the last 100 years, see Christopher Kobrak, "Zwischen Nationalismus und Internationalismus: Globalisierung und Unternehmenskultur aus historischer Sicht," in *Deutsche Unternehmer in der Welt* (Frankfurter Allegemeine and Gesellschaft für Unternehmensgeschichte, 2000). Raymond Vernon was one of the first post-World War II authors to highlight the conflict between national goals and international business in several works, for example, *Storm over Multinationals* (Cambridge, MA: Harvard University Press, 1977). These conflicts played a role, however, in earlier works, including several involving Germany, for example, Robert Brady, *The Rationalization Movement in German Industry* (Berkeley: University of California, 1933). Interestingly, in economic literature country-risk analysis has been very narrowly defined. In some recent works, the conflicts between nations and their impact on business play no role whatsoever.

company; it is barely on the list of the world's top twenty pharmaceutical companies. Hardly a household name outside of Germany, even though some of its products dominate their space in critical healthcare areas, its market capitalization of Euro 10 billion is less than one-tenth of pharmaceutical giants, such as Merck and Pfizer, and less than one-third of its former American subsidiary, Schering-Plough.[3] Some symbols of the New Economy such as Microsoft and Cisco, not even one-tenth of Schering's age, have over ten times its market capitalization.

Nevertheless, Schering is a remarkable company deserving of study for several reasons. In the pre-new-economy world, when consistency and longevity seemed to count for more, Schering was a model of both. During the first 100 years of its existence as a public company, it failed to turn a profit in only five years and most of those fell during and just after World War II. Despite the losses suffered in both world wars, however, Schering was able within several years to restore its domestic and international businesses with less stain to its reputation after World War II than many other Germany companies. As a leader in the chemical industry, one of the first knowledge-based industries, it played an important part in an earlier "new economy," enjoying substantial growth over decades.

Schering evolved with its business environment. It began its history as a small pharmacy. Through most of its history, it was a middle-size company (*Mittelstand*), but during the interwar years it was part of a large coal and coal-residue processing company. Schering's size and transformations allows a researcher not only to look more closely at a *Mittelstand* company so vital to the German economy, but also to trace how companies matured and adapted to earlier commercial revolutions.[4]

But that evolution creates methodological difficulties. At times it is not even clear where the corporation begins and ends, who is inside and who is outside. As Mira Wilkens has argued, "how to define the firm" is not as evident as one might think.[5] In the 100 years of this study, Schering operated under four names and for fifteen years was part of a larger holding company, most of whose business was in the processing and distributing of coal, coke,

3 Market values determined as of July 19, 2002.

4 Some recent studies indicate that small- and medium-sized (*Mittelstand*) companies were much more important to the German economy than hitherto thought. See Gary Herrigel, *Industrial Constructions: The Sources of German Industrial Power* (Cambridge: Cambridge University Press, 1996). Even on the eve of World War II, German industry, in one sense, was much more fragmented than its rivals in other countries. In 1937, the largest twenty-five companies in Germany only accounted for 9.6 percent of the gross national product, compared with 19.5 percent in the United States and 21.8 percent in Britain. C.J. Schmitz, *The Growth of Big Business in the United States and Western Europe, 1850–1939* (Cambridge: Cambridge University Press, 1993), 27.

5 Mira Wilkins, "Defining a Firm: History and Theory," in *Multinationals: Theory and History*, Peter Hertner and Geoffrey Jones, eds. (Dorset: Blackmore Press, 1986), 80.

and their by-products. For many of those years its sales and profitability growth seemed to out shine significantly that of its parent's, though these results were obscured by arcane accounting statements. Within fifty years of the founding of Ernst Schering's small Berlin pharmacy, the *Grüne Apotheke* – which continued to operate as a pharmacy even after manufacturing was split off – his successors were realizing half their sales outside Germany and were operating facilities in two foreign countries. Schering was merged twice with other companies, and participated in numerous joint ventures, partnerships, "communities of interest" (*Interessengemeinschaften*), and was a member of many cartels.

Schering's history highlights, therefore, what Geoffrey Jones calls the dynamic, "cumulative process" of multinational development, which can only be understood by examining the history of how those companies "established their leading positions in world industries many decades ago, and retained them despite the challenges posed by technology, social, political, and other changes."[6]

Schering's current managers are understandably proud of the company's leading role in German industrial organizations, new products, and product categories, and the internationalization of the entire chemical industry in the nineteenth and twentieth centuries. Schering's history has helped inspire and reinforce many of the company's most enduring corporate values such as its commitment to quality, technical innovation, and internationalism. But Schering's history, like that of Germany's, is a mixture of great triumph and failure. Schering came into existence in a world that favored technical innovation and international dependencies. Like many companies, it was reluctant to change its ways of doing business and its product lines when many of the fundamental assumptions of that world disintegrated. A lot of scholarly interest has been focused recently on how favorable macroeconomic and political factors can enhance industrial growth and innovation; much less attention has been paid to the effects of a deterioration in corporate environments.[7] While Schering relied less than some other German companies on group approaches to common industrial problems, many of its strategic decisions emanated out of the habit of wanting to preserve outmoded business forms by coordinating production and marketing structures with other companies, which often hid rather than resolved internal inefficiencies. As in other areas of life, attachment to the past may contribute to a reluctance to jettison old business forms and habits.

The story of Schering, then, is intertwined with Germany's history and culture. Commercial activity is not isolated from general historical events or the national and international milieus in which it operates. How Schering

[6] Geoffrey Jones, *The Evolution of International Business* (London: Routledge, 1996), 1.

[7] See Porter, *The Competitive Advantages of Nations* (New York: Free Press, 1990) and *Chemicals and Long-Term Economic Growth: Insights from the Chemical Industry*, Ashish Arora, Ralph Landau, and Nathan Rosenberg, eds. (New York: Wiley & Sons, 1998).

evolved from a tiny pharmacy to a multinational company in very different political and economic regimes is complex, almost unintelligible without an understanding of the world in which Schering operated – its nation, the international community, its industry, and other companies. As Wilhelm Treue put it, the entrepreneur lives in the present, but he is constantly grappling with how to cope with a future he can only divine. His achievements are the result of his capacity to understand the demands of the present, while forging innovative responses to an unknown future. His assessment of the present and future is formed not only by the underlying logic of industrial enterprise but also by personal factors, and by his national culture and history.[8]

Central to that history was the tension between nationalism and internationalism. Schering's early business in the nineteenth century thrived on the strengths of German culture and the strong commitment to internationalism shared by most governments. Likewise, Schering was unable to find a profitable antidote to the growing nationalism of its own and other countries coupled with the economic necessity to market its products and to source raw materials from all over the world.

Schering's history is also the history of the attitudes of individuals and the codes of institutions that make up the governance structures of German companies. That system of corporate governance and the economic system in which Schering operated shaped, in large part, the alternatives and strategies of all, as we say in modern parlance, Schering's stakeholders. This study suggests that Germany's "cooperative capitalism," while creating much needed stability at times, also slowed the combining of businesses, exiting of unprofitable undertakings, and, above all, creating managerial capacities that have been one of the hallmarks and principal strengths of big business. After its acquisition in 1922 by a coal and coke company, moreover, Schering's history began to reflect many of the problems and priorities of heavy industry in Germany. During the interwar period, Schering operated in an economic system associated with concentrated shareholdings, principally large banks, and large, capital-intensive firms, many of whose businesses were far less international and dynamic than Schering's. Many questions persist regarding the nature and efficiency of the German corporate governance system and the degree of influence that system had on smaller firms. If Schering's progress in adapting to changing markets and competitive conditions, despite its size, sector, and cosmopolitanism, was also greatly influenced by a corporate system arising out of heavy industry, then this would suggest that Germany's system of industrial organization was broader and deeper than some have thought.

Despite its ties to heavy industry, Schering's history is first and foremost about the men and women, products and production, and research and development of the chemical industry. Schering's industrial sector, chemicals,

[8] Wilhelm Treue,"Der Unternehmer und seine Biographie," *Unternehmens- und Unternehmergeschichte aus fünf Jahrzehten*, Hans Pohl, ed. (Stuttgart: Steiner Verlag, 1989).

particularly pharmaceuticals, is especially interesting, because of its dynamic growth and importance to Germany's and the world's economy. From the mid-nineteenth century to the present, pharmaceutical production has been transformed from a business of small shopkeepers to one dominated by huge multinational enterprises. The chemical industry is now the second largest manufacturing sector in Europe and the largest in the United States. It was the first high-technology, science-based industry.[9] Many of its technical developments stimulated growth in other industries. Its size and economics encouraged early international commitments and diversification. Schering shared in and profited from this spectacular growth in consumer demand and the internationalization of business, which have played such an important role in the history of this century.

Most of what we know about German industry during the period, especially the chemical industry, comes from larger firms, notably IG Farben. Through most of its history, Schering has had to tread gingerly in a world dominated by much larger, more powerful institutions.[10] In the 1920s, Schering was the largest chemical company to remain outside the IG Farben organization. Its history, therefore, may serve as an interesting comparison with and contrast to its larger rival, who by the end of World War II was viewed by many as a mere appendage of the German government. In short, enlarging the typology of firms studied may help determine the consistency of the experiences and attitudes of German industrialists.

Its location in Berlin also favors Schering as a topic. Berlin served as a micro-environment for much of Schering's history. As the new capital of a newly reunited Germany, Berlin once again enjoys the ambiguous distinction of its symbolic and real linkage with the German past. Schering's relationship to Berlin affords an opportunity to link the general with the particular in the city that served as focal point and symbol of Germany's coming of age in the mid-nineteenth century. It was in Berlin where many of the challenges and contradictions of Germany's new industrial power and autocratic history were played out. Though steeped in both commerce and war making, Berlin was also a locus of academic excellence. In Berlin, as one author put it, "the opportunities seemed limitless and the optimism was intoxicating as the city became the showcase of the new energetic German state."[11] Berlin was also a center of antimodernism and anti-internationalism. Some of Schering's decisions and behavior are best understood in light of Berlin's ambiance and ambivalence about old and new as well as nationalism and internationalism. "*Aus Berlin in alle Welt*," the title of its own company history from 1945

[9] See Preface in *Chemicals and Long-term Economic Growth: Insights from the Chemical Industry*, ed. 3.

[10] IG Farben regretted, for example, that it had not swallowed up Schering. See Friedrich Glum, *Zwischen Wissenschaft, Wirtschaft und Politik* (Bohn: H. Bourvier, 1964), 278.

[11] Alexandra Richie, *Faust's Metropolis* (New York: Caroll & Graf, 1998), 188.

to the present, was more for Schering than just a slogan hung at the exit of Tegel Airport. It encapsulates in many ways the delicate balance between national and international orientations that was so important to Schering's history and that of many other German companies.

An underlying premise of this book is that many of the "historical" issues and patterns of response addressed here are still significant aspects of the business landscape. While in many circles our time period is ripe with faith in internationalism, the critics of capitalism and globalization are probably even more vocal today than they were before World War I. Companies are still wrestling with political risks and how best to balance national perspectives with globalization. They are still grappling with those who view globalization as a threat to individual liberty, national identity, and humanistic values. The steady erosion of the world economic and political order, which began in the late-nineteenth century, formed the single greatest strategic dilemma for businesses such as Schering who were active in world markets. The loss of consensus among nations about the value of and how to preserve international connections added complexity and cost to doing business, for which Schering's management never found a satisfactory remedy.

With the transformation of its environment, Schering's business became increasingly dominated by two conflicting phenomena: the increasing power of national governments and the increasing economic benefits of international expansion.[12] The drama caused by the tension of these two forces is the most important contextual backdrop for Schering's history.

Schering's response to these demands was shaped, in large part, by Germany's business system and culture. The German system of corporate governance, as it is often called – the attitudes, institutions, and rules by which business's overall goals are determined and by which corporations are controlled – has been the subject of much discussion for nearly 100 years. Many authors have praised Germany's "organized capitalism" or "cooperative managerial capitalism" for its ability to encourage innovation and funnel resources efficiently into productive assets.[13] The institutional structures of German capitalism – such as the separation of management (inside) and supervisory (outside) boards (*Vorstand* and *Aufsichtsrat*); large, concentrated shareholdings; strong industry organizations and cartels; worker participation in strategic decisions (*Mitbestimmung*); and close government-business

[12] Much recent management literature has focused on national competitive advantage. The obstacles to development posed by national governments to a firms' ability to profit from standardization of tastes and reduction of communication and transportation costs as well as reductions in statutory and nonstatutory barriers to trade are less well developed. They are, however, receiving more attention in some economic literature. See essays by John Dunning and John Stopford in *Governments, Globalization, and International Business*, John Dunning, ed. (Oxford: Oxford University Press, 1997).

[13] See Kocka and Chandler in *Managerial Hierarchies*, Alfred Chandler and Herman Daems, eds. (Cambridge, MA: Harvard University Press, 1980).

cooperation – are thought to be a reflection of a corporate culture that prefers both stability and a balance among the interests of the firm's multiple stakeholders rather than exclusively aimed at maximizing shareholder wealth.[14] This ostensibly safeguards social values and limits the arbitrary power of managers and shareholders, while at the same time reducing monitoring costs and encouraging the long-term commitments necessary for technical innovation,[15] which is thought to be particularly important for German companies whose success depends greatly on "the ability to create advanced and specialized factor conditions" such as a highly educated, skilled, motivated workforce as well as effective research and development facilities.[16]

This study is intended to make a contribution to the literature about the German style of management by showing in detail how that system functioned and influenced one company. It suggests, in contrast to the widely held view, that the elements of German corporate governance had little to do with Schering's greatest successes and, indeed, may have hindered its effective response to the growing demands of nationalism and internationalism. Schering's history suggests that some of the elements of Germany's corporate governance system broke down under the strains following World War I and may be, in general, better suited to periods when companies need to maintain stable relationships as opposed to those when dramatic and rapid change is required.

As economic and political conditions deteriorated in Germany, Schering's dependence on some of the key aspects of German corporate governance also increased. But instead of allocating more resources to areas in which they would be most economically productive, much of Schering's energy and resources were thrown into "socially desirable" projects and futile attempts to save industries and products in which neither Germany nor Schering could compete on an international scale. Faced with the choice of greater international interdependence or national independence, those guiding Schering's

[14] Throughout this text, I will continue to use many German words for these institutions, for which there is often only a rough or cumbersome translation.

[15] See Albert O. Hirschman, *Exit, Voice, and Loyalty* (Cambridge, MA: Harvard University Press, 1970), who distinguished between systems in which *voice* and *exit* are used to resolve conflicts. *Voice*, for him, is the network of direct contacts that encourages change instead of escape from relationships. These systems are also characterized by a high degree of *trust*, rich and diverse arrangements with a strong moral content that allow for long-term commitment as a means of resolving conflicts. See also Mark Casson, *The Economics of Business Culture* (Oxford: Clarendon Press, 1991) pp. 1–9.

Hirschman himself warned, however, that in all systems there is a danger that the strengths of the system may be used to protect the short-term interests of managers, "to entrench themselves and to enhance their freedom to act as they wish, unmolested"... producing a self-serving oligarchy. He does not discuss, however, how historical circumstances may help or hinder this entrenchment (Hirschman, 93).

[16] Martin Wedge and Dirk Holtbrueggs, "Germany," in *Governments, Globalization, and International Business*.

governance opted for the latter. Just as Germany desperately needed to eliminate overcapacity in some areas and invest in new, profitable technologies, its system of corporate governance favored investments designed to further national independence in strategic industrial areas.[17]

The story of Schering and its sister companies after World War I indicates that Germany's objective economic problems were compounded by a combination of adverse economic and political circumstances, exacerbated by Germany's corporate governance system. The institutions most associated with the strengths of German corporate governance neither functioned as intended nor grasped the urgency of the economic and political situation, which demanded a rapid redeployment of resources into productive investments. Many of Germany's business leaders concentrated on production innovation, neglecting equally import innovations in management and corporate restructuring. They seemed to ignore many of the opportunities to extract more value from their technologies by refocusing their businesses and extracting cost efficiencies through internalization. As Mark Roe posed the dilemma, "Technologies establish the frontier of what the firm can do; management determines how close the firm gets to that frontier."[18]

Many analyses of Germany's business dilemmas after World War I have been too narrowly focused. By and large, they address higher labor costs and debt structure of businesses. This study shows that many other costs and risks of doing business also increased substantially at Schering, calling for aggressive adaptation and new approaches to business. Old, economically weak investments needed pruning. Like many others, those responsible for Schering's business were too concerned with preserving outmoded organizational habits, standards of economic achievement, and too sympathetic with often-futile attempts to control rather than to adapt to market changes. German business needed, in short, to "exit," unprofitable activities and enterprises.[19] Many significant changes were delayed because of a lack of acceptance within the firm of economic imperatives – the "creative destruction of capitalism," as Schumpeter put it – which, in turn, increased

[17] For the general problematic, see Carl-Ludwig Holtfrerich et al., eds., *Die Deutsche Inflation "1914–1923": Ursachen und Folgen in Internationaler Perspective* (Berlin: W. de Gruyter, 1980); Harold James, *The German Slump* (Oxford: Clarendon Press, 1986); Barry Eichengreen, *Elusive Stability: Essays in the History of International Finance, 1919–1939* (Cambridge, MA: Cambridge University Press, 1990); Knut Borchardt, *Perspectives on Modern German Economic History and Policy* (Cambridge: Cambridge University Press, 1991); Gerald D. Feldman, *The Great Disorder* (Oxford: Oxford University Press, 1993); Theo Balderston, *The Origins and Course of the German Economic Crisis* (Berlin: Maude & Spener, 1993); and Charles Feinstein et al., *The European Economy Between the Wars* (Oxford: Oxford University Press, 1995).

[18] Mark J. Roe, Preface in *Strong Managers, Weak Owners: The Political Roots of American Corporate Governance* (Princeton: Princeton University Press, 1994).

[19] See Michael Jensen, "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems," *Journal of Finance* XLVIII, no.3 (July 1993).

social conflict and external pressures. As Harold James wrote of German business as a whole, "The major changes in business behavior were forced on business by exogenous political considerations."[20]

While the close relationship of corporate stakeholders may allow for reduction of some costs by smoothing friction and maintaining stability, it may also discourage certain kinds of innovation. The history of Schering indicates that the culture of German capitalism, Schering's "network of relationships," had some hidden costs. Between the wars, those charged with the governance of Schering were neither particularly adroit in controlling management in the name of shareholders nor in resolving conflicts with other stakeholders. As conditions deteriorated, many of the demands that were made in the name of "trust" flew in the face of economic reality. Too many new partners from outside of the network were required for traditional norms to apply. A business culture that relies on trust may impede certain sorts of new relationships. Trust is easier to achieve in the confines of a common national culture and set of values. It is harder, almost by definition, to trust outsiders.

Despite a reputation for ruthlessness in some circles, moreover, the trust of German business verged on naïveté. Schering's history suggests that much of the rationalization of the twenties was merely coordination of activities among separate businesses, the repeated failures of which were ignored in the vain hope that the problems, such as higher labor cost, would just go away. Business's "craving for stability" was so strong that demand was often expected to follow passively decisions about what and how much should be "rationally" produced, and that workers and many other institutions would freely give up their individual economic interests in the name of some vague sense of community. As Ralf Dahrendorf put it, "There are traces everywhere of the deep aversion of all participants in industry to conflict, and the untiring search for ultimate solutions. Industrial democracy in Germany has always been the search for an industrial utopia."[21]

Those who praise the advantages of Germany's "cooperative managerial capitalism" tend to ignore its political dimension. The attitudes prevalent in German business circles did not make businessmen natural Nazis, but their penchant for harmony and order may have contributed to unwanted and unintended political consequences. The history of Schering confirms that the structural weaknesses in the German economy coupled with the manner in

[20] Harold James, *The German Slump*, 188. This is not to say that many other countries and non-German businesses did not do their share to undermine the reestablishment of a stable international order after World War I. American protectionism, excessive English pride in the pound leading to its early overvaluation, and French desire for revenge all helped create enormous obstacles to the world's and Germany's economic recovery.

[21] Ralf Dahrendorf, *Society and Democracy in Germany* (New York: Anchor Books, 1969), 161.