

The Crisis at Encyclopædia Britannica

All men by nature desire to know.

—Aristotle

Joseph J. Esposito, CEO of Encyclopædia Britannica, looked out over Lake Michigan and shook his head. After eighteen months of trying to sell a declining enterprise, in 1996 he had finally found a buyer in Swiss financier Jacob Safra. The price was nowhere near what Esposito had hoped for, but \$135 million would have to do at this point in hopes that someone could keep this organization alive for another day. The disappointment in Esposito's face was clear; what had once been the most venerable and respected product in the industry had come upon hard times.

How could a leading firm have fallen so far so quickly? In 1990 revenues had reached record levels, but six short years later the company had reached a financial crisis due to a sharp decline in revenues (see **Exhibit 1**). Esposito had done everything he could think of to prevent this, yet the questions running through his mind were endless: Had encyclopedia buyers changed? Did customers no longer care about authoritative information? Was today's Britannica organization flawed in ways that yesterday's had not been? Had Britannica neglected to defend against an aggressive competitor? Was there a crisis in the market that he had ignored? The decline of Encyclopædia Britannica was difficult to comprehend.

The Encyclopedia Industry

In the western world, the print encyclopedia was a comprehensive knowledge source that generally included multiple entries and/or volumes of entries that were organized alphabetically by topic.¹ Encyclopedias could be general reference sources (the word *encyclopedia* itself comes from Greek, meaning "a general education") or specialize in a particular subject. Encyclopedias were much more in-depth information sources than other general reference books, such as thesauruses or dictionaries, which generally provided limited, definition-focused knowledge on a variety of topics.

The modern encyclopedia had its origins in a book published in 1728 under the name *Chamber's Cyclopaedia*. However, the most common form of encyclopedia, the multivolume, all-inclusive reference source, gained mass popularity in the 1920s—continuing to grow into the

¹ Both Chinese and Arabic cultures had long traditions of organizing encyclopedias along different principles. Randall Stross, in discussion with the author, July 7, 2009.

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1950s and 1960s—in the United States, as well as many other countries. Text-heavy, with a focus on information delivery, encyclopedias were sold in multiple-volume book editions, primarily through a direct sales force of company representatives that went door to door. Popular encyclopedias included *World Book*, *Encyclopædia Britannica*, *Encyclopædia Americana*, *Collier's*, and *Funk and Wagnall's*.

In the 1980s encyclopedias commanded a price point of \$500–\$2,000 versus \$5–\$75 for a dictionary and \$5–\$40 for an almanac. According to a 1989 internal strategy memo at Microsoft, "No other broad-appeal content product in any category in any medium has a well-established single-user price point anywhere close to this."²

Encyclopædia Britannica

Though not the first encyclopedia ever produced, *Encyclopædia Britannica* was among the earliest encyclopedias available in the English-speaking world, and ultimately the most famous.³ The first edition was published in three volumes and distributed in weekly installments from 1768 to 1771 in Scotland. It was first brought to the United States in 1790. George Washington, Thomas Jefferson, and Alexander Hamilton all were said to have owned an *Encyclopædia Britannica*. Over time, the company built a reputation for authoritative information that commanded respect. *Encyclopædia Britannica* contributors spanned the brightest thinkers of the time, and scores of Nobel laureates contributed to various editions.⁴

Britannica came under American ownership in 1901. In 1911 it published what many consider to be the best encyclopedia ever written, the eleventh edition, consisting of twenty-nine volumes and 40,000 entries. The eleventh edition was revolutionary in that its contents focused on writing for a general audience, so its writings were much more all-inclusive and thorough than any preceding encyclopedia. Britannica moved its headquarters to Chicago, Illinois, in the 1930s.

By the time the personal computer began to develop in the late 1970s, *Encyclopædia Britannica* had acquired an iconic status. This was due in no small part to the efforts of William Benton, a senator from Connecticut who served as chairman of the board and publisher of *Encyclopædia Britannica* from 1943 to 1973.⁵ During this time the organization and Benton were identified with one another, generally to the mutual advantage of each.⁶

After Benton's death, Britannica came under full ownership of the William Benton Foundation, whose sole beneficiary was the University of Chicago. This was an outgrowth of a long association between Britannica and notable scholars at the university, including Mortimer Adler and Robert Hutchins, president of the university from 1929 to 1951. Adler and Hutchins had celebrity status as public intellectuals prior to and during their association with Britannica, partly due to their leadership of the Great Books Foundation. Both also served on the board of

² Randall E. Stross, *The Microsoft Way* (Reading, MA: Addison-Wesley Publishing Company, 1996), 84.
³ Philip Evans and Thomas S. Wurster, *Blown to Bits: How the New Economics of Information Transforms Strategy* (Boston: Harvard Business School Press, 2000), 1.

⁴ *Encyclopædia Britannica* Corporate, "Company History," http://corporate.britannica.com/company_info.html.

⁵ Biographical Directory of the U.S. Congress, <http://bioguide.congress.gov/scripts/biodisplay.pl?index=B000399>.

⁶ Sidney Hyman, *The Lives of William Benton* (Chicago: University of Chicago Press, 1970).

editors, with Adler succeeding Hutchins as chairman in 1974. Adler also had been director of editorial planning for the fifteenth edition, begun in 1965.

By the late 1980s Britannica had differentiated itself from the rest of the market as a luxury brand with an impeccable pedigree, an excellent reputation for authoritative knowledge, and a history of trustworthiness. It was generally known as an "august repository of serious information,"⁷ the world's most comprehensive and authoritative encyclopedia.⁸

Production

The encyclopedia business was a highly profitable one for Britannica. Production costs averaged about \$250 per set of books.⁹ Britannica had done a great deal of early research to fill out the books' contents, and while extensive revisions were frequently made, the sunk costs of establishing the prestigious Britannica name were far removed from management's mind by the late twentieth century.

Experts in every field imaginable jumped at the chance to write for Britannica. "They hired the best brains out there and were paying them a pittance to contribute. These people wanted Britannica on their resume so they didn't care," said Suzy Deline, a former employee at Encyclopedia Britannica Educational Corporation, a division of Britannica.¹⁰ It was a win-win situation: Britannica obtained world-class contributions at an extremely low cost, and contributors were able to bolster authority in their fields with their Britannica experience.

The organization was an attractive destination for employees interested in performing editorial and research-related functions. Benton, Adler, and Hutchins attracted many interesting employees to Britannica, which in turn attracted others. Former head librarian Terry Passaro recalled that researchers loved the intellectual work as well as the prestige and could not imagine any other employment would be as satisfactory.¹¹

Britannica believed that its customers valued authoritative information above all else. Britannica books were far more dense, sober, and complete repositories of detailed reference material than those produced by World Book or Grolier's. While it lacked the ease of use and readability of competitors' editions, Britannica never tried to appeal to an audience unwilling to put in the time needed to pore over its pages. Instead, it looked to appeal to a customer who would pay to provide his or her family with the best information possible, even at a high cost.

Britannica management made strategic choices in light of the organization's status. It believed its customers valued the implied authority of the Britannica name above that of its younger, less prestigious competitors. Britannica also believed that customers valued the privacy and convenience of having a knowledgeable encyclopedia representative come to their homes to explain how Britannica could contribute to a child's education.

⁷ Richard A. Melcher, "Dusting Off the Britannica," *BusinessWeek*, October 20, 1997.

⁸ Evans and Wurster, *Blown to Bits*, 1.

⁹ *Ibid.*, 2.

¹⁰ Suzy Deline, in discussion with the author, July 12, 2006.

¹¹ Terry Passaro, in discussion with the author, August 6, 2008.

Each edition of the *Encyclopaedia* involved considerable revision and reorganization, so full revisions were not undertaken or produced frequently. This simple fact framed and raised perennial debates among both editorial and business staff about how complete and current the volumes should aspire to be. Full revisions were published as "New Editions." For example, the fourteenth edition was first published in 1929, but the fifteenth edition did not appear until 1974. But between 1929 and 1973 Britannica published, in almost every year, a "New Printing" with a new copyright, which was important for sales purposes.

Partly in response to such concerns, the organization began a number of initiatives. For example, like many of its competitors, once a year Britannica issued reviews of newsworthy events of the prior year. Buyers could subscribe to this "Britannica Book of the Year" when they made their original purchase of the Britannica set. It implied that users would keep up to date and protect their investments. It was by far Britannica's most profitable product, with annual sales at one time in excess of one million volumes.¹²

In addition, Britannica operated a program guaranteeing customers the answer to any question not addressed by the volumes. According to former head librarian Terry Passaro, a large and active group of researchers addressed the questions sent into the organization.¹³

The management at Britannica also considered numerous initiatives designed to take advantage of the visibility of the brand, including ventures into a number of educational books, movies, and videos as well as extensions into other reference businesses. One of these initiatives turned out to be particularly profitable over the next few decades: the purchase of the G. & C. Merriam Co. in 1964, later renamed Merriam-Webster, Inc. This division published the *Merriam-Webster New International Dictionary* and the *Merriam-Webster New Collegiate Dictionary*, which was its biggest selling and most important product. It also published a number of other single-volume reference products.¹⁴

Sales Force and Organization

Britannica was healthy throughout the 1980s. Behind the iconic brand stood an organization with a successful operational history. In spite of donating a significant portion of its profits to a not-for-profit organization, the University of Chicago, the organization was a for-profit company and behaved in many ways exactly like a for-profit company situated in a competitive market.

Most competing encyclopedias were also sold and distributed door to door, but Britannica held a special place among all of these as the most expensive. The editorial and sales staff worked

¹² Lanny Passaro, in discussion with the author, July 11, 2009.

¹³ The Library Research Service department offered customers a response to almost any question in return for one of the coupons included in the original set of encyclopedias (other than medical questions and a few other exceptions). In general, the average buyer of such coupons turned in less than one a year. Even though few customers used multiple coupons, the service was expensive to operate. In later years customers were restricted to choosing from a list of already prepared reports. Terry Passaro, discussion.

¹⁴ Lanny Passaro, discussion.

hard to foster the perception that Britannica occupied the position of "highest quality," justifying the steep price of \$1,500–\$2,000.¹⁵

Britannica's goal was to support a full-time, rather than part-time, work force with these sales.¹⁶ Thus, it aimed to be better at sales and distribution than other firms. These were not "cold call" sales; all sales calls were generated by leads. Britannica hired the right people, trained them well, and made sure its model was more reliable than its competition.

Building the sales force into an extraordinarily effective organization began in 1932. Executive Elkan Harrison Powell helped build one of the most aggressive and successful direct sales forces in the world.¹⁷ Britannica's approximately 2,000 sales representatives were trained to pitch the *Encyclopædia* door to door, for which they were paid a commission of \$500–\$600 per sale.¹⁸

The sales force comprised representatives and sales managers. Explained former executive Lanny Passaro, "There was high turnover among representatives, so the company developed a highly polished 'read off' that controlled the presentation from beginning to end. It could enable a recruit to make a sale with little or no training or product knowledge."¹⁹ In this structure the big earners could be sales managers, who managed a large team of representatives.

It was valuable if the sales representatives believed in the product's virtues and valued its attributes to ensure that there was never anything insincere about the sales pitch. Similarly, it was valuable if sales representatives believed they were helping the customer by selling the best available product in its class, even if families that purchased the books ended up rarely, if ever, consulting them.²⁰ In fact, Britannica's own market research showed that the typical encyclopedia owner opened his or her volumes less than once a year.²¹

In practice, Britannica primarily marketed the *Encyclopædia* to middle-income parents characterized as overidden with anxieties over their children's academic performance. Sales reps capitalized on the aspirations parents had for their children, relieving their parental guilt by convincing them that they were "doing enough" for their offspring's education. Tied to the robust intellectual content of the *Encyclopædia*, this value proposition was one that brought sales managers rich returns.

Perhaps there was no greater issue for many target customers than financing a purchase. An optional purchase of \$1,500–\$2,000 could stretch the budget of a typical middle-class family. Britannica had responded to these concerns by crafting numerous financing options for potential

¹⁵ World Book generally was the closest competitor. It aimed its text deliberately at high school-level readers and charged a lower price, around \$695. It achieved higher unit volume than Britannica but lower total revenues due to the price. Craig Bartolomeow, in discussion with the author, July 18, 2009.

¹⁶ In contrast to World Book, for example, which was largely sold by school teachers during their summer break as well as during the school year. Lanny Passaro, discussion.

¹⁷ Evans and Wurster, *Blown to Bits*, 2.

¹⁸ *Ibid.*, 2. This amount reflects the fact that sales commissions were generally 15 to 20 percent of the sales price. Viewed more broadly, however, commissions were higher. The total commission, including all of the sales management levels, exceeded 40 percent of the sales price. With direct advertising (for sales leads and salesmen), the total sales costs could top 50 percent of the sales price.

¹⁹ Lanny Passaro, discussion.

²⁰ Stross, *The Microsoft Way*, 79.

²¹ Evans and Wurster, *Blown to Bits*, 4. A top sales manager once exclaimed, "These books aren't for reading, they are for selling."

customers. If they qualified, customers could make a down payment, then commit to monthly payments over three to five years. The vast majority of customers chose such payment plans.

Britannica financed its operations with bank loans, so the organization depended crucially on the majority of customers keeping up with their monthly payments. The down payment could be quite low and, therefore, was rarely sufficient to cover the commission for the sales force. The remaining revenue arrived over time. Thus, Britannica was financially stable and self-financing as long as a reliably high fraction of customers sent in their payment.²²

There were two inherent tensions in this financial structure. First, there was unavoidable conflict between the sales force and the credit department. The sales force was driven to qualify buyers and gain commissions, but the credit department had to be cautious of customers with bad credit and wanted to avoid bad debt writeoffs. Second, that conflict in turn stood at the center of unavoidable tension between bank lenders and Britannica's management. If Britannica sold to more unsophisticated buyers, then it risked increasing bad debt expense, which in turn would alarm the banks who lent working capital to Britannica.²³

At its height the Britannica organization contained a unique mixture of scholars and salesmen, each division working with the other for mutual advantage. While the sales force had been built by "a culture of salesmen, not scholars,"²⁴ the editorial divisions of the organization were almost the opposite. The editorial side guarded the firm's scholarly reputation, producing content with its unique authoritative voice.

These unique historical and strategic decisions resulted in an iconic and very successful organization. It was, however, about to be threatened by imminent innovations in the market for knowledge dissemination.

The Microsoft Offer

Boyhood friends Bill Gates and Paul Allen had founded Microsoft in 1975 and by 1985 Gates and college friend Steve Ballmer were running a company that had grown into an ambitious entrepreneurial upstart with \$140 million in revenue. Though Microsoft pursued a portfolio of products for a variety of computing platforms, in 1985 its fortunes lay primarily in its relationship with one client, IBM. Microsoft's primary business was writing the operating systems for IBM personal computers. It also had a reasonably profitable but much smaller business writing application software for Apple computers. Microsoft spent heavily on research and development—12 percent of sales in 1985—and by that time was eager to diversify its businesses, innovate, and invest in new projects.

That summer, just after Microsoft announced the development and release of Windows 1.0, Bill Gates told his team a CD-ROM encyclopedia would be a "high-price, high-demand" type of product, likening it to the highly successful Word product, which was a strong application for the

²² Lanny Passaro, discussion.

²³ *Ibid.*

²⁴ Steve Barth, "Britannica on the Virtual Bookshelf," *Knowledge Management Magazine*, <http://www.kmmagazine.com> (accessed July 5, 2006).

Apple personal computer, the chief competitor of the IBM PC.²⁵ Microsoft executive Min Yee was told to find a suitable partner from which to license text, and Yee approached Britannica to suggest a partnership on a multimedia CD-ROM version of the esteemed encyclopedia, offering to pay a royalty for nonexclusive rights to use the encyclopedia's contents.²⁶ Britannica immediately refused Yee's overture. Larry Grinnell, Britannica's director of public relations, said, "The *Encyclopedia Britannica* has no plans to be on a home computer. And since the market is so small—only 4 or 5 percent of households have computers—we would not want to hurt our traditional way of selling."²⁷

There were multiple reasons for Britannica to reject a partnership with Microsoft, but first and foremost was the effect on its "traditional way of selling." Britannica feared the reaction of its most valuable asset: its salespeople. It reasoned that if its sales force learned that the company was going to market a new encyclopedia product in a different form, they would desert immediately, resulting in sharply falling sales for Britannica.²⁸ "The company was driven by the sales organization, and the notion of selling just the information without the books at a cheaper price was abhorrent to them," according to a former vice president for research and development at Britannica.²⁹

Britannica executives also suspected that sales of a less expensive CD-ROM version of its contents would not come close to the current premium that Britannica commanded with the print version, and would both cannibalize revenue and reduce the company's strong profit margins. They viewed a multimedia CD-ROM encyclopedia as a mere child's toy, something just one step above a video game.³⁰ Such a product would not fit with Britannica's serious, intellectual image. Worse yet, it might even destroy it.

Moreover, Britannica had no reason to take a risk with a young, unproven company like Microsoft, or to fear competition from it. After all, Britannica effectively controlled the top end of the encyclopedia market, charged the highest price premium among encyclopedia publishers, and had strong and stable profits. The Britannica corporate culture was thriving and the *Encyclopedia* delivered strong returns. In fact, one former employee noted that "anyone who messed with the goose that laid the golden egg would have been shot."³¹ Partnering with Microsoft could mean eventually risking the demise of this strong business model, a thought that was repugnant to the Britannica executive team.

Finally, Britannica executives expected that a multimedia reference source would require years to gain popularity, and the home PC was far from a household staple in 1985. With such an uncertain forecast, why should Britannica strike a deal with Microsoft? Customers would always value the prestige of displaying an *Encyclopedia Britannica* in their home. As sales continued to grow in the 1980s, there was little to indicate any of this reasoning was invalid.

²⁵ Strass, *The Microsoft Way*, 83.

²⁶ *Ibid.*, 80.

²⁷ Dorothy Auchter, "The Evolution of Encyclopedia Britannica," *Reference Services Review* 27, no. 3: 297.

²⁸ Strass, *The Microsoft Way*, 80.

²⁹ Barth, "Britannica on the Virtual Bookshelf."

³⁰ Evans and Wurster, *Blown to Bits*, 2.

³¹ Suzy Deline, discussion.

Alternative Formats for Encyclopedias

Despite their decision, concerns about alternative formats for encyclopedias were never far from the minds of top management in the 1980s because customers frequently asked about it. From 1983 onward, the Britannica sales promotion department instructed the field salespeople to refer to a prepared list of "talking points" if a potential customer indicated they would wait for an electronic version and thus delay purchasing books at that moment (see **Exhibit 2**).

Management also began investing substantial funds in exploring the future. A few years after Yee's overture, Britannica executives started building a multimedia encyclopedia and eventually launched the first multimedia CD-ROM encyclopedia. To avoid taking risks with *Encyclopædia Britannica*, the management chose to issue the CD-ROM under the Compton name. This was an entirely different encyclopedia, and although it was owned by the Britannica organization, it was less expensive and less prestigious. It was aimed at school curriculum and was a distant competitor behind World Book and Grolier's.

Britannica demonstrated the "NewMedia" version of *Compton's Encyclopedia* in April 1989, with graphics and sound bytes from famous narrators such as Patrick Stewart (at that time known for his role as Captain Jean-Luc Picard on *Star Trek: The Next Generation*). Compton's was not the first electronic encyclopedia ever—Grolier's had issued a DOS-compatible text-only version of its encyclopedia in 1985—but it was the first multimedia encyclopedia on CD-ROM. In a year-end wrap-up, *BusinessWeek* dubbed *Compton's Multimedia Encyclopedia* one of the top ten new products of the year. DOS and Mac versions became available in 1991.³²

Britannica gave the disk away to purchasers of a print *Encyclopædia*, but standalone buyers paid a hefty \$895.³³ The pricing decision followed the general strategy for the CD-ROM: management and the sales force viewed the disk as a "sales closer," not an investment into a new medium. But the sales force had difficulty with the disk: "I conducted over a year of training with the sales force and taught them step by step how to use the demo on it; they didn't know how to operate the computers in the potential buyers' homes," said Suzy Deline.³⁴

As it turned out, this experiment did not go well. At the price point offered to standalone buyers, the CD-ROM by itself was feasible only for the high end of the market. Yet Compton's did not have the reputation to appeal to the high end of the market, and customers did not view the disk as a valuable freebie. Compton's did not have the reputation for providing the breadth and depth of information that its more expensive counterpart did. Moreover, the CD-ROM proved costlier to develop and execute than the core product. "When you're working in a new medium, you can't expect to get things produced cheaply. Britannica was not prepared for that," said Deline.³⁵

Compton's had a unique position for a while. The official launch of the "Multimedia PC" took place in October 1991, with many firms involved. Indeed, Compton's initial launch partner was Microsoft. Microsoft's only offerings were Multimedia Bookshelf (a reference shelf with the

³² Evans and Wurster, *Blown to Bits*, 2.
³³ Stross, *The Microsoft Way*, 86. The price came down relatively quickly for schools, which received discounted sets in the range of \$295–\$395. Craig Bartholomew, discussion.

³⁴ Suzy Deline, discussion.
³⁵ *Ibid*.

much slimmer *Columbia Concise Encyclopedia*, *Cinemania* (a movie guide), and *Multimedia Beethoven* (focused on the Ninth Symphony). Compton's was cheaper and available as a standalone product by then, but the price remained high, between \$395 and \$595.³⁶

After a few years Britannica decided not to make a long-term investment in the CD-ROM, selling the NewMedia unit to the *Chicago Tribune* for \$57 million in 1993.³⁷

At roughly the same time as these events Britannica's management engaged in a series of experiments with electronic versions of the Britannica text for popular sale. These initiatives were cumbersome, as the text was so large that it challenged the capacity of most personal computers in the early 1990s.³⁸ In addition, there were many problems related to finding the right search technology as well as the appropriate structure for the text, photographs, and graphics. Many technical issues had never before been addressed, and certainly not at this scale.

As retired editor-in-chief Robert McHenry recalled about the 1993–1994 efforts:

*Britannica text included a great many "special characters," including letter forms and diacritics used in non-English words (often proper names), mathematical symbols, and scientific notation. Translating raw Britannica text into ASCII or into the larger—but still limited—character sets used in Windows and other platforms was difficult and error-prone, and the results were judged unsatisfactory by the Britannica editors.*³⁹

In April 1993 the Advanced Technology Group was formally organized, providing structure for informal initiatives that had been going on for some time within the Compton group. It included personnel who were veterans of the Compton group as well as others, and shared space in Compton's Carlsbad, California, office. It moved to La Jolla, California, near the University of California at San Diego, in August 1993. Through the initiatives of this group, EB.com was registered on April 13, 1993. The group enjoyed considerable freedom in its endeavors for the next year, due mainly to its physical distance from Chicago and senior management's immediate and pressing interest in direct sales. It received excited feedback from its own staff, the Chicago technical staff, and the editors.⁴⁰

For some time the members of this group debated a variety of potential ways to make *Encyclopædia Britannica* available in a networking format. There were a daunting set of technical choices related to hardware and software. The turning point for this debate came when an employee of this group, John Dimm, saw a pre-alpha version of the NCSA Mosaic browser in June 1993 at a bookseller's convention in Miami. Britannica's potential publication on the World Wide Web became the focus of the group's efforts. By September Mosaic was formally released. By December the Advanced Technology Group had the whole article database up and running in HTML (viewable at <http://www.eb.com/eb.htm>).

In January 1994 Britannica Online was demonstrated in the Chicago office and at a computer science class at UC San Diego. On February 8, John Markoff published an article on the *New York Times* business section front page entitled "Britannica's 44 Million Words Are Going On

³⁶ Craig Bartholomew, discussion.

³⁷ Audier, "Evolution of Encyclopædia Britannica."

³⁸ Robert McHenry, "The Building of Britannica Online," <http://www.howtobrown.com/BOI.1.html> (accessed July 26, 2006).

³⁹ Ibid.

⁴⁰ Ibid.

Line." This article generated many hits to the Web site and numerous leads for beta testers. More development work continued, refining the search and display capabilities of the site. In September 1994, Britannica Online 1.0 was formally released.

The accomplishments of Britannica Online came quite early in the history of the Web. By comparison, Netscape did not release a beta version of its browser until November 1994, and Netscape's first official release was later still, in February 1995. Britannica's Advanced Technology Group had accomplished an enormous achievement ahead of almost every other potential content provider, and was well positioned to take advantage of the Web's growth.

Encarta

Microsoft never considered developing its own encyclopedia content. Finding the high quality of contributors and editors it needed to be successful would have been far too expensive and taken far too long. Furthermore, Microsoft did not have connections in the highly guarded reference industry. After Britannica turned it down, it approached other firms. After being rebuffed by the second-largest producer, World Book, Microsoft worked its way down the ranks of the encyclopedia world. Encyclopedia publishers were not persuaded by pitches that the product would be a "valuable addition to [buyers'] regular encyclopedia and not a replacement for it . . . [and that] 50 percent of purchasers of a new computer would buy a CD-ROM encyclopedia."⁴¹

Finally, in 1989 Microsoft settled on a deal with the nearly defunct Funk & Wagnall's New Encyclopedia, a brand that had survived as a "periodic promotional item in the aisles of supermarkets."⁴² Microsoft even negotiated to rewrite the encyclopedia text if necessary.⁴³

Encarta was a pet project for Gates. Yee knew the project would be high risk for Microsoft and did not invest a great deal of resources in it—in fact, until October 1991 the group staff consisted of four and a half full-time positions.⁴⁴ In contrast, Windows 3.0 had hundreds of full-time employees dedicated to it.

In April 1991 Craig Bartholomew was appointed the new head of the Encarta team, reporting to Tom Coddry, who was in charge of multimedia publishing. Bartholomew had come to the project through an unlikely path, joining Microsoft in 1988 after six years of experience in the book publishing industry. He first worked on the developer network for the CD-ROM consumer division, which explored developing applications for the CD-ROM, part of a program at Microsoft to enhance PC sales and help change the dominant form of PC software (i.e., substitute CD-ROM for floppy disks). The project had been cancelled in November 1990, but Bartholomew wrote a short memo in February 1991 proposing a new approach to building the project. This memo eventually found its way to the desk of Bill Gates, and after reading Bartholomew's

⁴¹ Stross, *The Microsoft Way*, 83.

⁴² Evans and Wurster, *Blown to Bits*, 2.

⁴³ Stross, *The Microsoft Way*, 81. The license was for the 1983 revised edition.

⁴⁴ *Ibid.*, 86.

suggestions, Gates successfully sought the board's approval to re-fund the effort. As a reward for his initiative and innovative ideas, Bartholomew subsequently was moved to the group.⁴⁵

Signing with Funk & Wagnall's had not been part of the original plan. Now that Microsoft & Wagnall's name, given its poor brand cachet, and name the new multimedia encyclopedia Encarta.⁴⁶ It also decided that there was not enough value in the text to simply reformat it on a CD and resell it; something had to be added or changed.

The Encarta team initially thought of its product as a "pull-through" for PCs, motivating customers who otherwise might have hesitated to make the purchase. Families in particular were targeted, as they wanted to give their children an advantage in school, but a PC purchase often stretched their budgets. Grolier's came bundled with the purchase of an Apple Mac, but the IBM PC had no equivalent match other than the offering from Compton's, which was priced too high to serve as a pull-through.⁴⁷

The Encarta team decided to distinguish the product from the traditional encyclopedias currently on the market.⁴⁸ It aimed to stress Microsoft's core competency—multimedia software presentation—above all else. This emphasis was making virtue of necessity. No encyclopedia could match Britannica's authoritative reputation, but Encarta could build on Funk & Wagnall's accessible content to offer something different by investing in choice graphics and sound.

The team thought that the reading level of Britannica was well beyond the capabilities of a typical school child; "it was written by experts for experts."⁴⁹ It thought World Book better met its target audience, as did Funk & Wagnall's text.

The team conducted lead user studies, which showed that intensive users of encyclopedias rarely stuck to one entry, instead seeking a deeper understanding of a topic by moving among different entries. That observation motivated developing better search technologies, references with hyperlinking, and content that facilitated searching multiple entries.⁵⁰

As the team further developed its plans to develop links and cross-references, it concluded that the text might turn out to be an advantage for Encarta's purposes. As explained by Corddry many years later,

The text from Funk and Wagnall's was far superior to Britannica's as a starting point for a digital encyclopedia because it was much more nearly "structured data," meaning that the architecture of the text was very consistent from one article to the next. This allowed us to add a lot of "contextual" value—to compute the relatedness of every article to

⁴⁵ Craig Bartholomew, discussion.

⁴⁶ The renaming occurred in fall 1992, after Yee had departed and Bartholomew was in charge. The name was chosen through a process of elimination. There was no enthusiasm for "Encarta," but Bartholomew recalled that "the other choices were just worse—Fountia, FountX, and Cycus . . . The early incarnations were called the MME [MS Multimedia Encyclopedia]." Craig Bartholomew, discussion.

⁴⁷ Craig Bartholomew, discussion.

⁴⁸ Stross, *The Microsoft Way*, 81.

⁴⁹ Craig Bartholomew, discussion.

⁵⁰ Ibid.

*every other article, and build what was at the time a uniquely useful set of links and navigational tools across the entire content.*⁵¹

Encarta's team set off on a course designed to highlight the computer's capabilities at that time.⁵² To create an attractive reference source, Microsoft stressed ease of use and included search capability, functionality for hyperlinks across articles, and embedded (though gritty) video, voice, and graphics, aspects the team anticipated would grab users' attention.

The team also aspired to differentiate by including less static information. Steve Ballmer, COO of Microsoft, stressed that the information in a traditional encyclopedia did not change frequently. The team became familiar with his motto for this point, "Ducks are still ducks, Lincoln is still dead."⁵³ Encarta's team sought to stretch the definition of an encyclopedia principally by including more current information. The team initially drew that from two categories of topics that tended to be unrepresented in mainstream encyclopedias, popular culture and business events. Once again, the team aspired to break the mold and, in so doing, catch the attention of potential PC buyers.

These aspirations brought the team up against many novel challenges. Consider the remarks of Jon Kertzer, one of the earliest employees in the team to face the challenges of how to encode music in a CD-ROM:

*We only had a limited amount of space. A CD-ROM is 700–750 megabytes, and there was always a fight between different parts of the project about how much disk space you would get. And maybe we got 200 megabytes, and there was limited good quality compression back then. This was before the era of MP3.*⁵⁴

After making many choices and designing the product, the Encarta team needed a marketing plan. This is often challenging for a small startup, but in this case Encarta could build on Microsoft's experience in selling software.

By 1993 Microsoft was no longer the small upstart it had been in 1985. Personal computers were in more than 20 percent of U.S. households and all forecasters predicted more use in more households over the next few years. Windows 3.0 had been a great commercial success, fueling a major shift in the types of applications made for computers based on the IBM PC architecture. Moreover, Microsoft had engineered a successful bundling of several applications—word processing, spreadsheet, database, and presentation software in the Office Suite—that worked well with Windows. It was now the largest applications provider for the IBM PC architecture as well as for the Apple architecture.

The Encarta team chose to sell its product much like other successful application software did, through third-party retailers such as Egghead and CompUSA, the largest retailers at the time. Marketing received only a small budget, keeping with standard practice at Microsoft. Marketing was done through public relations, in-store promotions, Sunday circulars, magazine reviews, and

⁵¹ Comments by Tom Coddery, March 31, 2009, <http://bits.blogs.nytimes.com/2009/03/30/microsoft-encarta-dies-after-long-battle-with-wikipedia> (accessed July 28, 2009).

⁵² Craig Bartholomew, discussion.

⁵³ Ibid.

⁵⁴ Museum of History and Industry, "Speaking of Seattle," Interview with Jon Kertzer, July 31, 2002, pp. 17–18, <http://www.seattlehistory.org/include/techpdfs/Jon%20Kertzer%20FINAL.pdf> (accessed July 28, 2009).

occasionally newspaper reviews. This was a very different channel than any encyclopedia had ever used. Encarta expected to learn from experience.

Microsoft was finally ready to release Encarta in March 1993, after slipping the first proposed release date in September 1992. It sold less than 10,000 copies of this first release, and according to Bartholomew, "failed fast."⁵⁵ The Encarta team members realized that the release could not and would not generate high sales, and they quickly realized why. Errors had resulted from their own naïve misunderstanding of the market. First, the timing was poor. Encarta had missed the holiday retailing season in October, November, and December, when the bulk of sales occur. Second, at \$295, the price was simply too high to attract much interest. Third, some technical issues needed attention. In some areas Encarta delivered some of its information unnecessarily slowly.

Yet in a way Encarta had been lucky to fail fast; most reviewers and potential users did not notice, which gave the team time to take corrective actions. The next release came in October 1993, just before the holiday shopping season. This release sold for \$99 and included faster capabilities. The price was ostensibly a temporary "holiday promotion," but once lowered it stayed there.⁵⁶ The Encarta team also went to great effort to include recent events, such as a video of the Rabin/Arafat signing ceremony for the Oslo Accords from September 13, 1993. Bartholomew recalled that it was regarded as "revolutionary to get it in there."⁵⁷ Encarta also had a handful of very short video clips—such as Neil Armstrong's first steps on the moon—which made for an impressive demo at the store.

The consumer reception was much better this time. While reviewers were not "wowed,"⁵⁸ users were. Buyers noticed the songs, movies, and bright pictures. The linking between entries also received kudos, facilitating an understanding of the links between topics. Entries were presented in plain and easy-to-use formats. The use of text from Funk & Wagnall's never seemed to bother the target customer, families with school-age children. The multimedia parts of Encarta appealed to users, as did the lower price.

In the 1993 holiday season alone Encarta sold 120,000 copies. Production could not keep up with initial demand.⁵⁹ It sold 350,000 copies in its first year, and 1 million the following year.⁶⁰

After the success of 1993 Encarta set on a path to grow from its shoestring origins. It would operate altogether differently than any encyclopedia that had come before. Explained Corddry,

By the standards of the print encyclopedia world, Microsoft invested heavily in expanding and updating the content of Encarta right from the beginning. We consciously invested in the contextual value . . . in expanding the core content, in creating the world's first truly global encyclopedia, and in an efficient update cycle. We had enough "multimedia" in the original product to keep the reviewers happy, but focused on the

⁵⁵ Craig Bartholomew, discussion.

⁵⁶ Stross, *The Microsoft Way*, 103–104.

⁵⁷ Craig Bartholomew, discussion.

⁵⁸ Walt Mossberg, the well-known IT reviewer for the *Wall Street Journal*, was not impressed. Stross, *The Microsoft Way*, 90.

⁵⁹ Craig Bartholomew, discussion.

⁶⁰ Randall Stross, "Digital Domain: Encyclopedic Knowledge, Then vs. Now," *New York Times*, May 3, 2009.

overall usefulness of the whole product much more than on the relative handful of video clips, etc.⁶¹

The organization grew into a unique business. Similar to an encyclopedia, the variable costs would be low while the fixed costs would be high. However, the level of those costs would support a very different price point for the end product. The cost of materials for the CD and packaging was quite low, sometimes \$5 a box. The fixed expenses arose from editorial staff, programmers, and additional staff needed to update the content as well as tailor the product to different languages and countries.⁶² Much like in traditional encyclopedia businesses, therefore, the business strategy became oriented toward generating sufficient sales volume to support revenue that covered the fixed costs of the operation.

The operation differed from any prior encyclopedia in its hiring practices. Many encyclopedia editors had learned habits and processes that did not translate well into this setting. Encarta, learned to "edit to fit," that is, edit the text for entries to fit into preassigned spaces. Encarta, however, faced constraints fitting its multimedia content on a CD-ROM. Video especially used up storage space. It faced a very different set of trade-offs. As explained by Corddry,

*The senior editors at [print encyclopedias] estimated that at least half of the total editorial effort was devoted to this sort of non-value-adding work [edit to fit]. At Encarta, by contrast, nearly all the editorial work added value—writing new articles, updating, expanding and improving existing articles, and, of course, adding the sorts of elements that computers could support that were truly valuable: the sound of a bassoon, the way gravity works in orbital models, and so forth.*⁶³

Bartholomew and Corddry aspired to hire employees with skills in creative editing. That facilitated new thinking about adding things that had never before been added to an encyclopedia, such as pieces of pop culture and any other material that would be attractive to users.⁶⁴ In short, Bartholomew sought editors possessing skills consistent with the differentiating factors behind Encarta, and not traditional encyclopedia editing.

Looking Back with Questions

Esposito reviewed the timeline of past events (see Exhibit 3) and wondered what he could have done differently to prevent Encarta from sweeping away Britannica's business.

Britannica's sales had peaked in 1990, but growth had flattened during the recession of 1991 and 1992. Encarta had apparently turned that flattening into a dive. The entire *Encyclopædia Britannica* could not fit on one CD-ROM, but a moderately modified set of entries could.⁶⁵ In 1994, as sales at Britannica continued to plummet, executives finally decided to release a CD-ROM version of the *Encyclopædia Britannica*. However, its sales force balked. Even with a high price premium over Encarta, the CD-ROM version could not possibly generate the sales

⁶¹ Comments by Tom Corddry, <http://bits.blogs.nytimes.com/2009/03/30/microsoft-encarta-dies-after-long-battle-with-wikipedia>.

⁶² At its peak, Encarta would employ 225 regular employees. Craig Bartholomew, discussion.

⁶³ Comments by Tom Corddry, <http://bits.blogs.nytimes.com/2009/03/30/microsoft-encarta-dies-after-long-battle-with-wikipedia>.

⁶⁴ Craig Bartholomew, discussion.

⁶⁵ Evans and Wurster, *Blown to Bits*, 2.

commission levels that the print version could.⁶⁶ What was the point of releasing a product the sales force would not sell enthusiastically? The sales force was the biggest advantage Britannica had over its competitors.

The sales force also raised a number of reasonable questions. How could Encarta compete with the *Encyclopaedia Britannica*? It used text from Funk & Wagnall's, which everyone in the industry knew was less authoritative. Many doubted that Encarta had anything to do with the decline in sales. Did Britannica lose out to Encarta, or did it lose out to the PC? With the explosive growth in home computer penetration in the 1990s, was it possible that Britannica's customers had replaced their encyclopedias with computers to educate their children? If that was the case, what could one CD-ROM product do?

Britannica executives debated their next move. They eventually decided to gain the full cooperation of their sales force by releasing the *Encyclopaedia Britannica* CD-ROM as a free add-on to the print version. If potential buyers wanted the CD-ROM on its own, they could purchase it for a mere \$1,200.⁶⁷

After a short trial, it was clear that this plan would not gain any market traction. Soon enough the executives had to reconsider. Britannica dropped the price of the CD-ROM to \$995 in 1995 and to \$200 in 1996. By then, however, it was quickly becoming too late: Encarta was one step ahead of others in the multimedia encyclopedia market and had begun segmenting the market with standard (inexpensive) and deluxe (on two CDs) editions. Later, it would also offer a reference library. By this time Microsoft had hired the largest team of editors on any encyclopedia and was rapidly improving the content.⁶⁸

The experience of Britannica outside the United States also raised questions. Britannica had extensive worldwide sales operations; some were company owned and some went through distributors. Some of them sold the Britannica set itself, but also sold separate French and Japanese encyclopedias, which were not translations of the *Encyclopaedia Britannica* itself but had been prepared with Britannica's editorial assistance. The company had also entered into a number of joint-venture and licensing operations, including one in Latin America signed in 1976. That company had, prior to the joint-venture agreement, published its own encyclopedias with editorial assistance provided by Britannica. It also used the Britannica name for its companies under a license agreement. Many of these organizations continued to prosper into the 1990s.⁶⁹

Initially the online site aimed at institutions who were previous Britannica subscribers, such as libraries and universities. The release in September 1994 was an immediate success, and even generated more sales from previous non-subscribers at universities who heard about the service. However, the total revenues from sales to institutions had never been large in comparison to home sales, and success within this market did not approach compensating for the decline in book sales. In fall 1995 Britannica Online was made available to individual subscribers as well, but the outcome never matched the company's hopes. Its availability did not alter the slide in sales.

Almost from its formal founding, the team at the Advanced Technology Group made ambitious plans for greater technical achievements. After its success in fall 1994, the group

⁶⁶ Ibid., 3.

⁶⁷ Melcher, "Dusting Off the Britannica."

⁶⁸ Craig Bartholomew, discussion.

⁶⁹ Lanny Passaro, discussion.

sketched an ambitious plan for evolving the online site. These involved advances in the search capability, the organization of information, and the updating of articles in response to news events, among many other technical and functional improvements. Most of these were not realized in part due to Britannica's growing financial crisis. When a strategy finally did emerge much later, it lay in a different direction than those devised by the Advanced Technology Group.⁷⁰

Britannica Online had not helped to stem the adverse tide. In many respects the group was too far ahead of its time. The site would generate only modest revenue in the next few years as part of library subscriptions. Moreover, it could not help the parent organization deal with the bigger crisis: the drop in revenues for the printed product.

Almost in concert, as Britannica's troubles multiplied, Encarta thrived. The line of business grew into a large international operation in the next few years, supporting multiple languages in a global production and distribution chain. Eventually more than half of Encarta's sales came from outside the United States.⁷¹

When Britannica went up for sale Microsoft was invited to consider making an offer, but declined.⁷²

Encarta would enjoy prosperity for many years. Eventually, however, the Internet and its abundance of information also induced changes in Encarta's model. Microsoft developed a hybrid version that allowed users to update the encyclopedia's contents monthly by downloading content through the Internet. Eventually, the whole product went online. In addition, the PC distribution channel increasingly moved to a direct sale to consumers. Encarta became part of a standard purchase of an original equipment manufacturer, which helped volumes but placed pressure on pricing.⁷³

Esposito was left only with questions. Was something fundamentally wrong with the organization he managed? Though it had experimented with the CD-ROM for *Compton's*, did Britannica lack the skills to produce a competitive CD-ROM product? Had it been vulnerable to a change in demand conditions that it had not foreseen? Should management have looked to a different sales model for the *Encyclopaedia*? Had it experimented too early with *Compton's Encyclopaedia* in 1989 or waited too long to bring out the CD-ROM of the *Encyclopaedia Britannica*? Had it waited too long to invest in the networking technologies that evolved into Britannica Online?

Should he have rethought his organization's positioning in the market or looked for new products to develop under the Britannica name instead of relying solely on the *Encyclopaedia* to drive sales and growth? Perhaps more investment should have been made in the *Compton's* multimedia edition. Could he have rethought Britannica's promotional strategy upon the launch of Encarta? Were there new customers for the *Encyclopaedia* that had been overlooked? These questions plagued Esposito as he prepared to complete the sale of the company.

⁷⁰ The story of the path not taken is told by Robert McHenry, "The Building of Britannica Online," <http://www.howtoknow.com/BOL/7.html>, BOL.8.html, and BOL.9.html (accessed July 26, 2006).

⁷¹ Craig Bartholomew, discussion.

⁷² Ibid.

⁷³ Ibid.

Exhibit 1: Encyclopædia Britannica Revenue and Sales

Year	Annual Revenue (\$ in millions)	Hard Copy Encyclopædia Sales
1990	650	
1991	650	
1992	586	
1993	540	
1994	453*	117,000
1995	400	
1996	325	55,000

* "Encyclopædia Britannica May Refer to 'For Sale' to Raise Capital," *Portland Oregonian*, April 7, 1995.

Exhibit 2: Talking Points from the Sales Promotion Department, 1983

ENCYCLOPÆDIA BRITANNICA VS. THE COMPUTER

One of the questions we are most frequently asked, by both our own people and outsiders, is "When will Britannica be available on a computer?" The answer we give is "Not for a long time." Here's why:

1. In spite of the many rapid technological advances in the field of home computers, none of the popular models available now have a large enough memory to store all of Britannica. We did a calculation recently that showed that we would need 100–200 floppy disks just to hold our Index.
2. You could put the encyclopædia on a large mainframe computer and allow the home computer user to access it via telephone. This is very expensive. In addition, most systems of this sort that are available today are very cumbersome and difficult to use. They are "menu-driven" and are tricky to manipulate. It is easy to lose your place. You need to know a great deal about the specific system in order to be able to use it. A book is a lot easier to use and is more cost effective at this time.
3. Because of limitations of the screen, you can read only a few words at a time on each screen. Trying to read an article is difficult and disjointed.
4. The main reason most people give for wanting a computerized encyclopædia is to be able to find things quickly. A computer does, indeed, search and sort information very well. But most systems available today use the "key word" search. For example, if you want to look up "orange," you will get back a listing of every place the word appears, whether or not it is a significant entry, and regardless of whether it refers to the color orange; Orange County, California; the fruit; or William of Orange. It is then your responsibility to determine which, if any of these, refers to the item you are seeking.

Britannica has already done all that work for you. Our indexers have read every article, analyzed what they read, and have determined exactly which entries should be in the Index. They have separated the colors from the fruits, etc., and have grouped the references accordingly. They have eliminated trivial references, so that when you follow an entry you can be sure you'll find a piece of relevant and significant information.

The technology to provide this kind of Index in the home today is too expensive. Until new ways are developed, we can provide a better, easier-to-use encyclopædia in printed form than in any computerized version. We will not change our delivery method from the printed page to the electronic form until we are sure that it is the most efficient way for our readers to receive it.

Source: Robert McHenry, "The Building of Britannica Online," <http://www.howtknow.com/BOL1.html> (accessed July 26, 2009).