

This material may be protected
by copyright law (Title 17 U.S.
Code).

6

MAESTRO OHGA:
THE ART OF PROFIT

Norio Ohga, Morita's chosen successor, is a paradoxical man. Educated in Tokyo and Berlin as a musician, he embodies a combination, rarely found in nature, of shrewd business savvy and an artist's sensitivity. In appearance and demeanor he is as staid as any banker, yet he is a daredevil, a race car driver and a jet pilot who has been known to fly prohibited rolls in his corporate jet. Inside Sony, Ohga is feared by many as a tyrant. There are stories of his hurling prototypes across a room and of scolding terrified subordinates in his booming baritone. To the outside world, he presents an icily superior aloofness. But he is also capable of compassion and warmth: his secretary for thirty-eight years recounts his kindness to her with tears in her eyes, and many others, Japanese and foreign, speak of him as a loyal and passionate friend.

Asked to account for how he sustains deep commitments to art and profit simultaneously, Ohga's answer is always a variation on the same unsatisfying explanation: "I have switches in my head," he recently told me yet again, "and when I throw them, they change me completely. When I fly my jet I'm a pilot and all I think about is flying safely. When I land I remember I must prepare to negotiate a contract. Then I remember I must conduct and I pore over my score."

When Morita prevailed on Ohga to join Sony after pursuing him for years, Ohga resolved to return to his music when he reached the

age of sixty, and he has kept his promise to himself. On September 6, 1997, I was in the audience when he conducted the Tokyo Symphony Orchestra in Beethoven's Third and Seventh symphonies at a concert in Tokyo's Suntory Hall. The occasion, a benefit to raise money for the composer's birthplace in Bonn, was cosponsored by Beethoven-House and the Sony Music Foundation, which Ohga controls. Suntory Hall, erected as a monument to himself by Keizo Saji, Suntory Brewery's epicurean owner, seats two thousand people. That night the house was filled with personal guests of Ohga's from the worlds of finance and business. There were surprisingly few foreigners. Tokyo's international community would flock here the following week when Ohga's old friend, Lorin Maazel, conducted, but Sony's chairman was not a draw. The Sony family, on the other hand, was very much in evidence: both of Morita's brothers and their wives; Ibuka's son, Makoto; Ohga's handpicked successor, Nobuyuki Idei, and Idei's wife; and most of the other executives on the Sony board. Clearly, when Ohga conducts, Sony attends.

In Japan, an orchestra does not usually tune on stage. Western concertgoers enjoy the cacophony of scales and fragments of difficult passages as the musicians warm up; in Tokyo, the orchestra appears only when the house is full and settled. The concertmaster sounds his "A," the oboe answers politely, the orchestra briefly confirms pitch a final time, more a gesture than a process, and is silent again, awaiting the maestro's entrance. Are we being spared the disturbance of the random noise of tuning? Or is tuning up, a practice session of sorts, unacceptably personal, tantamount to receiving a visitor in one's private office or taking guests on a tour of the home?

Ohga enters, and moves to the podium with his deliberate, mincing gait. As always, he is impeccable: a perfect tuxedo, gleaming shoes, not a hair out of place (now or at the end of the performance). He acknowledges the applause with a slight bow and turns to the orchestra. I am seated behind the bass viols, looking obliquely across the strings into the audience: the acoustics are frightful, but I have a full view of Ohga's face.

He conducts from memory without a score. His tempi are assured, his phrasing subtle. But he seems even here, as in a business meeting,

withdrawn and unapproachable. His eyes closed, his body swaying, he appears to be focused inwardly on the bliss the music brings him. Perhaps, strictly speaking, Ohga's talent alone would not earn him invitations to conduct the Boston Symphony at Tanglewood, the Pittsburgh Symphony, the Israel Philharmonic, or the Metropolitan Opera Orchestra. Perhaps his position as chief of the world's largest sound and music company has gained him access. There are those who suggest that inviting Ohga to conduct advances an orchestra in the global competition for Sony sponsorship on a world tour. Nevertheless, here he is, one of the world's most powerful businessmen, summoning forth Beethoven with his baton from one of Japan's best orchestras, attended by his friends and by the Sony family in Tokyo's most prestigious hall. Before Ohga was twenty he had lost both an elder and a younger brother in freak accidents, and his family used to say about him that he enjoyed their share of luck and happiness in addition to his own. Watching him take his curtain calls, turning to the orchestra to salute the players and back to the audience to acknowledge their applause, one feels that Norio Ohga is indeed a fortunate man. Asked, however, to reflect on his forty-year career at Sony, his reply is unexpected: "What strikes me as unique about my life is the extent to which it took me on a path I had no desire to walk."

Ohga was born in 1930, the fourth of seven children, four girls and three boys, and raised as the darling of the family by his doting elder sisters. His father, a wealthy importer of lumber from Southeast Asia, was away in Hanoi managing his business there until the end of the war. Ohga grew up with his mother and sisters and brothers and the family's servants in a "summer home" near the beach in Senbon Matsubara on Suruga Bay, eighty miles southwest of Tokyo. From an early age he was drawn to art and music. He loved watching his eldest sister paint and practice calligraphy—he would become an accomplished calligrapher himself—and when he was five he sat down at the piano in the Western-style drawing room and taught himself to play. In elementary school he was an A student in all but two subjects, music and physical education. In music, he earned a rarely awarded A⁺ ("outstanding"); in P.E., the best he could do was B. In a recent interview, he recalled that he had always "hated" athletics. Five feet nine inches tall

and 180 pounds, Ohga is a large man by Japanese standards, but his robustness seems to have belied, then as now, a delicate sensibility.

In 1943, when he was thirteen, Ohga developed pleurisy and had to stay home from middle school for over a year.* While convalescing, he spent his evenings studying with a man who lived across the street, Ichiro Iwai, the wealthy scion of a merchant family who was living in a large house with his children and three servants after the death of his wife, and who seems to have adopted Ohga as his protégé. Thirty years old at the time, with a degree in electrical engineering from the University of Tokyo, Iwai tutored Ohga in math and science and taught him many other things in the bargain, including how to read electrical diagrams and musical scores. The relationship between the cultivated young widower and the sensitive, eager adolescent who may have been feeling keenly the absence of his father was, for Ohga, formative: "I think Iwai taught me everything he knew, and whatever I understand today about art and beauty and music and science begins with what I learned from him, which was far more than I ever learned in school. In a way, I owe my life to him." When Iwai died of a heart attack at the age of sixty-two, Ohga, in his forties, was bereft.

When the war ended, Ohga returned to middle school vaguely intending to become a mechanical engineer, but he was listless in class, and discouraged by the bleak prospects for engineers in the rubble of the defeat, when MacArthur's occupation was dismantling the country's largest manufacturing organizations. In 1946, at sixteen, he auditioned for the distinguished voice teacher and opera singer Teiichi Nakayama and was accepted as a student. For four years, he commuted to Tokyo once a week, a journey that took three hours each way, for private lessons in German lieder. In March 1949, he passed the entrance examination to the newly founded Tokyo University of the Arts and was one of thirteen students nationwide to be admitted to the first graduating class in the Department of Voice.

Ohga's path might never have led him to Sony had it not been for another of his wealthy neighbors, Kahei Nishida, a man twenty years

* By this time, normal classes had in any event been suspended; students from middle school upward were being mobilized to work at munitions factories and other military installations.

his senior whose family money came from textiles and who happened to be related distantly to Ibuka. In the fall of 1950, Ibuka visited Nishida on one of his endless rounds in search of funding, and persuaded him to invest in his fledgling company. Knowing of Ohga's interest in electronics, Nishida told him about Tokyo Telecommunications and suggested he visit Ibuka in Tokyo. Later that year, with a note of introduction in hand, Ohga called on Ibuka at his ramshackle wooden building in Gotenyama Heights. The meeting was brief; when Ibuka took Ohga to the shop floor and demonstrated his brand-new G-Type Tape-corder, Ohga observed that playback was too distorted to be of any use to a musician and excused himself. Later, Ibuka remarked to Morita that he had met a brash student with no manners but an impressive grasp of technology.

Early in 1951, a Tokyo Telecommunications representative named Masao Kurahashi showed up at Tokyo University of the Arts with a G-Type machine. His ostensible purpose was to record the school orchestra as a sound-quality test, but he was secretly hoping to make a sale. Kurahashi was employed by a trading company backed by the Tokugawa family, descendants of the overlords of feudal Japan. He had persuaded the Tokugawas, who were in search of new business opportunities, to purchase fifty Tape-corders from Totsuko at the deeply discounted price of ¥3 million. A check had been delivered into Ibuka's jubilant hands, and now the pressure was on Kurahashi to find customers.

The demonstration ended before it began. In 1951, power was still in short supply in Tokyo, and as evening approached, amperage dropped: when the orchestra was ready and Kurahashi threw the switch, nothing happened. Ohga had been advised of the experiment and was looking on. As a mortified Kurahashi was packing up to leave, Ohga introduced himself and got his business card.

The following week, Ohga went before the faculty to recommend that the school apply to the Education Ministry for funding to purchase a G-Type machine from Ibuka's company. Normally, students did not present to the faculty senate, but Ohga was cocksure, articulate, knowledgeable, and charming. His argument was inventive: dancers relied on mirrors to mark their progress as they worked on perfect-

ing their art; tape recorders would certainly become the musician's mirror. Without the means of playing back a performance, musicians and singers like himself would be deprived of the opportunity to observe and correct themselves.

The machine was priced by Totsuko at ¥160,000, an amount equivalent to annual tuition for 40 percent of the college's freshman students. Nevertheless, Ohga's vision of the Tape-corder as a mirror for musicians proved irresistible, and funding was secured. Though he was only a sophomore, Ohga was given responsibility for overseeing the purchase.

From Ibuka's point of view, an outspoken college student had transformed himself into a premium customer: this time he dispatched his secondhand Datsun truck to pick up Ohga and convey him to Gotenyama in style. When he arrived, Ohga handed Akira Higuchi a list of modifications he wanted made, with an accompanying sketch and wiring diagram. He was asking for changes in the stabilization motor to reduce flutter and wow, and for a different kind of microphone and input connection. "I could see that he was right," Higuchi recalls, "and as an engineer I wanted to make those changes because they were definitely improvements." When Higuchi showed Ohga's specifications to Ibuka and Morita, they were astonished by the level of his technical understanding.

Before long, Ohga had become a familiar figure at Totsuko. He was invited to attend technical meetings, impressing everyone with his encyclopedic knowledge of tape recorders in particular, and engaged Ibuka and his engineers intensely in conversation about the future of audio technology. Eventually, Ibuka directed that no prototype would be put into production before Ohga had had an opportunity to test it and render an opinion. Often he was critical. Recording a set of tuning forks, he would point out the distortion in pitch and tonal quality as he played back the paper tape and would reiterate his judgment that the machine was still too crude to be of use to a musician. Recently, recalling these early days, Ohga reflected on Ibuka and Morita's tolerance of criticism from a college music student: "They actually treated me as an equal, and that was an attitude you would never have found in any normal Japanese business executive."

The day he graduated in 1953, Tokyo Telecommunications threw a party for Ohga at the Gotenyama office. After breaking open a keg of Morita sake to toast his success—celebrations at Sony still begin with the dramatic stoving in of a Morita keg—Morita called Ohga aside and invited him to join the company “informally.”* He proposed paying him a full starting salary, ¥3,000 a month, and in return asked only that he stay in touch and continue to share his thoughts about the future of the technology. Ohga protested that he was determined to pursue a career as a soloist and had no intention of becoming a businessman, but Morita insisted that he accept the offer in the spirit it was being made, with no obligation to himself. Ohga promised to think it over and, in his excitement, left his diploma behind and had to retrieve it the following morning.

By any conventional standards of Japanese business protocol, Morita’s offer was unthinkable. Nor was the additional cost of Ohga’s “salary” a trivial matter at a time when the company was ramping up for transistors and funding was in short supply. But Morita in particular had detected in Ohga what he judged to be the gifts Sony would need to grow, and he was determined not to lose him. This would not be the last time he would act on impulse to lure people to Sony from other careers. But Ohga, who would prove to be his biggest catch, was the hardest to land: it was six years before he finally persuaded him to join the company formally in 1959. Once he did come to work, Ohga met and abundantly exceeded Morita’s expectations. When he took over as president in 1982, the business stood at \$15 billion. When he turned over daily control in 1995 to Nobuyuki Idei, revenue had grown to \$45 billion.

In the year that followed, until he left for Europe in the summer of 1954, Ohga continued to study with Professor Nakayama as one of a handful of students who had been invited to remain in a makeshift “Masters” program, and embarked on what promised to be a successful career as an operatic baritone. He sang a number of roles in Wagnerian

* The term Morita used, *shokutaku keiyaku*, means a “part-time contract,” but his intention seems better expressed in English by the notion of an “informal agreement.”

and Italian operas—Wolfram in *Tannhäuser*, the Commendatore in *Don Giovanni*, Count Almaviva in *The Marriage of Figaro*—which were produced as radio broadcasts. He also appeared in recital, performing Schubert’s *Winter Travels* and other German lieder. His accompanist on these occasions was the woman he would marry on his return to Japan from Europe in 1958, the pianist Midori Matsubara.

Meanwhile, he continued to participate in technical meetings at Totsuko, and even poached talent for the company. This practice was highly irregular for someone who was a student and not formally an employee, but Ohga’s capacity for disregarding protocol when he perceived an advantage was always a match for Morita’s aggressiveness. From Tokyo’s finest hi-fi store, where he was a regular, Nishikawa Electric, Ohga shanghaied two engineers at once, Susumu Yoshida, the “general,” and Masahiko Morizono, the “father” of Sony’s commercial video camera business. In conversation one day, Ohga suggested to Yoshida that he was wasting his time in his job and offered to introduce him and Morizono to a company that was dedicated to technology and where a person could grow as fast as his talent took him. “He was very smart,” Yoshida recalled, “and he was sensitive but without the darkness that sometimes goes along with being an artist. He was sunny and bright and sensitive, it was hard to imagine that he was just a student.” Ohga arranged a meeting with Ibuka at a small restaurant near Shinagawa Station, at the bottom of Gotenyama Heights. Yoshida recalls with a smile Ibuka’s assertion that the company employed three to four hundred people, and his subsequent surprise, on joining Sony, when he was assigned employee number 195. Morizono, who knew and respected Ibuka but says he had no idea who Ohga was, signed up at the same time.

During his senior year at university, Ohga had met the eminent German singer Gerhard Hüsch and had been invited to become his student in Berlin. In June 1954, he departed Yokohama on a Japanese freighter bound for Manila, Singapore, Bombay, and points west. At Manila, because anti-Japanese sentiment was still running high in the Philippines, passengers were advised to go ashore at their own risk; Ohga was one of the handful of travelers who took the opportunity to tour the city hurriedly. In Bombay, he received a letter from Morita

informing him of the birth of Morita's second son, Masao.* From that point on, long letters scrawled in what Ohga describes as "Morita's hideous hand" were waiting for him at every port of call. That he found the time to write given the frantic pace of his business life is further evidence of his intense interest in Ohga.

Ohga spent his first year studying in Munich while he waited for permission to enter Berlin, still an occupied zone administered by the Allies. Once there, he enrolled as a regular student at Kunst Universität and spent three years earning a second degree, graduating in 1957 at the head of his class. The cost of his stay in Europe was paid for by his family, but Totsuko helped him with foreign exchange through the Mitsui Bank, and continued to deposit his monthly salary in a Mitsui Bank account in Tokyo. Ohga in return sent detailed reports of the latest developments in the German tape recorder industry, which, as he was at pains to point out, was far ahead of Japan's. He provided diagrams of the newest Telefunken machines, and urged Totsuko's engineers to work on faster revolutions and acetate-based tape of the kind made in Germany by BASF to improve the quality of playback.

Morita kept closely in touch with weekly letters, and sent Ohga one of the first model TR-55 radios to come off the production line. Ohga was excited by the new product, and promptly showed it to Michiko Tanaka, the resident doyenne of Japanese high society in Germany.†

* Morita wrote that he had chosen for "Masao" a Chinese character composed of two identical elements top and bottom, in hopes of raising "a child who will be entirely straightforward and honest with nothing to hide." Morita's two sons grew up referring to Ohga as "Uncle Ohga," and when Masao came to work for Sony, Ohga would say that he had known him from the time he was in his mother's womb.

† Michiko Tanaka was the daughter of a famous Japanese painter who was sent to Vienna to study art in the early thirties. Her charm and beauty quickly gained her access to Viennese society. At age nineteen, she married a wealthy businessman three times her age named Julius Meinl, known across Europe as "the coffee king" for his chain of cafes, and became the reigning social queen of Vienna. In a twist worthy of an Italian opera, the aging Meinl, recognizing that he had grown too old to satisfy his still youthful wife, introduced her to a German superstar of screen and stage, Viktor de Kowa, and arranged their marriage, providing Michiko with a large dowry and a mansion in Berlin, where she was living in splendor when Ohga met her.

Ohga had met her while he was still in Munich, and she had helped him with his visa to Berlin and given him use of a chauffeured car while he was getting settled. Tanaka borrowed the TR-55 and demonstrated it to everyone in her broad acquaintance in Berlin, creating what may have been the first interest in Sony in Europe.

When Ohga returned to Japan late in 1957, he married Midori Matsubara and joined an opera company. The couple intended to spend their lives together as musicians. Morita persisted, urging Ohga to spend one day a week at the company, doing "nothing in particular." While in Europe, Ohga had become acquainted with the head of the Japan Musical Instrument Company, soon to become known as Yamaha, and Morita had heard rumors that he was also being actively courted by Yamaha's president. Ohga did resume his visits to Totsuko, but continued to resist pressure to go to work; he was aided in his resolve by his wife's determination that he should continue his career as a musician. In 1958, as a preliminary to building a Sony sales network in Europe, Morita asked Ohga to reconnoiter the European market and consult with him on strategy. At the end of a month of traveling, Ohga was joined by Morita in London and they returned to Japan together via New York. Morita assumed they would fly, but Ohga was set on crossing the Atlantic on the USS *United States*: "It was a seven-hundred-thousand-ton vessel, and could travel at thirty-five knots!" he explained to me. "That made it the fastest passenger ship in the world. I had to see for myself what that was like!"

Their Atlantic crossing threw Morita and Ohga together in close quarters for, by Ohga's measure, "four days and just over ten hours" with nothing to do but eat, sleep, and talk. According to Ohga, he did most of the talking, and his insistent theme was the necessity of bringing the company into the modern age with product planning and more stylish product design and marketing. By the time they reached New York, Morita was even more certain that Sony needed Ohga, and renewed his efforts to recruit him. Ohga held out for another six months, continuing to receive a salary, until Morita invited him to dinner with his wife, a schoolmate of Yoshiko Morita's and inclined to respect her, and proposed that he wear, in the Japanese idiom, "two pairs of san-

dals," continuing his singing career while working for Sony full-time. Ohga says that Morita assured him that night that if he came to work he could count on being president of Sony one day.

In April 1959, Ohga entered Sony formally at the top rung of the middle-management ladder, as *buchō*, general manager, a position that normally, then as now, would take an enterprising employee twenty years to achieve. As head of the Second Manufacturing Group, he was responsible for manufacturing and sales of Sony's broadcast equipment and three hundred employees. By night, after long days in Sony's manufacturing facility at Atsugi and traveling the country selling to broadcasters, Ohga pursued his career as a singer. But the moment came when he was obliged to recognize that his double life was no longer sustainable. He was singing the role of Count Almaviva in *The Marriage of Figaro* and had arrived at the theater in Hiroshima at the end of a day he had devoted to a futile attempt to sell Sony tape recorders to a local affiliate. With just enough time to get into costume and makeup, Ohga went on stage and sang his way without incident through Acts One, Two, and Three, the most challenging of all, in which the count is on stage from beginning to end. With the demanding portion of the performance behind him, he changed costume and sat down on a trunk backstage to wait for the count's final entrance at the end of Act Four. Exhausted, he dozed off, was awakened by the orchestra playing the cue for his entrance, and realized he was sitting on the wrong side of the stage. With no choice, he appeared on stage from an unexpected direction—"Here you are, my sweet Susanna"—and threw Figaro and Susanna off their timing (Susanna was being sung by Kyoko Ito, who would become a distinguished soprano). That night, he resolved to give up his musical career. Asked what had impelled him to choose Sony over music, he replies that it was his sense of responsibility to the people working for him. By that time, as head of the entire tape recorder division, Ohga had a staff of more than one thousand employees.

The speed of Ohga's ascent within Sony was unprecedented and remains unique. Within two years of starting, in addition to managing the tape recorder division, he had requested and received responsibil-

ity for product planning, industrial design, and advertising for the whole company. "I changed Sony's image," he told me. "When I came on the scene, it wasn't really such a modern company at all. And I'd been telling Morita for years that what we needed to do was create products that looked smart, stylish, international, and start advertising stylishly, and that's what I undertook to do, and it's amazing that Morita let me do it all, as young as I was."

Japanese executives do not meet visitors in their own offices, which are held to be private, but in "guest-reception rooms," which become increasingly spacious and ornate as the floors in the building ascend toward top management. I am interviewing Ohga in the "parlor" that adjoins his office on the seventh and top floor of Sony headquarters in Gotenyama and is reserved for his personal use, a stiffly formal room furnished with a long, low table and eight plush chairs positioned too far apart to allow comfortable conversation. Abruptly he stands, motions to me that I am to follow him, and strides out of the room without a glance at the head of Corporate Communications and the two freshmen in attendance to tape-record our conversation (with two tape recorders as insurance against the possibility of mechanical failure). I hurry after him, down the hall past the large Monet that he and Mickey Schulhof purchased in New York on the occasion of Sony's fiftieth anniversary in 1996, to the executive elevator. No word of explanation. Emerging on the ground floor, Ohga crosses the lobby to the entrance of the Sony products museum, heedless of the bows in his direction from people halted in their tracks in gestures of respect, moving as if through his private space, and enters the softly lit museum. Here, in long showcases that hug the contour of a gently arcing wall, Sony's entire product line is on display in chronological order. Ohga approaches the point on the arc corresponding to the year 1960, and says, taking my arm, "You can see the difference before and after I got involved." There is no arguing this point: the tape recorders, radios, and TV sets spotlighted behind the glass become noticeably sleeker and more modish upstream of where we stand. For thirty years, Ohga minutely managed what consumers around the world identify today as the Sony look: the heft and feel of the product, the matte black of the metal, the placement, color, and even the size of the Sony logo.

But Ohga's interest was never limited to style; he insisted that Sony tape recorders should have automatic level adjustment circuitry, which Sony pioneered in the Japanese market, and argued successfully for another first, the built-in microphone. Over the years, his review of Sony prototypes at the Product Planning Center, created by him and staffed by designers he has hired and trained, were always tense occasions. Morita was generous with compliments and encouragement; Ohga looked for faulty design. In February 1990, David Sanger of the *New York Times* witnessed Ohga in action at the center:

He stops at the display of a new television set for introduction in 1991, clearly unhappy: all the peripherals connected to it—the stereo, the compact disc player, the videodisc, the CD-ROM player—require separate remote controls.

Ohga launches into a lecture. The television, he tells the silent room, is “the center of the home.” Just as Sony transformed the TV business once with Trinitron, it must do it again, making the television set a single, simple control center, so that you point the remote control only at the screen rather than at each individual machine.

Briefly, Ohga is challenged by a tall young woman. The television is her project, and she raises some problems with Ohga's approach. He listens carefully, but gives no ground.

“I want direct control of everything, all through the television,” he tells her. She retreats.

During his early years as a full-time employee, Ohga also recreated single-handedly the company's domestic advertising. When he arrived in 1959, Sony ads featured a line drawing of a small boy named Attchan, a well-known comic strip character that Sony had licensed from the cartoonist for its exclusive use as, according to the borrowed English term in the contract, an *aikyatcha*, or “eye-catcher.” Ohga was appalled, and in short order had persuaded Morita that a stick figure with a sappy smile was not an appropriate logo for a company with international aspirations. “Mr. Ibuka and Mr. Morita were great visionaries and entrepreneurs,” he explained to me circumspectly, “but they didn't necessarily have much sense of style.” By 1961, “the Sony boy”

had disappeared and Ohga was personally writing the leads for all of Sony's domestic advertising. He also managed layout, choosing fonts and sizes, and insisted that print ads for newspapers be positioned where readers were most likely to see them, just beneath the TV program listings or on the op-ed page.

In the mid-sixties, Ohga began to manifest an aptitude for deal-making and a perspicacity about the future which rivaled Morita's own. In 1965, he met with Wisse Dekker, then head of the Asian Division inside Philips Electronics N.V., to discuss Philips's newly developed tape cassettes, which would soon replace reel-to-reel tape. Philips was competing with Telefunken and Grundig in a race to establish its cassette tape as the worldwide standard, and it wanted support from Japanese electronics manufacturers. In Ohga's judgment, the Grundig cassette was slightly more sophisticated than the Philips version; nonetheless, he had already decided that Sony should align with Philips because he viewed the company as a more vibrant brand worldwide than Grundig, with a stronger organization and more to offer Sony in potential for future growth. Speaking in German, a language he commanded better than English, he informed Dekker that he was in conversation about adopting the Grundig cassette with Max Grundig personally. If Sony were to align with Grundig, in view of the market share the two companies controlled in Europe, the United States, and Japan, Philips would certainly lose the opportunity to control the worldwide standard. On the other hand, if Sony joined Philips, the Dutch company would be assured of worldwide control, and Sony was ready to sign if Philips would waive royalties altogether. Dekker agreed.

The following year, 1966, leveraging his connection with Dekker, Ohga concluded a free cross-licensing agreement between Sony and Philips. Now both companies were licensed to make use of the other's technologies or manufacturing processes free of charge. For Sony, this deal was a major triumph for two reasons. As it developed products, the company had been obliged to pay licensing fees on countless Philips patents in the past, and that obstacle had been removed in perpetuity. At the same time, Philips, a company vastly larger and wealthier than Sony, a household name around the world, was acknow-

ledging the probability that Sony would be innovating on a level that would make the exchange worthwhile.

Morita was certain that the venerable Dutch company that had impressed him so vividly on his first trip to Europe in 1953 would not agree to view Sony as an equal and assured Ohga that he was wasting his time. When the agreement was concluded, he was both surprised and proud. According to Ohga, Philips in general was opposed and would never have come to the table at all if it hadn't been for Dekker, who lobbied executives throughout the organization, persuading them of his certainty that Sony would deliver the goods over time. In years to come, Ohga's relationship with Dekker, who was soon to become president and later chairman of Philips, would yield a variety of benefits to Sony. In the early eighties, Ohga and Dekker would lead the collaboration that produced and brought to market the compact disc.

In view of Ohga's success with Philips, it is not surprising that Morita entrusted him the following year with a negotiation that would prove to be one of the most important in Sony history: a joint venture with CBS Records. Over lunch with Harvey Schein in October 1967, Morita had decided to enter into a deal, and that same day had turned over responsibility for handling the negotiation to Ohga, thirty-seven at the time. Harvey Schein was known to be a cunning and aggressive deal-maker who left no money on the table, but Morita was confident that Ohga would hold his own.

The principals agreed at once that the new company would be capitalized at \$2 million, each parent to invest \$1 million. The first issue was a name for the venture. With his characteristic emphasis on building the Sony brand, Morita wanted "Sony-CBS Records," but Schein insisted that CBS and its Columbia record label were household words around the world and must come first. Ohga yielded, then exacted an "equivalent" concession from CBS when the discussion turned to the issue of royalties. Schein wanted to charge the venture an "all-in price" for each record master provided by CBS Records. "All-in" meant that CBS's markup on the actual cost of acquiring rights to the master and producing it would be folded invisibly into the bill it presented to the joint venture. Ohga refused. He had already proposed that the parent companies take 1 percent each of annual gross "off the

top" (irrespective of profit or loss), a mechanism to help ensure that their original investment would be repaid, and Schein had eagerly agreed. Now Ohga pointed out that marking up the cost of record masters in addition to taking 1 percent from gross receipts would amount to "double dipping." The joint venture, he declared, would pay CBS its actual costs per master and not a penny more. As Schein faltered, Ohga pressed home his advantage by reminding him that Sony had compromised on the issue of the name, which was more important than profit to a small company building its presence around the world. Schein felt trapped and finally conceded a point that, in the ensuing twenty years, would cost CBS hundreds of millions of dollars. "Ohga suckered me," he recalled with a smile. "He gave up on the name because he knew he could more than make it back when we got around to royalties and profit."

CBS/Sony Records, Inc., was signed into being in Tokyo on March 1, 1968. The English documents were vetted by a young lawyer named Walter Yetnikoff whom Schein had recruited from the same law firm he had left for CBS.* Yetnikoff remembers driving through a pouring rain in a Sony car to deliver the document book for signing to Morita's house, where he was sick in bed with the flu, and waiting in the foyer while Yoshiko Morita shuttled back and forth to the bedroom with the documents. Yetnikoff would later become head of CBS Records and would play, as an intimate of Ohga's, a catalytic if abrasive role in Sony's acquisition of both the record company and Columbia Pictures.

On paper, Morita was president of the new company, but on the first day of business he informed Ohga that managing it would be up to him. Ohga claims that this announcement came as a complete surprise and reflects wryly that he might have reconsidered the 2 percent top-off payment to the parent companies had he known that the ensuing problems would be his own to manage.

* Rosenman, Colin, Freund, Lewis, and Cohen. In 1972, Morita's mentor in legal matters, Ed Rosiny, joined the firm as a partner and brought Sony's business with him. Located on Madison Avenue and 56th Street, opposite Sony headquarters in New York, the firm continues to play a role in the company's U.S. legal affairs: Paul Burak, another partner, sits on both the Sony America board and the compensation committee.

The business began badly. It was common practice in the trade for record companies to make the rounds of the retailers once a month to collect what they were owed in cash. Ohga pronounced this "feudal," and insisted that money be remitted to a CBS/Sony account. He also rejected the conventional returns policy and required retailers to purchase a percentage of the records they ordered. When the merchants protested and Ohga refused to yield, the Japan Record Dealers Association declared a boycott against CBS/Sony Records which lasted throughout what is remembered at Sony Music as the "long hot summer of 1968." That autumn, the impasse was broken when Simon and Garfunkel's "The Sounds of Silence" arrived in Japan on the Columbia label and swept the country off its feet: as a condition of distributing the hit single, Ohga required dealers to sign a new contract and they had no choice but to agree.

By the end of the second year of Ohga's leadership, the joint venture was returning dividends to both parents equal to 100 percent of their initial investment, and continued year after year to repay the initial investment in addition to royalties due on individual albums. On the fifth anniversary of the business, Ohga was able to use profits to build CBS/Sony its own headquarters building, in front of Ichigaya Station in Tokyo, without borrowing a penny. A celebration dinner for the entire staff was held at the Pacific Hotel, and Walter Yetnikoff, Harvey Schein, and Goddard Lieberson, president of CBS Records, flew from New York to attend. Ohga bid the crowd welcome and thanked them for their hard work. In the middle of his speech, his feelings overwhelmed him and he paused, fighting back tears.

Ohga's strategy was to stay just ahead of the constantly shifting tastes in popular music. Judging that classical music was, for the time being, out of vogue, he limited it to less than 10 percent of his investment. He also ignored *enka*, an entire genre of native ballads sung by its own galaxy of star performers and conveying a particularly Japanese brand of melodrama. Instead, he developed and marketed a series of artists including Momoe Yamaguchi and the Candies, who were created to mirror the fantasies of teenagers and adults in their early twenties. The sensibility he identified was naïve and odorless: astonishingly,

given his parallel life as a classical musician, Ohga created what he describes as a "cutie-pie boom." CBS also fed the joint venture many profitable acts from its own Columbia and Epic labels, beginning with the Simon and Garfunkel hit.

The unlikeliness of Norio Ohga as pop music czar is breathtaking. "Beethoven," Ohga explained when I asked him about the paradox, "will always be Beethoven. And then there is business. I have a switch I can throw as I move back and forth between worlds." In the early seventies, the place to be seen in Tokyo after midnight was a disco in Akasaka called Byblos. Morita, not surprisingly, enjoyed dancing the night away in the private part of the club upstairs; Ohga hated the noise, and was observed on more than one occasion as he backed toward an exit and then bolted to freedom. When Morita called to let him know that Andy Williams was in town, he wanted to know if Mr. Williams was a professional golfer. He accompanied Morita and his son, Hideo, to a Williams concert and declared unsmilingly when it was over, "This man cannot sing!"

Though he may not have admired some of the music he packaged, Ohga was so successful at marketing and selling it in Japan that the record company under his leadership grew to become Sony's, and CBS's, most profitable division. The profits generated became a source of ongoing contention. CBS's share quickly climbed above \$10 million annually: the succession of CBS presidents under the founder and chairman William Paley eyed the retained earnings hungrily and were continually demanding that larger portions of the pie be "repatriated" in dividends. Ohga politely and immovably rejected these demands (Sony had the contractual right to determine distributions). How would it look to outsiders, he would remonstrate, if the parent companies were to withdraw tens of millions of dollars above and beyond the 100 percent annual return on original investment, not to mention royalties! Year after year, CBS Records executives made the pilgrimage to Tokyo to petition Ohga and returned empty-handed. Finally Paley made the trip himself but fared no better than his subordinates. Sometimes Ohga would commiserate, complaining that his hands were tied because "Mr. A. Morita" refused to release the funds. Sometimes he

would grow angry and throw an intimidating tantrum. "I was the retained earnings watchdog," he told me. "When CBS reached out its hand, I would lunge and growl."

In the course of managing CBS/Sony, Ohga became friendly with both Harvey Schein and Walter Yetnikoff. With Schein, he shared a sense of having created a successful company, and this feeling was a bond. After 1972, when Morita lured Schein to Sony from CBS, Ohga had less to do with him professionally, but the men remained close and continued to socialize with their wives, in Tokyo and New York. In 1976, Ohga tried unsuccessfully to mediate between Morita and Schein in the last days of their relationship, hoping to save Schein's position inside Sony. Then, on the twentieth anniversary of the founding of CBS/Sony, Ohga and Schein had their own falling out over what appears at first glance to have been a trivial matter but should probably be ascribed to deep cultural differences.

Souy had invited Schein and his wife to the anniversary party in Tokyo, and had sent them first-class air tickets. Schein wanted to exchange the tickets for economy-class seats around the world for himself and his wife and their two grown children, and asked Ohga to make the necessary arrangements through the Sony travel bureau. Ohga said he would try, but week after week the reissued tickets failed to arrive. Shortly before the date of the party, Ohga came for dinner to Schein's apartment in New York, and Schein confronted him about the tickets. Sony had sent him first-class tickets because it wished to honor him, Ohga explained, his face clouding with anger; it was disrespectful and unseemly for Schein to sell his tickets and ride in the back. Schein retorted heatedly that Ohga had no business interfering in his family travel plans and threw the tickets in his face. Ohga rushed out of the apartment. Schein's wife pursued him and brought him back, but the damage had been done: the men did not meet again.

Ohga's relationship with Walter Yetnikoff ran deeper and was more complex. If Morita and his first American mentor, Adolph Gross, were an unlikely partnership, Ohga and Yetnikoff are not easily conjured in the same room together. Ohga tends to be restrained and distant; Yetnikoff, though said to be much mellower than in his days as a bellicose drinker, remains contentious, incorrigibly and gleefully invasive.

Nevertheless, it seems that they were close friends for over twenty years. By way of explanation, Ohga told me repeatedly that Yetnikoff was a very serious, quiet, "even somewhat timid" corporate lawyer when they met: "He had a charming wife named June, and I thought they were an ideal couple. The only unfortunate thing was, she couldn't cook. It would be hard to find someone as bad at cooking as she was. You know the expression 'tone-deaf'? Well, she was cooking-deaf! Still, they were a wonderful couple."

In the early years of the joint venture, while he was still working as Schein's in-house counsel, Yetnikoff served as consigliere to Ohga, helping him to organize a mail-order record club in Japan and advising him on budgeting costs for developing new artists and producing their records. Notwithstanding Ohga's memory of Yetnikoff as gentle and timid, he was known to others even then as a man committed to outrageousness. Ohga himself referred to Yetnikoff affectionately as "the funny American." Yetnikoff called Ohga "Herr Ohga" or "The Ohga." Several times a year he traveled to Tokyo, and the men were often in each other's company. They took long walks and engaged in intimate conversations about the purpose of life. The Ohgas were childless, and Ohga confided in Yetnikoff his sense of resignation and loss. Over time, Ohga's wife, Midori, and Yetnikoff's first wife, June, became friendly, and the couples socialized at one another's homes. The Ohgas lived in Tokyo with a chow chow called Martin. Ohga would cook, preparing steak and roast beef and his speciality, crêpes suzettes, and serve French cheese and rare wines. When he was in America, he would visit Yetnikoff at his house in Wilton, Connecticut, and, later, Great Neck, swim in his pool, which he always complained was too cold, and fall asleep on the couch with his glasses on.

Yetnikoff recalls that Ohga could be "both condescending and kind." His personal secretary was having trouble with a boyfriend, and Ohga was very solicitous, inviting her home to dinner and in general looking after her. In matters of business, then as now, Ohga's temper was volcanic. Yetnikoff remembers an incident from the mid-seventies in the New York office of Arthur Taylor, then president of CBS. Taylor, who had taught Renaissance history at Brown, was a student of Japan who prided himself on understanding the culture. When he tried ex-

plaining to Ohga his perception of Sony's problem with distributions, Ohga began screaming at him, waving his arms—"You think you know Japan better than I. The joint venture is *over!*"—and stormed out of the office. Yetnikoff went after him and tried to calm him down, but that night, over lobster, one of his favorite foods, Ohga was still insisting that he intended to cancel the joint venture. According to Yetnikoff, he remained agitated until the conversation turned to investing CBS/Sony money in a plane for the purpose of importing lobster to Japan. Yetnikoff had been working on Ohga to compromise on the dividend issue by putting some of the retained earnings to work in profitable investments. For a brief period they were serious about lobsters, until they learned that shellfish could not be imported to Japan. Later they went shopping together for citrus groves in California, flying around in a chartered helicopter, and purchased for the joint venture two thousand acres of lemon trees north of Los Angeles near Oxnard.

In 1972, when Schein left CBS for Sony, Yetnikoff succeeded him as president of the International Records Division. From this point on he was Ohga's opposite, representing CBS's equity position in CBS/Sony. Twice a year he was in Tokyo trying to extract increased dividends from Ohga and failing, but the men remained fast friends. One day they were out on a walk and happened to pass a Porsche dealer. Yetnikoff stepped inside and wrote a check for a new car as a gift to Ohga from CBS. Business, after all, was booming under his leadership, and he had yet to receive a bonus. Ohga was pleased, but declined to accept the car until Morita had been given the opportunity to approve the bonus, which he did in a memo that afternoon. When the Porsche arrived, Ohga discovered it was an automatic shift and gave it to his wife: a race car driver, he was not about to drive a "hydromatic." Subsequently, Yetnikoff paid Ohga additional bonuses.

In the business arena, the men had other conflicts. The dividend issue was a constant irritation. Then there was Guenther Breest, a record producer in Hamburg championed by Ohga who, in Yetnikoff's view, was "ruining the company" with recordings of Broadway musicals with inferior casts. Another blowup occurred late in 1989, after Sony had purchased CBS Records, when Ohga approved a \$20 million

purchase of rights to record Herbert von Karajan's complete opera performances on video laser disc. Yetnikoff was furious, screaming into the telephone that he was not about to do "this lousy junk" that would not earn the company a penny. When Ohga insisted, Yetnikoff took his complaint directly to Morita, who brushed it aside. Today Ohga says that the project's passionate advocate was not himself but Sony's current president, Nobuyuki Idei, who was responsible for developing the videodisc. In any event, Yetnikoff's protest notwithstanding, the project was completed and lost money.

In 1975, Yetnikoff became president and chief executive of CBS Records, Inc., worldwide, in his own words, "führer of records." It was then, Ohga said, his voice heavy with judgment, that Yetnikoff began to transform into an entirely different human being: "He left his pretty wife and became a womanizer, and he was rude and arrogant and would scream into the telephone and then slam the receiver down. . . . watching Walter made me realize how suddenly and unexpectedly a man's life can take a sharp turn." Yetnikoff listens to what Ohga has said about him and smiles grimly: "I'd say he was the one who changed, certainly in his attitude toward me, for no reason I could see . . . I am very disappointed in Norio Ohga."

If Ibuka was the muse and champion of the transistor age, and Morita's principal marketing triumph the Walkman, Ohga rightfully lays claim to having taken Sony into the digital age with the compact disc. The technology at the heart of the CD as it was to evolve, the "general junction laser," was developed in the early sixties at MIT's Lincoln Labs and improved at Bell Laboratories later in the decade. By 1974, Philips had incorporated the laser in an early video laser disc, and Sony was developing its own version based on the Philips model. Independently, a team of audio engineers led by Heitaro Nakajima were at work on digital sound. By early in 1974, Nakajima had a machine capable of digital recording, but it was the size of a refrigerator and weighed several hundred pounds. Subsequently, his team devised a processor that permitted digital signals to be recorded on tape and played back on a U-Matic three-quarter-inch player. This system was still unwieldy and had its own technical problems, but when it was

performing optimally, it delivered a clarity of sound that could not be retrieved from analog signals.

Sometime in 1975, the optical and audio teams came together at the Central Research Laboratory and went to work on recording digital audio information directly onto a laser disc. Ohga was already enamored of digital recording, which he had likened to "removing a heavy winter coat from the sound." When he learned that an "audio laser disc" was in development, he ordered it brought to completion as a top priority no matter the cost. To reduce the chance that Ibuka might wander in on his endless rounds, the work was housed in a building at a remove from headquarters on Gotenyama Heights. Ibuka had grown up in the analog age and was immovably convinced that analog sound was the genuine article. In this conviction he was not alone: with the exception of Nakajima and his small team, Senri Miyaoka and Toshitada Doi, Sony's audio engineers were united in their opposition to digital technology. Doi reflects that Nakajima championed and drove the project forward in the face of ongoing skepticism from Sony's analog engineers, who continued to predict that there was no future in digital sound. Later, listening to the system when it had been refined, Ibuka acknowledged its superiority, but he never focused on the technology.

In the spring of 1976, the team proudly presented Ohga with an audio laser disc thirty centimeters across, the size of an LP record, a musical "platter" with a capacity of thirteen hours and twenty minutes of digital sound. For their pains, they received a withering lecture on the folly of engineering for its own sake and the importance of developing business sense. A principal reason for Ohga's excitement about creating a new standard in the recording business was the opportunity it would create to combine new hardware with the rich "software" holdings of CBS/Sony Records. But at current rates for acquiring and recording music, in the neighborhood of \$75,000 an hour, each and every audio disc with this capacity would cost the record company over \$1 million to produce. Ohga still uses the story to ratify his assertion that engineers left to their own devices would run any business into the ground because business is never what excites them. "I love technol-

ogy," he says, "and I love technical details, but inside Sony I was always first and foremost a businessman."

Meanwhile, in Eindhoven, Holland, Philips's audio division was at work on its own variation of the optical laser disc. In the spring of 1979, Philips's chief audio engineer, L. F. Ottens, traveled to Japan to demonstrate the device to Sony and other electronics manufacturers. Ohga was in the hospital. On his way to a Sony plant on March 16, his helicopter had crashed—"we had a lousy pilot," he told me in English—and he had broken his back. In July, when he was able to travel, he visited Philips's headquarters in Eindhoven and was shown a first-stage prototype of an audio laser disc that was 11.5 centimeters across and could hold one hour of digital information. One faction inside the Dutch company had been inclined to choose Matsushita as a partner, but Wisse Dekker, who was now president, and the head of Philips's audio group, Johan Van Tilberg, were Sony admirers and cast the decisive votes in Sony's favor. Ohga was impressed by what he heard and promised to secure Morita's approval for a collaboration.

From August 1979 until June 1980, when they presented their standards to the Digital Audio Disc Conference, Sony and Philips teams, physicists and audio engineers, alternated visits to one another's laboratories in Tokyo and Eindhoven. Ohga and Van Tilberg applied terrible pressure, asking originally that the project be completed by the end of October. According to the Sony team leader, Toshitada Doi, the collaboration accomplished three years of work in ten months (the teams continued to refine their work together until April 1981). As technical problems surfaced, each team addressed them separately. The solutions were tested and compared at the next meeting. The atmosphere was competitive—which side would end up with more patents in the finished product?—and there were heated arguments. Doi recalled an October morning in Eindhoven when the unusually clear and sunny sky abruptly darkened in the middle of a dispute and a storm began. A junior member of the Philips team suggested quietly that the thunder and lightning signified Ohga's and Van Tilberg's anger at time being wasted in arguments.

There was also by all accounts a goodly measure of bonhomie. The

Dutch team introduced the Japanese to the pleasures of cold, salted herring eaten whole from a cart on the street and gulped down with *jenever*, the potent Dutch gin. Doi went so far as to prevail on Philips to serve the herring, considered a street food, in its executive dining room. In Tokyo, the Philips team learned to enjoy sake hot and cold, and joined the Japanese for evenings of drink and song. On at least one occasion, Ohga himself put in an appearance and translated the Japanese lyrics into German for the Dutch engineers.

As the optical disc evolved, debate focused on two issues. One was the number of bits, the units of digital memory which ultimately determined the quality of the sound; Philips maintained that fourteen bits would be sufficient, but Doi argued that sixteen bits, though more costly and complex, would help distinguish their product from competing systems in development. Sony's audio engineers continued to drag their heels, insisting that fourteen bits, which enabled a dynamic range far superior to analog sound, would suffice, but Nakajima supported Doi's position and would not budge. The second issue related to size and capacity: Philips proposed an 11.5-centimeter disc, which would fit into an audio car system in the European market and would allow a recording capacity of sixty minutes. Ohga was adamantly opposed on grounds that a sixty-minute limit was "unmusical": at that length, he pointed out, a single disc could not accommodate all of Beethoven's Ninth Symphony and would require interrupting many of the major operas before the end of the First Act. But seventy-five minutes would accommodate most important pieces of music, at least to a place where it made musical sense to cut them. At sixteen bits, the disc would have to be twelve centimeters to accommodate seventy-five minutes. In the end, Philips agreed to Sony's specifications.

At the final session of the first round, held in Tokyo in March 1980, the two teams tested one another's error correction systems on discs that had been scratched, marked with fingerprints, even dusted with chalk. The Philips system proved inadequate to these extreme conditions, and Sony was judged the winner. There were protests from the Philips team that the test conditions were extreme, but their manager, J. P. Sinjou, agreed that the test had been fair, and the Sony error-correction mechanism was adopted. Later, Nakajima and Ohga decided to

agree that the CD technology should be considered a fifty-fifty contribution between Sony and Philips. "It was a very Japanese conclusion," Doi says, "and some of us objected, but Mr. Nakajima was a man of great integrity, and we went along with him." The name chosen for the product was Compact Disc Digital Audio System.

As early as September 1977, twenty-nine manufacturers around the world had formed the Digital Audio Disc (DAD) Conference with an eye to achieving standardization. In June 1980, in Salzburg, DAD reviewed three systems, the optical system proposed by Sony and Philips, a mechanical system developed by Telefunken, and an electrostatic system that belonged to JVC, Japan Victor Corporation. In April 1981, DAD announced that it was endorsing both the Sony-Philips and the JVC systems. JVC, a subsidiary of Matsushita and a hated rival inside Sony, had developed the VHS system that had effectively driven Sony's Betamax out of the market by 1980. Fifteen years later, Sony would lose again, this time to Toshiba and the Toshiba camp, in the standards war that raged around the product now known as DVD, digital video disc. In the case of the compact disc, the superiority of the Sony-Philips approach—the laser read the information on the disc without physical contact with its surface—and Sony's privileged access to music through CBS/Sony Records generated a competitive advantage for Sony. Before long, most electronics manufacturers around the world had joined the Sony-Philips camp and were licensing their technology.

The CD lacked a player equal to the disc's potential, and creating an acceptable CD player at an affordable price proved to be a hellish job. Ohga had declared an immovable deadline of October 1982 for bringing the CD and player to market in Japan, and it seemed impossible to all concerned that components could be ready for mass production in time. The lens to focus the laser beam, for example, had to be of microscope quality. Today's lenses are stamped from a plastic mold; in 1981, three four-millimeter lenses were assembled in a copper mounting. It took a day to grind fifty lenses, and two hours for the assembly, which tended to crack when soldered, at a cost of \$800 each. Sharp licensed its laser to Sony, but there was no guiding mechanism for moving the beam and the lens across the spinning disc in unison in

order to read the two billion bits on a twelve-centimeter disk. Because the scale was so much smaller than in the videodisc player, none of the previous solutions to this scanner could be applied. Sony also faced the challenge of converting the analog signal to digital and back again. Finally, the player's circuitry required miniaturizing five hundred integrated circuits into three LSI circuits. Once again, for perhaps the final time in Sony history, audio engineers brought bedding to their labs so they could work around the clock. By mid-1981, Sony had a prototype player, which held the disc upright so it was visible spinning through the glass at the front of the machine. It was nicknamed *goronta*, a neologism that conveyed the notion of bulk and unwieldiness. Philips was developing its own CD player independently.

While Sony continued to work on refining the player, Ohga went on the road with his associates at Philips to prepare the record industry for the advent of CD technology. By this time, he felt certain that CDs would replace records sooner or later and was expecting resistance from the record industry. But he was not prepared for the unanimity and the violence of the opposition. The most dramatic moment occurred at the International Music Industry Conference sponsored by *Billboard* magazine in Athens in May 1981. Ohga, accompanied by his new right hand, Michael Schulhof, arrived with Sony's prototype player and a digital recording of performances by the Berlin Philharmonic conducted by Herbert von Karajan. Morita had met the maestro, Hitler's conductor of choice, in Vienna on his first trip to Europe in 1953, and the two had evolved a personal relationship over the years. Morita was frequently von Karajan's guest at his house in Salzburg, and when a concert brought Von Karajan to Japan, he invariably visited Morita (Yoshiko remembers her husband and the conductor swimming nude laps in the indoor pool in the basement of the Moritas' home). In April 1980, Morita announced he had something he wanted the maestro to hear and surprised him with a digital recording on three-quarter-inch videotape of a von Karajan rehearsal of *Die Walküre*. When the conductor pronounced the sound "superior to anything achievable with analog technology," Morita asked if he would allow Sony to make digital recordings of his performances for use in demonstrating the CD, and von Karajan agreed. Thereafter, he be-

came an impassioned and ultimately effective advocate of Sony and Philips in the face of record industry opposition.

In Athens, however, record executives from around the world were not impressed. On the contrary, they were furious: the CD was the ugly brainchild of people in hardware who knew nothing about the software business, they asserted. The new format would require an enormous capital investment, and all it promised to do was threaten LP records, the heart of the business! Hans Timmer, later the Philips chairman, was also there, and recalls, "Ohga must have been shaken, but he didn't show it. He was calm, and he kept explaining that CDs would never scratch and that the sound was superior. But they shouted him down." Jerry Moss, then president of A & M records, screamed that CDs would kill the industry because the perfect digital master would invite and facilitate piracy. At some point, executives stood up in the auditorium and began to chant a slogan that sounded like a Madison Avenue nightmare, "The truth is in the groove! The truth is in the groove!" Even Timmer, a thickset bull of a man, was anxious: "I think we almost—we barely escaped physical violence," he told me.

Nostalgically, Ohga recalls joining the others that night, including Schulhof and his wife, Paola, for a "defeat banquet." Paola, who is Greek, chose a fish restaurant on the docks in the Piraeus and impressed Ohga indelibly when she led the party to the kitchen and inspected their fish for freshness by examining the flesh through the gills. "We sat down to console ourselves with some delicious seafood. We had certainly lost the day, but I wasn't despondent by any means. I sat there and resolved to go *my own way* [Ohga used the English phrase]. You might say I came back triumphant in defeat and resolved to go it alone."

The stakes for Sony, and for Ohga, were high. With the rout of Betamax now in full play, Sony earnings were dropping—1984 would be the worst year in its history to date—and the 8-millimeter video camcorder was still several years away from market. The company desperately needed a breakthrough product, and its fortunes would be tied to the success or failure of the CD.

Ohga had already committed the company to CDs with a \$30 million mastering plant built in 1981 in Shizuoka Prefecture and financed

entirely with profits from CBS/Sony Records. For fifteen years he had been retaining earnings despite CBS's protests on the principal grounds that it was unseemly to siphon excessive profits from the joint venture. Perhaps he truly felt that this was so, but he was also waiting for the right moment to use the money to fund a new business. Now the opportunity was at hand. In the space of three years, Ohga would use record company profits to build two additional CD plants, one in Salzburg and another in Terre Haute, Indiana. CBS was reluctant to approve the expenditures, but Ohga persuaded Yetnikoff's boss, CBS president Thomas Wyman, that he was being handed a brand-new business free of charge. Wyman signed off on the plants, but CBS, uneasy about becoming the first major record company to endorse the compact disc, asked Ohga to delay the launch for a year. Ohga was disgusted with what he called CBS's "stodgy conservatism" and, as chairman of CBS/Sony Records, decreed that the launch would proceed on schedule. Philips agreed but was a year late in bringing its own CD player to market.

On October 1, 1982, Sony introduced to the Japanese market its first CD player, the CDP 101. At the same time, CBS/Sony Records released the world's first fifty CD titles. There was some jazz and some pop, including Billy Joel's *52nd Street*, but the catalog was weighted toward masterworks from the classical canon, reflecting Ohga's judgment that classical music fans would better appreciate the benefits of digital recording. Ohga had hoped to release the CD in 1977, the centennial anniversary of Thomas Edison's invention of the phonograph, and to this day speaks regretfully of missing the target by five years. The importance he attaches to a historical connection to a great American entrepreneur reveals the postwar Japanese view of American achievement as the definitive yardstick of its own progress.

The launch generated excitement, but the first CD player was priced prohibitively at ¥168,000, roughly \$700: once audiophiles willing to pay any price had been skimmed from the top of the market, sales began to lag. By November 1984, the second anniversary of the CD, Sony had developed a new player, the D-50, which was half the size and one-third the price of the original, and the market came roaring back to life. At the end of that year, LP records produced in

Japan outnumbered CDs by ten to one. By 1986, CDs had climbed to forty-five million titles annually, overtaking records to become the principal recording format. By 1988, production grew to one hundred million CDs, and by 1992 had tripled to three hundred million CD titles a year.

But opposition to the technology was deep-rooted and persistent, particularly among musicians, who formed a group called MAD—"Musicians Against Digital"—and the recording engineers who controlled the sound studios. Detractors maintained that digital perfection was artificial and empty. The singer Neil Young put it as well as anyone: "The mind has been tricked, but the heart is sad."*

Ohga handed responsibility for overcoming professional resistance to the man who had led the Sony team during the Philips collaboration, Dr. Toshitada Doi. A jazz saxophonist who idolizes Charlie Parker and a charmingly eccentric, original man, Doi was given his own business unit in 1980, staffed by thirty engineers from the Audio Division, and charged with developing and marketing a Sony line of digital recording and mastering equipment for studio use. At the time, a twenty-four-track analog recorder cost between \$20,000 and \$30,000; when Doi's team developed a digital recorder priced at \$150,000, he went to Hollywood in search of a first customer and found Stevie Wonder, who was delighted with the quality of the machine and bought one for his Wonderland Studio.† Impressed that

* Dissatisfaction with digital audio is like an underground river that rises to the surface from time to time. In a May 7, 1998, article, the *New York Times* reported that audiophiles in swelling numbers are replacing their CDs with records because the sound is much closer to live music. Asked to comment, Ohga is dismissive: "Anyone who cannot hear that CDs are incomparably superior to records, 9.7 toward a perfect 10, has a tin ear and no business listening to music."

† An awkward moment occurred when Doi brought Wonder an improved model of the recorder-mixer, which Sony had ingeniously "coffee-proofed." Recording artists and engineers often work through the night and habitually consume large quantities of caffeine. Coffee spills are a commonplace and could shut down an expensive session if the equipment were not impervious. On the improved model, the mixing board had been covered with a thin sheet of plastic and LED indicators had been added to allow the mixer to see what he was doing, rendering the device unusable by Wonder. With Band-Aids, which allowed him to feel positions of the toggle switches, the problem was hastily corrected.

Wonder had gone digital, others tried the recorder and followed suit, including the jazz pianist Herbie Hancock. Both Wonder and Hancock joined von Karajan as active advocates of digital technology and Sony equipment, endorsing Sony products and even accompanying Doi to demonstrations and audio fairs. Before long, five or six of the top forty hits in *Billboard* had been recorded on Sony's nine-channel model PCM 3324 digital recorder, and by 1984, Doi's business unit had secured a 90 percent share of the commercial digital market.

As CD production around the world began to climb, the CD mastering plants that Ohga had built with joint-venture money became lucrative profit centers. In 1984, as Betamax was disappearing from the American market, the Terre Haute plant in Indiana generated Sony America's entire profit for that year. Ohga took pleasure in reporting the profitable numbers to CBS in person.

In 1986, shortly before he lost his job to Larry Tisch, then CBS president Thomas Wyman, the man who had reluctantly approved the plants, asked Morita and Ohga to visit him in New York on their way home from a Sony conference in Spain. In his office, Wyman explained that CBS profits were down and asked whether Sony would consider purchasing the plants from CBS/Sony and distributing the proceeds fifty-fifty to the parent companies. "We arranged for CBS/Sony to sell us those plants at cost," Ohga chuckles, relishing the memory, "and they've remained highly profitable down to this day."

By the time Ohga oversaw the CD launch in 1982, his power inside the organization was comprehensive and, effectively, supreme. Approval from Morita was still required before major decisions became final, but Ohga controlled budget allocations from product development through marketing, and was by now the principal architect of product planning and business strategy.

The steepness of his climb to power remains unique in Sony history. In June 1964, only five years after he entered the company, Morita had seated him on the board, making him at age thirty-five Sony's youngest director. Ohga relinquished his directorship temporarily when he moved to CBS/Sony Records in 1968 and began to manage the record business, first as senior vice president nominally reporting to

Morita, and from 1970, as president and representative director of the CBS/Sony group. For five years, he belonged to the record company and disappeared from view in the rest of Sony. In 1972, with CBS/Sony in orbit and generating robust profits, Morita called him back, promoting him to managing director (*jomu torishimariyaku*) of Sony and chairman of the record company. From this point on, he continued to oversee the record business, spending one morning a week in the new headquarters building in Ichigaya, and resumed control of budgeting, design, and market planning for the Sony Corporation. In 1974, he was promoted again, to senior managing director (*semmu torishimariyaku*), and was invited to join the company's supreme governing body, the Executive Committee.

In January 1976, as Sony was preparing to launch Betamax, management responsibility at the top of the company shifted: Ibuka ceded the office of chairman to Morita and became honorary chairman; and Morita appointed his brother-in-law, Kazuo Iwama, president and made Ohga deputy president and representative director. Having two classes of board membership—director and representative director—is one of a number of unique features of Japanese corporate governance. As a representative director, Ohga was empowered under the Japanese Commercial Code not only to vote on issues brought before the board, but to bind the corporation legally with his signature. In 1976, there were twenty-six directors on the Sony board, all company executives, but only eight representative directors. Ohga's promotion amounted to formal recognition that he had been admitted to the innermost circle of power in the organization. The fact that he had been designated Sony's first executive deputy president (*fuku shachō*),* is additional evidence that Morita intended to make good on his promise that he should one day lead the company.

The outside world saw this move as a major realignment, and the media speculated about its significance and cause. According to Ohga, the impetus was provided by Morita, who, though he had been president for only five years, was feeling bored and exasperated by the

* The literal meaning of *fuku shachō* is "vice president," but the actual rank is much higher than VP would suggest. NEC and the other companies use "senior executive vice president."

quotidian demands on his attention. By this time, Morita was already sitting on the boards of several American companies, in general augmenting the international activity that would claim his time increasingly as he became the country's most visible corporate statesman. Not that Morita intended to relinquish control of the big picture: beginning in 1981, he made himself Sony's first chief executive officer, becoming chairman, representative director, and CEO until he passed the new title to Ohga in his third year as president in 1985.

The choice of Kazuo Iwama for president was Morita's. He had admired, even idolized, Iwama for his scientific brilliance and discipline since the days of their childhood together as neighbors in Nagoya. Two years his senior, Iwama turned sixty in February 1976. If he was ever to be president of Sony, something Morita wanted for him, the time had come. Hiroko Onoyama, Morita's secretary in New York for twenty years, was visiting the Morita family in Hawaii for New Year's 1976 and remembers "Chairman Akio" telling her that two of the happiest days in his life were Iwama's marriage to his sister and the board's recent approval of his appointment to president.

If Morita was impatient with daily management, Iwama had no larger appetite for managing the details of what had now grown into a billion-dollar business. By 1976, he was preoccupied with the challenge of the "charged couple device" (CCD), which would enable the video camcorders that Sony pioneered in the eighties. The CCD, a tiny electric eye, was a semiconductor that could "see" color and convert it to electrical impulses. Along with so many other breakthrough technologies, it had come from the Bell Labs in the late sixties. In 1972, Iwama had organized a team inside Sony's Central Research Laboratory to develop a CCD for use in an electronic camera. The work was funded and carried out in secret: integrated circuitry was another of the new technologies that Ibuka had declined to understand. According to Dr. Makoto Kikuchi, who came to Sony in 1974 to head the lab, Iwama was increasingly alarmed that Ibuka's intransigence would impede the company's ability to stay on the leading edge. Even Morita, Iwama worried, was becoming so involved in international business that he was falling behind the technology. These concerns made the CCD project all the more appealing, just the kind of

formidable challenge that Iwama felt Sony needed to keep its innovators on their toes: instructing his team to fix their sights on Kodak, the world leader in photographic imaging, he dedicated himself to the project with all his energy and passion.

The result, according to Ohga, was that beginning in January 1976, Sony had two chairmen and no president. He was given to understand, in the implicit way of the Japanese family, that he was to run the daily business. "I would discuss things with Mr. Iwama, but he would say, 'You handle it.' Or he would come to me, and say, 'I'll need ten or twenty or however many million dollars this quarter. Make sure you have that much on hand.' He wouldn't explain anything, and I'd of course do as he asked."

At the time, and to this day, decisions of major importance were made at regular Tuesday-morning meetings of the Executive Committee. Membership was limited to the chairman, the president, and several other executives chosen by the chairman from the ranks of senior managing director or executive deputy president. After January 1976, Ibuka attended when the spirit moved him. The committee was controlled by Morita, and regular members at the time included Iwama; Ohga; Susumu Yoshida, the "general" of Trinitron days; Masahiko Morizono, the engineer credited with developing Sony's broadcast products business; and the accountant dispatched by Morita's father in 1951 to oversee the family investment, now a senior managing director and unofficial CFO, Mitsuzo Narita, who was also recording secretary at the meetings. Later, Morita's brother Masaaki would also be invited to join. From time to time, as necessary, other executives were asked to present to the committee, but were normally asked to leave the room before decisions were reached.

The dynamics of decision-making inside the committee were, and remain, arcane. Ken Iwaki, rumored for a time to be Ohga's choice for the next Sony president, understood the process as well as anyone: "Ibuka-san rarely appeared, and when he did he only commented on money matters. The committee was in Morita's hands. When Chairman Akio said, 'Yes, that sounds like a good idea,' that was an end to it, it was decided. When he said, 'Not a good idea,' no one brought it up again. And Narita would write down the result. But when Morita

would say, 'That's really very interesting' but not 'yes' explicitly, Narita would record in his book, 'Unresolved due to lack of approval from chairman.' Sometimes I'd negotiate with Narita after a meeting. Since the chairman had said, 'Hmm, that's interesting,' I'd urge him to change 'unresolved' to 'Chairman interested, suggests we investigate further.' Sometimes he'd agree."

"When Ohga came in as deputy president, he did a lot of the talking, mostly about product development. Our Betamax was being driven out of the market by the VHS camp, and we were looking hard for new products to come back with. Ohga was particularly strong in the new-product area, and Chairman Akio was just as passionate about products. Iwama-san was never much of a product man, so he'd mostly just listen, and others would chime in, but when Akio-san and Ohgasan were in agreement, and Akio-san said, 'That's really interesting,' Iwama would jump in and say, 'Sounds right to me,' and that was it. We spent about half our time with Ohga leading the discussion about new products. He was pushing CDs in those days, and then eight-millimeter video cameras."

At just the moment Iwaki describes, before the CD was ready for market, when the company was searching desperately for a new product that might reverse the losses occasioned by Betamax, Morita conjured the Walkman out of thin air. He had long argued that creative marketing was as important as technology and innovation. The Walkman is the prime example of his prodigious skill as a market pioneer.

The product originated in a personal request from Ibuka late in February 1979 for a highly portable player that would allow him to listen to stereo recordings on long international flights. Ohga, in charge of Sony audio at the time, conveyed the request to Kozo Ohson, general manager of the Tape Recorder Division, reminding him that Ibuka was scheduled to travel to the United States in March. In just four days, Ohson and a team of engineers modified a small, monoaural tape recorder called the Pressman, which Sony had designed for use by journalists, replacing the recording mechanism and speaker with a stereo amplifier and stereo circuitry. When the altered player was connected to headphones, the high-quality stereo sound it delivered was a surprise to everyone.

The player was brought to Ohga for approval when he was in the hospital with his broken back; he remembers phoning CBS/Sony Records from his hospital bed to arrange for a selection of classical music tapes to be presented to Ibuka before his trip. Ibuka was delighted with the sound. Returning to Tokyo, he showed the device to Morita, who took it home to try it over the weekend. Saturday morning, he carried it with him to the golf course, and that evening he passed it around the dinner table, laughing with pleasure at the look of surprise on his guests' faces at the unexpected richness of the stereo effect.

All his life, Sony's new products were Morita's favorite toys. By the time a prototype was ready for the production line, Ibuka's volatile imagination might have leaped beyond it to the next challenge, but Morita invariably laid claim to the first working model for himself, and bore it home excitedly to explore its features and demonstrate to his family and friends. When he was pleased, which was often, he was lavish with compliments to all concerned. When he discovered what he considered faulty design from the consumer's point of view, he took it personally and communicated his displeasure. Sony's first portable home-video camera was an example. As with the precursor to the Walkman, Morita had taken the prototype home on a Friday. The following Tuesday, at the weekly lunch attended by technical division heads, he asked for the name of the camera's designer and had him summoned to the dining room. Had the man tried using the camera, he inquired. Certainly, he had. But had he taken it skiing? No, because the product had not been publicly announced and could not be taken outside where it might be seen by the competition. Morita, who had taken the camera with him on a ski trip, now pointed out that the start switch was too small for someone wearing ski gloves.

This time, at the regular Tuesday-morning meeting of the Executive Committee, Morita appeared with Ibuka's special-order toy in hand and declared that Sony should bring it to market. Because the product would be aimed at young consumers, Morita felt strongly that it should go on sale before students went on summer vacation on June 21, in less than four months. Ohga remembers about the meeting only that Morita was emphatic, as certain as he had ever seen him. Based on Ken Iwaki's description of the dynamic in the room, it is likely that the

others went along with "Chairman Akio" whatever doubts they may have had.

In fact, from the moment Ohson's engineers began to design an approach to producing the player in mid-February until the Walkman was launched, Morita was alone with his enthusiasm. No one believed that a player without the capacity to record would catch on. According to Ohson, even Ibuka had his doubts. Morita was immovable. He had watched teenagers on vacation in Japan and the United States lug their radios with them to the beach or into the mountains. How could they resist the opportunity to immerse themselves in their music while they played, exercised, or simply walked down the street?

Ohson remembers the winter of 1979 as he rushed the Walkman into production as the most frantic period in his Sony career. There was no time for designing from scratch: the tape transport and stereo circuitry were lifted from other Sony players. Morita had asked for two additional modifications: twin outputs to allow two people to listen to the same tape, and a button to depress the volume and enable conversation with the headphones in place. These refinements had been suggested by Yoshiko Morita, who had not enjoyed her first experience of headphone isolation. The first iteration of the Walkman had his-and-hers headphone outputs and a fader button, which Sony advertised as the "hotline function."

Morita had also objected to the headphones that had come with Ibuka's set, which were heavy and as large as the player itself. As it happened, the Research Laboratory was already developing lightweight headphones designed for outdoor use (the H-AIR model), and these were added to the package.

The Walkman project was founded on Morita's certainty and determination; there was no conventional development process, and no market testing. From the outset, Morita insisted that the product must be affordable to teenagers. Asked to name a price, he declared ¥33,000 (\$125 at the time), explaining with a smile that 1979 was the company's thirty-third anniversary. At this low figure—the Pressman sold for \$400—design engineers cautioned that thirty thousand units would have to be produced to achieve economy of scale. At a time when the company's most popular tape recorder was selling only fifteen thou-

sand units a month, a first run for the Walkman of thirty thousand units was beyond imagining. Nevertheless, Morita ordered thirty thousand units. When he learned that the sales force was expressing dismay, he announced to the entire Audio Division that he would resign as chairman if thirty thousand units failed to sell.

Morita orchestrated every aspect of the Walkman campaign, beginning with the press conference to introduce the product. Normally, product introductions were held indoors. When journalists arrived at the Sony building in the Ginza on June 22, they were escorted onto buses and taken to Yoyogi Park, where each was handed a Walkman and asked to push the play button. While reporters stood under the trees listening to a recorded pitch with background music in stereo, Sony staffers and models demonstrated how to enjoy the Walkman on roller skates, skateboards, or riding a tandem bicycle on a date.

Morita also had a hand in the early print ads, which were aimed at the young and active and emphasized speed and mobility: a girl with long blond hair bent low on her racing bike, a blond roller skater in summer shorts, a roller-skating couple, hand in hand. The Sony Walkman was positioned as a passkey to youth and sportiness. One poster placed a Walkman alongside three pairs of shoes. The banner read: "Why man learned to walk."

Less overtly, the early campaigns emphasized the lightness of the headphones and the stylishness of the earpieces compared to the bulky, earmuff look of conventional earphones. In the first poster for the Tokyo launch, a tall, leggy American girl in leotard and heels grooves to the music coursing through her Walkman headphones, her left arm thrown exuberantly upward. Just behind her stands an elderly Japanese Buddhist monk in summer kimono. On his shaved head, he wears clunky old-fashioned phones, and observes the young lady with a look of admiration and envy. Other ads featured two comely models in evening dress and headphones on the deck of a ship in New York Harbor, or a blond Cleopatra in a sheer bathing costume reclining at the edge of a swimming pool at dusk. In every case, the images reinforced the notion that the Walkman and its stylish headphones were a fashion statement.

The emphasis on fashion was partly Morita's response to general

uneasiness inside Sony about a product that required headphones. "We were all skeptical," Ohsonne recalls, "because at the time, in Japan, anything you put in your ears to hear with, including headphones, was associated with impaired hearing, and deafness was a taboo subject. Even the word had been disallowed for use in newspapers and magazines." Morita had anticipated this objection and was ready with an answer: Sony would create a new fashion, a "headphone culture."

The Walkman was launched in Japan on July 17, 1979, more than three weeks behind Morita's deadline, and for a stomach-churning month, nothing happened. Then, from mid-August on, dealers had trouble keeping their shelves stocked. The first thirty thousand units were gone by the middle of September, and for the rest of the year, production capacity had to be doubled and tripled every month. The first wave of buyers were music fans in their mid-twenties, but by the fall, the Walkman had become the fashionable new way for teenagers to listen to music, and Morita's prescience was confirmed.

The original marketing plan called for introducing the Walkman to the United States and Europe in September, but exporting was out of the question at a time when the production organization was scarcely able, and by December unable, to keep up with domestic demand. Although foreign sales did not begin until February 1980, advertising had been placed in the fall. Aware that "Walkman" was Japanese English, Morita had approved a suggestion from the advertising department that the product be sold under different names in different countries. The player was to be called "Sound-About" in the United States and "Stowaway" in Britain, where "Sound-About" was already registered. In Sweden, where the lawlessness conveyed by "Stowaway" was deemed objectionable, it was named "Freestyle."

In November, Morita telephoned Sony from Paris and told Ohsonne that he had decided that the product should be sold as Walkman everywhere. All summer and fall, tourists and airline flight crews had been bringing the player home, and a Walkman had been given as a gift to the musicians in the Berlin and the New York Philharmonic orchestras. The result was that Morita had been besieged by friends in New York and London and Paris asking how they could lay hands on a Walkman for their children, and he realized that the name had appeal

whether or not it was proper English. When Ohsonne pointed out that advertising using other names had begun, Morita replied that his next call was to marketing at Park Ridge, New Jersey, and hung up.

Between 1979 and 1990, under Ohsonne's supervision, Sony developed and launched eighty different models of the increasingly portable stereo player. In the process, Walkman became a household word around the world and, as Morita had predicted, established headphone music on the move as a singular feature of international youth culture. The phenomenon has always been closely associated with Morita personally. When he was knighted at the British embassy in Tokyo in October 1992, two English tabloids headlined the story, "Arise, Sir Sony Walkman."

Ohga by his own admission never paid any attention to the Walkman. Reflecting on his attitude as cumulative sales approached 250 million units at the end of 1998, he reaffirmed his admiration for Morita's market sense: "I could never be bothered because it had no technical interest. When they showed it to me in the hospital I was preoccupied with CDs and optical laser technology, which was much more difficult and more interesting. Frankly, I couldn't see why Sony should make a product that was boring technically. And that is the major difference between me and Mr. Morita. He had the merchant's intuition that allowed him to see what it would become. If it had been up to me, it would never have happened."

In August 1982, Kazuo Iwama died of colon cancer at the age of sixty-three. People close to him worried that the stress of the Betamax debacle had contributed to his untimely death. The grieving company organized a formal corporate funeral, the first in its history, at which Ibuka and Morita presided. Ohga took his place in the procession with the immediate family as they entered the hall bearing Iwama's ashes in an urn.

Ohga had been close to Iwama. As a demonstration of their affection and respect, they had purchased adjoining funeral plots for their families in a temple cemetery in Kamakura not long before Iwama had fallen ill, a practice not uncommon among Japanese colleagues and less macabre in their social tradition than it somehow feels in ours. Ohga,

in deference to his superior, had chosen his plot just below Iwama's, on the slope of a hill. "I never dreamed," he told me, "that his ashes would be installed there so soon after we had arranged for the space." Iwama died just before the CCD chip he had labored for ten years to develop at a cost of \$100 million was to be put into mass production. When the first chips came off the line several months after his death, Ohga took one to the cemetery in Kamakura and affixed it to his gravestone with rubber cement. "I said to him, 'Iwama-san! Here's the CCD you made for us. Look through it and see how beautiful the world appears!'" In 1990, Ohga led a group of engineers to Kamakura to pay their respects and to report to Iwama that cumulative production of CCDs had reached ten million units. In the tradition of his mentors and champions, Sony's founders, Norio Ohga is a sentimental man.

In September 1982, one month after Iwama's death, Ohga was appointed president of the Sony Corporation, a position he had been guaranteed since even before he joined the company formally in 1959. His precipitate climb to power was of course enabled by Morita with Ibuka's approval; and the process of his investiture points toward a contradiction, possibly a paradox, at the heart of the organization. By the late seventies, Sony was a multibillion-dollar transnational company with a board of directors—albeit composed of insiders with fealty to the founders—and multiple levels of management. In principle, decisions were made by consensus, which reflected the Japanese emphasis on the subordination of individual needs to the good of the social group. But, in fact, as illustrated by Ohga's ineluctable progress toward an autocracy of his own, the animating power of the organization had always resided, and would continue to reside, with the founder-owners and those few others chosen by them for inclusion in the "family." Iwama was the first, and though he happened to be related to Morita by marriage, the literal family connection appears not to have guaranteed admittance to the inner circle: Morita's brother, Masaaki, for example, notwithstanding his distinguished career at Sony, was not granted access to the highest level of privilege and power. The next to be anointed, the adoptive son, was Ohga. There are those who distinguish the nature and quality of Ohga's power from the founders' own, seeing it as less elemental and sweeping, functional only in reference

to, or as a derivation or echoing of, Morita's desires and intentions. Perhaps there is merit in this view; for although Ohga was known and feared as a tyrant in the heyday of his own power, it was then and remains unthinkable now that he would act in a manner contrary to Morita's wishes, any more than Morita was ever capable of betraying Ibuka. In any event, to fathom Sony's behavior as an organization, its acquisition, for example, of Columbia Pictures in 1989, it is necessary to look beneath the rational exterior that the company presents to the world and into the web of family connections at its emotional center.