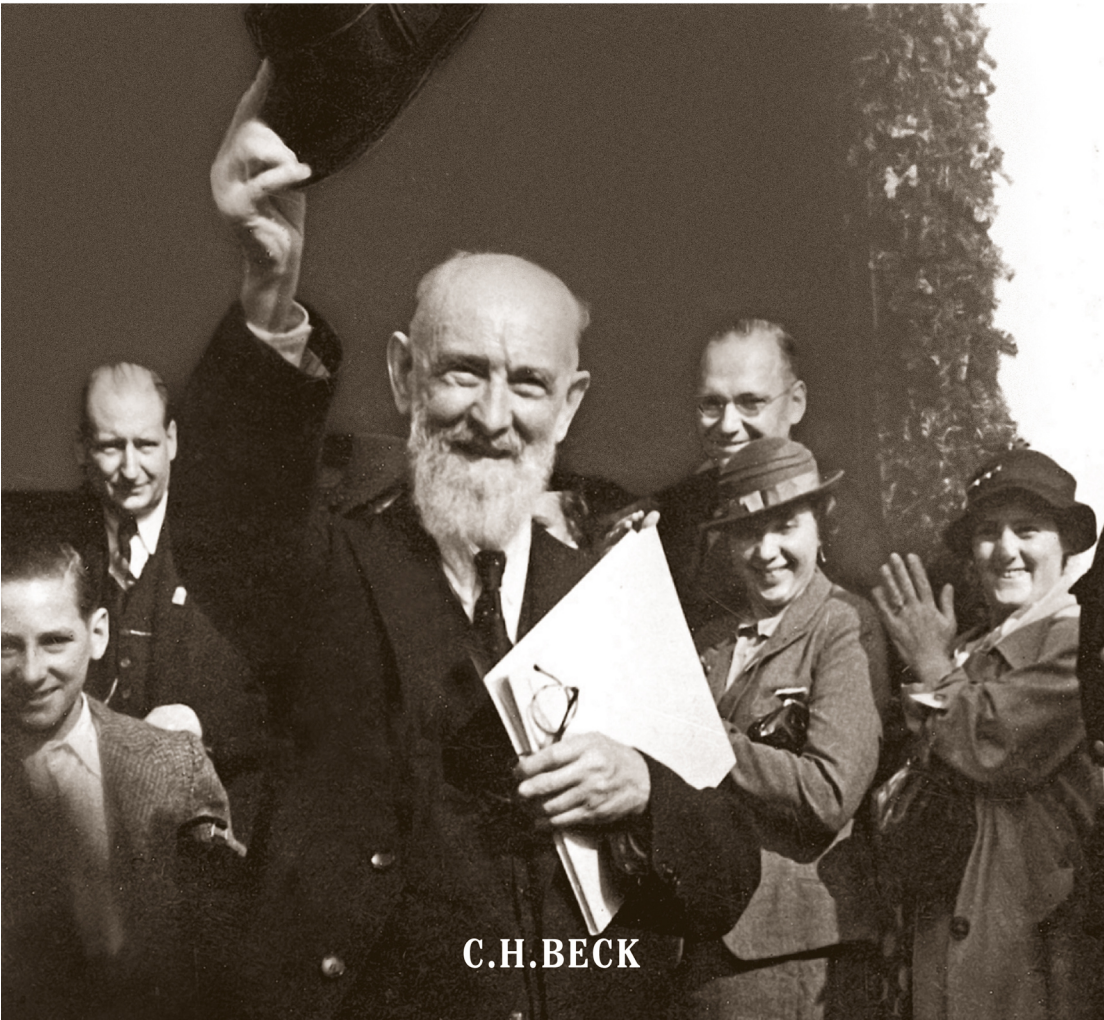
JOHANNES BÄHR PAUL ERKER

BOSCH

HISTORY OF A GLOBAL ENTERPRISE



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BOSCH

History of a Global Enterprise

Translated by J. A. Underwood

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Introduction

On July 10, 1996, Hans L. Merkle sent a memorandum to Hermann Scholl, the chairman of the Bosch board of management, and to Marcus Bierich, the chairman of the industrial trust Robert Bosch Industrietreuhand KG. Merkle was alarmed by an article about Bosch that had appeared in a recent issue of the German business weekly *Wirtschaftswoche*. In the memorandum, Merkle drew attention to obvious factual errors, for example the suggestion that the foundation Robert Bosch Stiftung GmbH somehow "oversaw" the company's affairs. More importantly, however, he warned of possible consequences that "might arise from claims by heirs of Robert Bosch" and that "threaten our [corporate] constitution. I would see a comparable risk in the proposed scholarly appraisal of our company's history."[1] At the time, of course, Merkle had long since retired from all his executive positions at Bosch, but as honorary chairman he still wielded considerable influence. His memorandum alludes to two cardinal areas of corporate history – problem areas which had remained largely taboo, though they had no bearing on what had long been seen as the dubious role played by the company in National Socialist Germany. The first of these concerned the distribution of voting rights between management and the Bosch family, culminating in the establishment of a new, foundation-based Bosch constitution and the 1964 reformulation of the "Bosch basic law." The second was the importance of Robert Bosch Industrietreuhand KG. This was the real center of power, direction, and control at Bosch, one which had emerged from the group of executors installed by Robert Bosch to manage his estate. The doubts and misgivings expressed by Merkle in his memorandum were the main reason why, during Merkle's lifetime, despite numerous false starts and notwithstanding all potentially fitting occasions arising from company-internal anniversary celebrations, no source-based corporate history of Bosch had ever been published. Even after his death, all efforts in this direction had failed – for a wide variety of reasons. No fault attaches to the successors of Robert Bosch. The members of the family had been pressing for such a publication for years.[2]

So it is by no means a matter of course that a Bosch corporate history has now been published – and here the 125th anniversary celebrated in 2011 was in fact more occasion than actual cause. The cause lies in a recent opening up of

the company under the leadership of Hermann Scholl and Franz Fehrenbach, as well as in the express readiness of the most senior Bosch executives to subject themselves to the complex and – for them – often difficult task of having a source-based analysis and evaluation conducted by business historians from outside the company. As it happened, the anniversary gave rise not only to an official general history of the company compiled by staff at Bosch Historical Communications to mark 125 years of the company's existence,[3] but also to the present analysis compiled by independent business historians, now published quite some time after the company's milestone anniversary. For the first time, this analysis goes beyond the period from 1886 to 1945, which for all intents and purposes has already been examined, to look at developments up to and including the present. That said, it also brings to light new findings about the National Socialist era and places points of emphasis slightly differently than previous research has done. Naturally, the project has been accompanied by many consultations, debates, and informal discussions between the authors and members of Bosch management. The slant that such individuals have on the history of the company, the way they remember things – particularly when it comes to phases that they themselves crucially helped to shape – inevitably diverges in many respects from insights gained through external examination of documents. At all times, however, the principle of scholarly independence that governed the study was respected. The authors enjoyed unrestricted access to all relevant papers and files – not only in the Bosch Archives (unique in the quality and availability as well as in the sheer extent of its content) but also, in certain instances, in the management's own files. Here, the authors drew mainly on the minutes of meetings of the Bosch board of management and of the group of executors, as well as on those of subsequent meetings of the shareholders of Robert Bosch Industrietreuhand KG. In doing so, they gained insight into an area of Bosch history that for a long time, both outside and inside the company, was veiled in secrecy. In addition, they carried out supplementary research work in national and municipal archives and evaluated assorted accounts given by the people involved.

The study itself falls into four parts. The first two parts describe and analyze the beginnings and rise of Bosch up to 1914 as well as the company's progress in the Weimar Republic and the Third Reich. During these years, the company stood under the dominant leadership of its larger-than-life founder Robert Bosch, the entrepreneur who left such an indelible mark on the company. The second part, entitled "Bosch in the Third Reich," is a rather special case. Bosch was hugely important to the armaments industry during these years, and during the war the company became involved in using forced labor. At the same time, Bosch management tried to keep its distance from the National Social-

ists – to the point of backing the resistance movement against Hitler. However, in contrast to the study by Joachim Scholtyseck,[4] the present work highlights the ambivalence that was characteristic of Bosch, and which is manifested in a balancing act between compliance and opposition. In other words, it looks at the entire range of ways in which Bosch workers and managers reacted to the National Socialists. The subsequent period, following Robert Bosch's death in 1942, and particularly from the immediate postwar years to the early 1980s, is marked by processes of adaptation and transformation in an economic environment that swung repeatedly from boom to bust and back again. It constitutes a pivotal phase in Bosch history, one of decisive importance. This phase is the subject of the third part. During this period, management of the company passed into the hands of non-family members, and a new, foundation-based constitution was introduced. Both these things were carried out in a complex process of negotiation, against the background of the legacy handed down by the company founder. Finally, the fourth part examines the corporate policies and strategies formulated in response to the many challenges posed by globalization and the fundamental upheaval in customer-supplier relations that began in the early 1980s – challenges that still call for responses today. It is largely accidental that the four phases defined here broadly coincide with the terms of office served by the company's first four chairmen of the board of management. In any event, it has nothing to do with any methodological approach.

What this first truly complete history of the Bosch Group enables us to do is to compare the individual phases of the company's development over time. For many of the challenges of postwar history, one can find comparable phenomena in the 1920s and earlier – crises and diversification conflicts, attempts to achieve internationalization, arguments about legal forms and experiments in business organization, and efforts to use engineering expertise and high levels of research and development outlay to work on innovations and technological improvements in the fields of processes, products, and manufacturing. At all points across these decades, something akin to a strategic path providing Bosch management with crucial guidance can be seen. One of the aims of this study, therefore, is to reveal the long-term learning effects and experiential processes running through the history of the company – processes which, because they exist beyond the personal sphere and, indeed, are handed down from one generation to the next, might well be described as collective.

The common thread running through our study is woven from three main themes:

– *Corporate constitution, corporate leadership, and corporate principles.* What makes the history of Bosch special is the fact that it has for the most part been a privately owned family company. Even so, it is a company that, over

the years, has modified its corporate constitution several times. Starting as a sole proprietorship, in 1917 it became the stock corporation Robert Bosch AG, which in 1937 was transformed into the close corporation or private limited company Robert Bosch GmbH, eventually adopting a distinctive foundation-based solution in 1964. It is also in this context that the values and principles of the owners and managers of Bosch have to be discussed. In addition, the study focuses on the fundamental matter of corporate governance (the defining lines along which the company is organized and managed), the role of internal stakeholders (shareholders, associates), and issues relating to corporate financing and social benefits for the workforce.

- *Technical orientation and competitive structure*. From the outset, Bosch has been an innovation-driven engineering enterprise. In all phases of its history, the company has come up with groundbreaking developments and important technical changes; changes which have extended to manufacturing technology and production systems. As a result, the company has held a special competitive position – and this from the beginning of the twentieth century – as one of a bare handful of suppliers of choice for automotive technology and the original-equipment business.
- *Internationalization and globalization*. Bosch was represented outside Germany from an early stage, with 88 percent of its sales being generated outside Germany as early as 1913. This makes it all the more important to ask how the company managed to conquer markets outside Germany, to return to world markets after two world wars, and to cope with changing patterns of globalization over recent decades.

In addition to these main strands, the study deals with other themes:

- *Corporate strategies*. What plans were drawn up and what decisions were made that led not only to changes in production and competition structure but also to some companies being taken over and others sold? In the course of its history, Bosch has managed to navigate several key junctures of this sort – the decision, for example, to enter the household-appliances sector, or the sortie into communications technology, later abandoned.
- *Crises and crisis management*. The present study analyzes how Bosch has conducted itself in a number of economic crises, looking at the Great Depression of the 1930s and the slumps of the 1970s, 1990s, and the first decade of the new millennium. Particular attention is paid to the crises of 1926 and 1993, which the Bosch management boards of those years found especially traumatic.

In all this, our focus is not only on how decisions were made but also on processes of perception and negotiation. The latter may relate to internal struggles

for power between workforce and management or to wrangles about how to interpret the "constitutional principles" contained in Robert Bosch's will and set out in guidelines – wrangles first played out between family shareholders and the executors named by Robert Bosch himself, and later between the family and the select circle of independent businessmen appointed as shareholders of Robert Bosch Industrietreuhand KG. These processes were also evidenced in the way Bosch defined its future market and competitive positions, and in efforts within management to find the optimum growth and crisis strategies for the company. Viewed from outside in the mirror of documentation, the "Bosch world" often appears more sharply defined in this connection, but at the same time many facets remain concealed and can only be inferred – and then only in part – by speaking to those who were involved. However, what we want to show is not only how Robert Bosch practiced his own brand of business management and, later on, what made company headquarters at the Schillerhöhe tick. We also want to demonstrate how Bosch engineers and plant managers sought, in each of these different periods, to deal with the production problems facing them. It is extremely important in this regard that the wealth of options and the complexity of developments that were faced by all concerned should also be brought out in full. Many negotiations about investments or new orders ultimately came to nothing, collapsed, or dragged on interminably. If these developments are not reflected, corporate policy and corporate action will ultimately, in hindsight, assume a pleasing linearity, cohesion, and developmental logic that in historical terms they never in fact possessed. Seen in their proper historical perspective, processes of change within companies are far more complex, drawn out, and disjointed than they appear in the eyes of management today or were regarded by those in charge at the time.

Our concern, therefore, is to take a historico-critical approach to the "Bosch phenomenon," with the central question being: what has made this company so special and so unmistakable, even where the paths it took were by no means unusual? The answer must be sought in the specific manner in which decisions have been made and business operations have been run. In other words, it must be sought in corporate culture. This leads back to the founder, Robert Bosch, and his ubiquitous presence which continues even today, decades after his death. The power of his legacy has made itself felt not only in the annual remembrance of the anniversary of his birth and death, the celebrations to mark the day the company was founded, and the articles in the *Bosch-Zünder* containing his sayings and anecdotes about him. The way in which business operations are invariably governed by testamentary principles and directives – for instance, in connection with whether borrowed capital or pro-

jected partnerships are acceptable or not – likewise testifies to the enduring influence of the founder. Strict though the rules are that have been imposed by the "Bosch basic law" and the quasi-permanent "jurisdiction" of the executors of Robert Bosch and (later) the shareholders of Robert Bosch Industrietreuhand KG, at the same time the ruling doctrine has been one of a corporate culture that has foregone rigid rules and regulations and remained open to constant reform. Ultimately, therefore, the question around which our whole study revolves is this: how has Bosch mastered this ongoing, dual task of guarding its own identity and corporate culture while at the same time – indeed, with the very aid of this cultural grounding – remaining as far as possible ahead of the processes of economic and technological change?

Thanks are due in large measure to the skilled and tireless assistance of the Historical Communications team of Robert Bosch GmbH under the direction of Dr. Kathrin Fastnacht, with special mention going to Dieter Schmitt for helping us find our way through the vast store of the Bosch Archives. Thanks are also due to present and former members of the company's supervisory and management committees, as well as to the works council and to the members of the Bosch family, for their full and frank responses to our queries. The authors are grateful to J. A. Underwood for his translation of the revised edition, and to Philip Mann and Stephen Smith (Bosch Corporate Communications) for their editing of the manuscript. Our hope is that this study, rather than representing the last word on Bosch, marks the beginning of further detailed studies of the many aspects of Bosch history that could often only be touched on here.

I Early years and rise of the company (1886–1932)

1 Robert Bosch – portrait of a founder

Robert Bosch was born in Albeck, a village near Ulm in the Swabian Jura, on September 23, 1861. He was the eleventh of twelve children born to a couple who worked as innkeepers and farmers. Their inn, the "Gasthaus zur Krone" in Albeck, with its approximately 75 hectares of arable land and forest, had been in the Bosch family for several generations. Robert's father, Servatius Bosch, an educated, well-read man, was also a freemason and someone who held firm principles.[1] His mother, Maria Margaretha Bosch, *née* Dölle, came from an innkeeper family in nearby Jungingen, and despite her huge brood helped out tirelessly in the inn. The couple, while not being particularly rich, were very comfortably off.[2] Today we would say the parents belonged to the prosperous middle class.[3]

"We children were fond of our parents; they showed us understanding," Robert Bosch wrote in his 1921 "Memoirs."[4] In fact, the parental home exerted a stronger influence on him than might be assumed at first glance. His parents may not have been responsible for his fascination with electrical engineering and precision mechanics, but they did instill in him a head for business, a disciplined approach to work, and a love of farming. For Robert Bosch, his father was in many respects an exemplar. He grew up sharing his father's political stance, understanding of social affairs, and highly developed sense of justice. As a social-liberal democrat with a commitment to the "ideas of 1848," Servatius Bosch felt a deep aversion to Prussian militarism. In Albeck, he had a certain reputation as a stubborn opponent of the mayor. He is said to have taken matters into his own hands when a broom-maker was imprisoned on what he considered unjust grounds, freeing the man from his cell – which cost Servatius a two-month spell in the state penitentiary at Hohenasperg.[5] "Never forget your humanity, and respect human dignity in your dealings with others," was a motto that Robert Bosch ascribed not only to himself but also to his father.[6] Servatius Bosch was a member of the local railroad committee, from which we can infer that he took a forward-looking attitude toward the technological and industrial developments of the age. In 1867, the landlord of Albeck's "Zur Krone" is said to have visited the World Exhibition in Paris.[7] Robert Bosch was also shaped by the region into which he was born. To his dying day he saw himself as a *Schwabe*. "The Swabian," Theodor Bäuerle writes in his biography

of Robert Bosch, "was for him the epitome of the good German, the industrious worker, a pillar of German civilization."[8] Robert Bosch not only spoke the local dialect in the family and among friends and associates, he was also the living embodiment of several qualities often attributed to the Swabian: thoroughness, conscientiousness, dependability, and a certain mulish obstinacy.

In 1869, when Robert Bosch was just under eight years old, the family moved to Ulm. His father sold the house and land in Albeck, since none of the older sons wished to take over the inn. In addition, it was becoming apparent that the place was not going to lie on the new Ulm-Heidenheim railroad. In Ulm, Robert Bosch attended the *Realschule*, the secondary-technical school, while his parents now lived from private means.[9] Robert's brothers had in the meantime gone their own ways. The eldest, Jakob, became an innkeeper, taking over the "Adler" in Jungingen from his maternal grandfather.[10] His brother Karl, with whom Robert Bosch was subsequently on closer terms than with any of his other siblings, went into partnership with their sister Caroline's husband, Gustav Haag. Together they founded an installation business for gas and water appliances in Cologne. Karl's elder son Carl later became president of the board of IG Farben and in 1931 received the Nobel Prize for Chemistry. Carl's career filled Robert Bosch with pride that "the rustic farmland of the Ulm Jura has produced two men who are a glorious credit to the German nation."[11] Another brother, Albert, studied architecture, settled in Ulm in that profession, and worked as a stonemason at the minster there.[12]

Following his father's advice, having completed *Realschule*, Robert Bosch began an apprenticeship in precision mechanics – although at the time his interest lay more with the natural sciences.[13] During his three-year training under the Ulm mechanic and optician Wilhelm Maier, he made his first acquaintance with electrical apparatus. Later, he was to describe this apprenticeship as deeply disappointing. His master, he complained, had "not even encouraged learning."[14] The experience made a profound impression on him and was later to play a major role in shaping apprenticeship training at his own company.

His apprenticeship completed, the "years of travel" then customary for young journeymen began for Robert Bosch. Initially, he worked at his brother Karl's company in Cologne, where he also learned basic bookkeeping. He then moved to Stuttgart and joined C. & E. Fein, one of the earliest electrical engineering businesses to operate in the city. He did not stay for long there, either, switching to a jewelry workshop in Hanau that manufactured foxtail necklaces.[15] In the autumn of 1880, he entered military service with an engineering battalion in Ulm. One of his friends from this time, Eugen Kayser, subsequently became his brother-in-law, and later still a close colleague. At the end of his term of military service, Robert Bosch was given the chance of pursuing

Robert Bosch (1881)

an officer's career. However, he decided against it and instead resumed his "travel years," first taking a job at the Schuckert works in Nuremberg, then working for the mechanic Gottlob Schäffer in Göppingen. Clearly, Robert Bosch found it hard to make up his mind between precision mechanics and electrical engineering.[16] So he decided to enroll as an auditor at what would later become the Stuttgart Polytechnic in order to tackle the theoretical principles of electrical engineering.[17] After only one semester, he felt the urge to move on. In the spring of 1884, together with a friend from Ulm, his former fellow-apprentice Leonhard Köpf, he took ship for the United States. In retrospect, Robert Bosch wrote that he had embarked for America "partly to see the world but partly also because that country, the land of freedom, held a particular attraction for me. After all, by upbringing and after the example of my father and my elder brothers, I saw myself as a young democrat."[18]

On the basis of references he brought with him from Germany, Robert Bosch found employment in New York City as a technician at the company run by the German-American entrepreneur Sigmund Bergmann. Bergmann, an immigrant from Thuringia, had jointly developed the first light bulb with Thomas Edison in 1879. His business was a forerunner of the General Electric

Company, which Edison set up subsequently. In New York City, the young technician not only became acquainted with the world but also suffered the hardships of having a job with no security. As soon as the next slump arrived he was laid off, and although he quickly found a new position at the Edison Machine Works it was an experience that left its mark on him. Robert Bosch promptly joined a worker organization named the Knights of Labor and in a letter to his future wife, Anna Kayser, declared himself a socialist.[19] He was disillusioned with the "land of freedom" because, as he later wrote, "the cornerstone of justice was missing: equality before the law."[20]

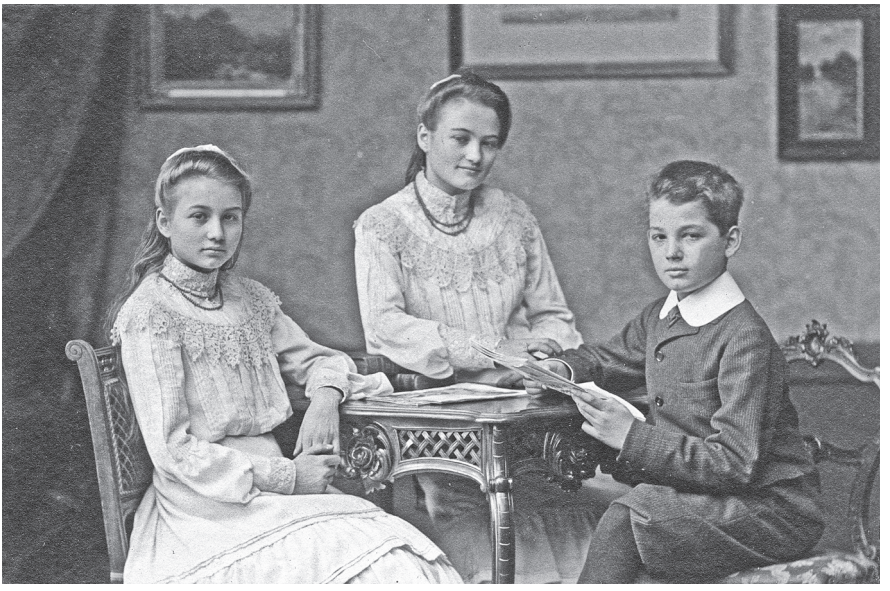
Following such disappointments, it was likely his engagement to Anna Kayser (which had ensued by correspondence) that persuaded him to leave the U.S. after only a year and return to Europe. Robert Bosch spent the first six months working for Siemens Brothers outside London, but at Christmas 1885 he went back to Germany and became officially engaged to marry Anna Kayser. She lived in Obertürkheim, just outside Stuttgart, so it made sense for him to move to the Stuttgart region. Before he finally settled there, Bosch worked for a few months for Buss, Sombart & Co., a gas-powered engine manufacturer in Magdeburg.[21] He was drawn to Stuttgart for personal reasons in the main, and not because the city was a particularly important industrial center (in fact, at the time it was by no means a big place). But after many "travel years," it is likely that Robert Bosch also felt the need to return to his Swabian homeland, and calculated that there were good career prospects for him in the Württemberg capital, with its roughly 130,000 inhabitants.

At the time when Robert Bosch settled in Stuttgart he was 25 years old. Seven years had passed since the completion of his apprenticeship – a lengthy total of "travel years," measured by the standards of the time. There is a strong sense that he did not find it easy to commit to a specific occupation. His letters, however, show that he had decided some time back to opt for self-employment, and now had personal reasons for taking the plunge. In Robert Bosch's view, setting up his own company would give him the kind of assured income that at the time was deemed essential for a man contemplating marriage. Sure enough, the business was launched in November 1886, and one year later the wedding took place. The young Mrs. Bosch, the daughter of a timber merchant in Obertürkheim, had almost as many brothers and sisters as her husband. And over the next seven years the couple had four children of their own: their daughters Margarete (born 1888) and Paula (b. 1889), a son Robert (b. 1891), and a further daughter, Elisabeth (b. 1893), who died prematurely. For a time the family lived in rented accommodation in the west end of Stuttgart, not far from the new company's workshop – on Schwabstraße, initially, then on Rotebühlstraße, then on Moltkestraße. For several years, the Bosch family were

Anna Kayser (1886)

neighbors of the Kautskys, with whom they became friends. Through Karl Kautsky, the leading contemporary theoretician of social democracy, they also came to know the emigrant Clara Zetkin, who worked under Kautsky as a journalist on the magazine *Die Neue Zeit*. The Social Democratic Party's celebrated "Erfurt Program" of 1890 is said to have been drawn up in the flat above the Bosch apartment at 145 Rotebühlstraße.[22]

As the business grew, Robert Bosch prospered, and in 1902 the family moved into a small detached town house. Eight years later, the entrepreneur built the rather more splendid villa on Heidehofstraße in eastern Stuttgart – a building that is today the head office of Robert Bosch Stiftung. Soon afterwards it emerged that the son, Robert, who was designated to succeed his father at the helm of the company, was incurably ill with multiple sclerosis. In 1913, he had to break off his studies at the Stuttgart Polytechnic, and from that time on he was an invalid in need of constant nursing.[23] Family life was overshadowed by the son's serious illness. In addition, there were clashes between Robert Bosch and his daughters, who had joined a left-wing socialist group. Paula Bosch, the younger daughter, began a relationship with the painter Georg Friedrich Zundel, who was married to Kautsky's former associate, Clara Zetkin. Zetkin hesitated for a long time before agreeing to a divorce, and the couple were not able to marry until 1926. The elder daughter, Margarete, studied political science at Tübingen University, receiving a doctorate in 1920.[24] Aged just 30, the son, Robert, died on April 6, 1921, while his father was away on a business trip to South America. In 1917, the then "crown prince" in the management team, Gustav Klein, had been killed in a plane crash, and the following year Robert Bosch's brother-in-law, Eugen Kayser, committed suicide. For Robert Bosch, this was probably the worst period in



Paula, Margarete, and Robert Bosch (who died in 1921). Photo taken around 1903.

his life. He was suffering from cardiac dilation, his company was going through a difficult time, and his own marriage was on the rocks. According to Robert Bosch's own account, following the death of their son, his wife had sunk into a series of depressions. The couple were divorced in 1927. But things soon looked up again. He remarried immediately after the divorce, having met his second wife, the singer and forester's daughter Margarete Wörz, when she applied to him for a scholarship.[25] As a result, at an advanced age Robert Bosch became a father again. In 1928, a son was born, he too receiving the name Robert, and three years later a daughter, Eva.

Robert Bosch was an entrepreneur in Joseph Schumpeter's sense – a creative, dynamic founder who implemented new ideas and never once rested on his laurels.[26] However, unlike Werner von Siemens, for instance, Robert Bosch was no inventor. His saying "I think I can say it was never my ambition to actually make something myself" is among the classics in the long list of Robert Bosch quotes.[27] Robert Bosch's strengths were the skills of the precision mechanic: exactness and quality. In this respect he was a perfectionist who would not tolerate the slightest negligence and could never accept compromise. His business principles included a determination to manufacture "the best of the best."[28] A demanding entrepreneur needs above all able colleagues.

Robert Bosch with his second wife Margarete and their son Robert Bosch Jr. (1931)

One of the reasons Robert Bosch was so successful was that he knew how to pick gifted technicians, engineers, and sales personnel and, having picked them, to motivate them and win their loyalty to his organization. The rapid rise of Bosch from workshop to global brand rested on the new magneto ignition systems for internal-combustion engines developed by Bosch's associates Arnold Zähringer and Gottlob Honold. But of course these inventions alone would not have been enough to achieve such great things; they also had to be marketed, and here Robert Bosch showed his good head for business. The economic historian Toni Pierenkemper points out that the kind of business success enjoyed by Robert Bosch involved "a certain amount of luck": "He entered the right market with the right product at the right time."[29]

The distinctive characteristics of Robert Bosch included a special ability to instill and communicate his ideas within and through the workshop (and later factory) environment. He did not spoon-feed staff, and he gave those in charge extensive freedom. In return, however, he expected them to live up to his standards. Robert Bosch had very precise ideas about what principles should govern work in his organization and how business should be conducted. Those

principles were not enshrined in any in-house regulations, but everyone in the company knew what they were and complied with them as unwritten rules. Indeed, many employees referred to the founder as "Father Bosch," the label remaining in use even after his death. The fact was that Robert Bosch exuded a natural authority within the company. He was generous in his praise, but his criticism could also be unsparing.

Robert Bosch expected entrepreneurs to "recognize staff as contractual partners enjoying equal rights."[30] His company, too, had its fixed hierarchies, but the kind of "master in the house" mentality championed by many industrialists in the Ruhr district of Germany and elsewhere was not something the Swabian democrat Robert Bosch ever entertained. He invariably accepted works councils as part of corporate structure. In his view, they served to promote understanding between management and workforce. But trade-union representatives who tried to be something more found him to be an unsympathetic opponent. A further component of Robert Bosch's conception of the entrepreneur's task was that it included a duty of care towards employees.[31] This view matched his own conviction that well paid and well looked-after workers will also work well. Robert Bosch therefore paid good wages and was one of the first employers in Germany to introduce (in 1906) the eight-hour working day. Not only did he consider both to be his social duty; he also saw both as contributing to a perfectly sober business-management calculation.[32] Altogether, he remained firmly convinced that good behavior, besides carrying its own reward, paid for itself commercially, and that reprehensible practices would be punished by the market.

Robert Bosch's social openness was in stark contrast to the thinking of most members of his class. Consequently, among broad sections of the public he enjoyed a popularity accorded to few captains of industry. In his "character sketches" of German entrepreneurs published in 1924, the journalist Felix Pinner wrote this about Robert Bosch: "But what marks him out, almost uniquely, as a glorious exception, not merely from the typical German entrepreneur of his day, is his attitude towards social-policy matters."[33] This did not make him popular among his fellow entrepreneurs. Early on he acquired the nickname "Bosch the Red."[34] Nor was the sobriquet wholly unjustified. During his time in the U.S., he had believed in socialism, his friend Kautsky had taught him a lot about social democracy, and up until the years following the First World War, he consistently voted for the Social Democratic SPD.[35] However, he rejected out of hand any encroachment on the autonomy of the entrepreneur, to say nothing of full-scale nationalization of industry. In matters of economic policy, he was a staunch liberal: for free trade and against any kind of national regulation. How these potentially disparate stances fitted together was indi-

cated by Bosch in his 1921 memoirs, where he admits to having "sympathized with the Socialist Party out of despair at the bourgeoisie."[36] But later, under the influence of the circle that gathered around Ernst Jäckh and Friedrich Naumann, Robert Bosch shifted closer to a social-liberal position, and in the Weimar Republic his sympathies lay with the German Democratic Party (DDP), also founded by Naumann. In the 1925 presidential election, he publicly issued an appeal for the electorate to vote for the centrist politician Wilhelm Marx, who was standing against Hindenburg. Seven years later, he backed Hindenburg as being, compared to Hitler, the lesser of two evils.[37] In any case, Robert Bosch remained a committed democrat, as his father had been before him, and he stayed true to his principles throughout the Third Reich.

Robert Bosch can be seen as a Swabian *Eigenbrötler* – in other words, as something of a loner, as we might say nowadays. But he was undoubtedly also a citizen of the world and a pioneer of globalization. As a result of the development of his company, but also – even earlier – as a result of the time that he himself had spent abroad, he was a cosmopolitan. He had no difficulty in doing business in Paris, New York City, or Buenos Aires, and his partners never had the feeling they were dealing with a narrow-minded German businessman. By this time, his deep commitment to international understanding was by no means confined to commercial interests alone. Robert Bosch was also firmly convinced that political chest-beating and militant nationalism operate to people's detriment by inhibiting justice and social equilibrium. He reached this attitude under the impression of the First World War. From this point on, he particularly strove for détente between Germany and France, and from the late 1920s he committed himself equally to the Paneuropean Union founded by Coudenhove-Kalergi, fired by his vision of "a united Europe, living in peace."[38]

Robert Bosch was thrifty, but he was not miserly. He despised any squandering of money, but he often gave generously to causes that seemed to him worth supporting. As early as 1910, the Stuttgart Polytechnic received a donation from him of one million marks for promoting research and training in physics, mechanical engineering, electrical engineering, and construction.[39] At the end of 1916, he donated 13 million marks of his war profits to "building the Neckar Canal" – a project that was thwarted by the high inflation of the postwar years.[40] Robert Bosch also gave money to, among other things, the Markel Foundation for Furthering Gifted Students, the Society for the Advancement of Popular Education founded by Theodor Bäuerle, the Berlin College of Politics where his subsequent biographer Theodor Heuss taught, the *Deutscher Werkbund* association for the applied arts, the foundation that ran Stuttgart's Homeopathic Hospital, and the House of German-Turkish Friend-

ship in Istanbul. Hans-Erhard Lessing's biography of Robert Bosch lists over 30 endowments and major donations made by the entrepreneur, primarily to colleges, educational societies, and medical and charitable organizations.[41] To mark his 75th birthday, Robert Bosch set up something of a monument to himself by endowing a homeopathic hospital in Stuttgart, now known as the Robert Bosch Hospital [*Robert-Bosch-Krankenhaus*].[42]

Of great importance in the life of Robert Bosch was his interest in agriculture, which he also inherited from his parents. He acquired an estate of his own when, in 1912, he bought shares in an undertaking that produced peat briquettes from a large moor in the vicinity of Mooseurach in Upper Bavaria. Ammonia and nitrogen were also extracted from the peat for the manufacture of artificial fertilizers, although such operations had to be halted following the introduction of the Haber-Bosch process for synthesizing ammonia, developed by Robert Bosch's nephew Carl Bosch in conjunction with Fritz Haber. In December 1913, Robert Bosch bought the Mooseurach estate, and during the First World War he had it drained and the peat extracted. After the war, he acquired several adjoining farms in order to combine them into a major agricultural holding. At the beginning of the 1930s, more than 300 people worked there. Under its manager Walther Mauk, the estate experienced a boom following the Great Depression, but in commercial terms it remained very much a loss-making business. Here, too, Robert Bosch developed a certain technical ambition, but for him the farm (known as the *Boschhof*) was more an important place of retreat where he could busy himself encouraging swallows to nest and planting fruit trees. For the family, it became a second home. After Robert Bosch's death, the family continued to run the *Boschhof*, and today it is farmed by Christof Bosch, a grandson of the founder.[43]

Hunting lodges were further places of retreat for Robert Bosch. Hunting was indeed his greatest leisure-time passion, and he did not feel this conflicted in any way with his commitment to the lifestyle reform [*Lebensreform*] movement. He owned several shoots simultaneously: the so-called "Bosch-Jagd" near Pfronten in the Allgäu, the Wespental preserve near Dottingen in the Swabian Jura, and a third one at Kastelalmen, Scharnitz, in Austria's Tyrol region. His interest in hunting was not so much fuelled by social needs. It was a private passion. That said, he did on many occasions invite work associates and business partners to Pfronten or Wespental. "Hunting reveals a completely different side to people," Robert Bosch would say frequently, or so we are told.[44] Hunting gave rise to friendships such as those with the Stuttgart city official Otto Metzger and the professional hunter Georg Escherich – a Bavarian monarchist who in the early 1920s had founded a right-wing, paramilitary self-protection league and certainly will not have shared Robert Bosch's political opinions. As a hunter,

Robert Bosch hunting (1941)

too, Robert Bosch set himself the highest standards. Escherich, one of the most prominent forestry people of his time, wrote of the Wespental shoot, "Robert Bosch's hunting preserve in the Rauhe Alb is the best shoot I know of in present-day Germany. It was not money alone that created this jewel of a hunting preserve but primarily the sympathy and skill of the proprietor."[45]

Robert Bosch was not an easy man to get on with. He could fly into a dreadful temper when something did not suit him or failed to come up to his high standards. It is said that those around him often had to suffer a seemingly "total lack of manners and respect."[46] People who knew him only as a caring employer and generous patron never suspected this side of his character and therefore often found such behavior puzzling. Theodor Bäuerle, who knew Robert Bosch well, had the feeling that, however successful and popular this entrepreneur was, "in the deepest part of his being, he was a lonely and unhappy man."[47] Robert Bosch had very few close friends. From the early years, there was only really Eugen Kayser, who subsequently became the first head of the metalworking business that Robert Bosch set up in Feuerbach. His longest friendship

was probably that with Paul Reusch, managing director of the Gutehoffnungshütte mining and industrial engineering group. Robert Bosch had met him in 1888–89, through the *Akademischer Verein Hütte Stuttgart*, a student organization. Both men remained friends until Robert Bosch's death, although politically the national conservative Reusch took a different view from Robert Bosch in many respects. Another close friendship began in the 1920s with Hermann Bücher, whom Robert Bosch got to know through the *Reichsverband der Deutschen Industrie* ("National Association of Industrialists"), even before Bücher became president of AEG. Skeptical by nature, Robert Bosch was no fan of formal social occasions, clubs, or high society. He would rather go walking with the family in the Alps, and even there he was not drawn to the five-star hotels favored by the industrialist class.

Robert Bosch became involved in the lifestyle reform movement early on. His parents had already been great believers in natural healing. He was also influenced by Gustav Jäger, whom he met during his brief period of study as an academic teacher. Jäger was keen for people to wear only clothing made from natural fabrics, and from that time on Robert Bosch wore what was called "natural clothing" or "Jäger underwear" made from wool.[48] Around the turn of the century, Robert Bosch began campaigning for homeopathy. He joined the "Stuttgart Homeopathic Hospital" association, and in 1915 donated nearly three million marks to build such a hospital in the city. Since this project could not be brought to fruition, he later supported the construction of an "interim" homeopathic hospital.[49] Robert Bosch also financed homeopathic training courses and in 1925 founded the homeopathic publishing house Hippokrates, which today still specializes in literature on the subject of natural healing processes.[50]

Despite his sparse leisure time, Robert Bosch was widely read. He was interested in publications to do with the natural sciences but also in history. On the other hand, he had no feeling for music, and also viewed the fine arts more through the eyes of a craftsman, concerned mainly with technical aspects.[51] Unlike many of his bourgeois contemporaries, Robert Bosch never dreamed of building an art collection. He felt a deep aversion for the metaphysical, the transcendent – in any shape or form. He was an engineer, and that was the way he saw the world; he could not be doing with anything intangible. Bäuerle writes in his memoir about Robert Bosch, "He took no interest in theoretical questions. He avoided philosophical, ideological, or religious literature."[52] The same stance determined what Robert Bosch thought of the church. He was unable to believe in God because God was invisible. He is reported as often saying, "If there is a personal God, he should have created me in such a way that I too can believe in him."[53] It was no more than consistent