

McKinley's Amazon

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Introduction

It is a cliché to talk about the revolutionary effect that science and technology have on had our lives, and it is almost axiomatic that new revolutions are still to come (cf. Joy (2000) and Drexler (1990)). This results in an expectation that science and technology will solve all our problems, an expectation that I believe is wrong and thus dangerous (Ben-Ari, 2006). Here I wish to bring one small example that shows how things have changed less than one would expect from media hype.

Clearly, the past decade has been dominated by the explosive expansion of the internet.¹ I, too, check my email incessantly and engage in all the cool activities like web surfing and ecommerce. However, the real question is: What *capabilities* has the internet given us that did not exist before? The answer is: precious few. The internet gives us the capability to engage in rapid, reliable communications over long distances, but this capability dates from the invention of the telegraph in the middle of the nineteenth century, as described by the wonderful book *The Victorian Internet* (Standage, 1998).²

¹ Parenthetically, it is important to note that few people are aware of how long ago the technology of the internet was invented (Zakon, 2005). Do you know when email was invented? The first email program for sending messages in a distributed system was written by Ray Tomlinson of BBN in 1971—thirty-five years ago!

² See my comparison of telegraph technology with computer technology in (Ben-Ari, 2003).

Sears vs. Amazon

Recently, I found out that it is possible to purchase an inexpensive facsimile of the mail order Sears catalog from a century ago (Sears, 1897/2003).³ It occurred to me to follow in Standage's footsteps and to compare the shopping capabilities of 1897 (when William McKinley was President of the United States) with those of ecommerce pioneer Amazon.com. Does Amazon offer revolutionary new capabilities or only a similar capability for remote shopping, albeit improved by modern technology?

It is obvious that there will be significant differences between Amazon and Sears due to changes in society and technology. For example, the population of the United States was about 70 million then and 280 million now (U.S. Census Bureau, 2000), and the economy was primarily rural. Furthermore, improvements in communications and transportation enable Amazon to be a global company. It is not my intention to conduct a full-scale historical comparison, only to point out remarkable parallels between the two companies.

A word about prices. There has been massive inflation during the past century. Using the Consumer Price Index (CPI), \$1 in 1897 was worth \$22.59 in 2004 (Williamson, 2005). There are other ways of calculating inflation; for example, calculating according to the wage rates of unskilled laborers, \$1 in 1897 was worth \$113.70 in 2004. Nevertheless, I believe that the CPI is a better indicator in this case, because the Sears catalog was clearly aimed at relatively prosperous people owning their own farms and living in small towns, rather than at unskilled laborers who could barely pay for food and housing.

The Sears catalog

This volume is truly a marvel. It has 786 three-column pages of very small print with copious illustrations and an index of about 6000 entries. The catalog was issued twice a years and sent to consumers free, except for a fee of 15¢ (\$3.30) for postage.⁴ How much did you pay for your computer and your ADSL and ISP in order to access Amazon?

Before looking at the catalog in detail, let us write down what Amazon sells:

apparel, shoes, and accessories, home, garden, and outdoor living products, baby care products, jewelry and watches, books, kitchenware and housewares, beauty, magazine subscriptions, camera and photography, music and musical instruments,

³ All material that I quote on Sears' policies can be found in the first seven pages of the catalog; individual items can be found by searching the extensive index.

⁴ To facilitate comparison with today, each price quoted from the catalog will be followed by the 2004 CPI-linked price in parentheses.

cell phones and service, office products, computers and computer add-ons, software, consumer electronics, sports and outdoors, dvds including rentals, and videos, tools and hardware, gourmet food, toys and video games, health and personal care (Amazon, 2004, p. 4)⁵

Clearly, Sears did not sell dvds and software, but almost every other category is well represented in the catalog. Here is a list of categories for which you could order specialty catalogs (again free with a fee of between 1¢ (\$0.23) and 7¢ (\$1.58) for postage):

agricultural implements, accordions [sic], baby carriages, bicycles, blacksmith tools, books, bibles, boots and shoes, carpenters' tools, cloaks and capes, clothing, dresses, waists and skirts, furniture, groceries, guitars, musical instruments, mandolins, pianos and organs, saddles, sewing machines, violins, vehicles and harness, watches and jewelry, wagon makers' stock tools

Other categories in the general catalog include medicines, veterinary instruments, refrigerators and stoves, luggage, eyeglasses, guns and ammunition, cameras, beauty supplies, telephones, mathematical and drawing instruments. The variety is staggering!

There is a preponderance of 'hardware' in the Sears catalog as compared with the 'software' that Amazon specializes in; about the only software that Sears sold were books, music folios at 40¢ (\$9.00) and records for a graphophone [sic] (for example, John Philip Sousa's Washington Post March) at 50¢ (\$11.30).⁶ Today, technology certainly has improved, as Amazon sells cds with a large selection of Sousa's marches for between \$3.99 and \$13.98.

Sears' selection of books was not large. It contained classics like *Robinson Crusoe*, *Gulliver's Travels*, *Oliver Twist*, *20,000 Leagues Under the Sea*, *Jane Eyre*, and *Ivanhoe*. You could buy these in a paperback Ideal Library Edition for 8¢ (\$1.81) or in an expensive, gold-stamped, Alta Edition for 25¢ (\$5.65). Amazon sells these (out of copyright) classics for between \$2.50 and \$11.69.

From our perspective there are a lot of curiosities in the catalog. I'm sure that many people today would be keen to order Peruvian Wine of Coca for 95¢ (\$21.46) a bottle, to say nothing of 'Laudanum (Tinct. Opium) USP Strength. Directions on bottle for old and young' at 10¢ (\$2.29) an ounce! The cheapest revolver sold for 68¢ (\$15.36), although rich hunters could buy the 'Charles Daly Hammerless Ejector [Shot]Gun' for \$189.50 (\$4280.81).

⁵ Note that products in many of these categories are sold not by Amazon, but by third parties using the Amazon web site.

⁶ The graphophone was an improvement over Edison's phonograph that used wax instead of tin foil as the recording medium.

Sears was rather forthright in their descriptions: ‘Earling Fig Laxative for the Bowels, Liver, Kidneys & Stomach’ at 20¢ (\$4.52) a bottle, and ‘Ladies syringes for cleansing vaginal passages of all discharges’, which were quite expensive at \$1.25 (\$28.34).

Nevertheless, many consumer items have not changed. Roquefort cheese cost 50¢ (\$11.30) a pound, while Amazon charges between \$18.99 and \$86.91/3.3lb = \$26.34 a pound. The price of nutmeg, however, is now significantly cheaper, reduced from \$50 (\$1129.50) a pound to \$7.56. It was (and is) expensive to play baseball: ‘Spalding’s Baseman’s Mitt’ cost \$3.60 (\$81.32), while on Amazon you can get one for \$39.99 or \$53.99.

‘Oh, the vision thing’

The above quote is attributed to former U.S. President George H. W. Bush. Apparently, Amazon takes a similar stance, as the closest thing to vision statement that I could find was the following single sentence:

We seek to be Earth’s most customer-centric company, where customers can find and discover anything they might want to buy online, and endeavor to offer customers the lowest possible prices. (Amazon, 2004, p. 3)

On the other hand, the first few pages of the Sears catalog contain an extensive presentation of the ‘policy of our house’. It is worthwhile to bring some excerpts:

It is the Policy of Our House to Supply the Consumer Everything on which we can save him money, goods that can be delivered at your door anywhere in the United States for less than they can be procured from your local dealer[.] ... We Aim to Illustrate Honestly and Correctly Every Article. ... We are Able by Reason of Our Enormous Output of Goods to make contracts with representative manufacturers and importers for such large quantities of merchandise that we can secure the lowest possible prices.

Anxiety about online orders is not new and Sears went to great lengths to reassure their customers of the safety of ordering from them, including a letters from their banks attesting to Sears’ financial soundness. On relations with their customers, Sears promised:

Our employees are Instructed to Treat Every Customer at a Distance Exactly as They Would Like to be Treated were they in the customer’s place; in fact, if you favor us with your patronage we will feel under obligations to do everything in our power to merit your trade, and no matter how small your order may be it will receive the same prompt and careful attention as if it were ever so large. ... We Aim to Treat our Customers in a

manner calculated to secure their permanent patronage. ... We Deem that the Best Advertisement Any Firm Can Have is a well satisfied customer.

That is truly customer-centric!

Ordering merchandise

Amazon has a strange system of charging a flat shipping rate per item, regardless of its size and weight, while Sears computed exact shipping charges, whether freight, express or mail, and tables are given to enable customers to compute these for themselves. In addition, Amazon has a per-shipment packing charge, which can be relatively large for small orders. Sears made no charge for packing and handling.

Since freight charges are differential (smaller shipments cost relatively more), Sears encouraged customers to 'club together' to make up large orders: the individual orders were first packaged separately and then the packages formed into a single large shipment. Sears offered a discount of between 3% and 5% for cash payments, instead of the usual cash on delivery (COD), and 'club' orders are also eligible for this discount.

Customer service

Freight and express shipments from Sears were usually sent COD and the customer had the right to inspect the shipment and to refuse to accept it if there is a mistake. Amazon promises a full refund within 30 days, provided that items are unopened.

What is impressive about Sears is the effort they were willing to invest in order to ensure customer satisfaction. For example, they offered to send free samples of fabrics before you buy clothes, although they did request the customer not to abuse this privilege. I was particularly impressed by the buying guide for watches: four pages of very small type. When will Amazon post comprehensive buying guides for electronic equipment?!

Sears was committed to customer service, even for difficult customers:

Don't fail to report any oversight, shortage, inattention or error on our part. **Do it pleasantly, if possible**, if not pleasantly report it anyway, and you will find us quick to right any wrong. (bold emphasis in the original)

The following gem is indicative of a lost naiveté in their commitment to their customers:

There are cheaper hooks on the market, but we do not carry them in stock, as they are no good for catching fish.

Conclusion

Frequently, in the hype about modern technology, we forget that similar capabilities have been available since the technological revolutions of the mid-nineteenth century.

‘Ecommerce’, or perhaps we should say ‘rcommerce’ (remote commerce), became feasible as soon as railroads enabled cheap, fast and reliable delivery of mail and freight, and ‘Sears, Roebuck & Co., (Incorporated), Cheapest Supply House on Earth, Chicago’—as they named the company—was able to take advantage of this technology to build a successful enterprise with a commitment to superb customer service. Amazon.com is a worthy successor to Sears, though even they might learn some useful tips from their ancestor!

References⁷

- Amazon: 2004, *Amazon.com Annual Report*. Download from <http://amazon.com/ir/> by following the link Annual Reports and Proxies.
- Ben-Ari, M: 2003, How Did They Get to the Moon Without PowerPoint? *Conference of the Finnish Computer Science Society* (keynote speech), <http://stwww.weizmann.ac.il/g-cs/benari/articles/moonart.pdf>.
- Ben-Ari, M: 2006, The End of Science Revisited: The Case for Incrementalism in the Future of Science. *Skeptic* 13(2), 2007.
- Drexler, K. E.: 1990, *Engines of Creation: The Coming Era of Nanotechnology*, New York: Anchor.
- Joy, B. 2000. “Why the Future Doesn’t Need Us.” *Wired* 8.04. <http://www.wired.com/wired/archive/8.04/joy.html>.
- Standage, T.: 1998, *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century’s On-line Pioneers*, New York: Walker.
- Williamson, S.H.: 2005, What is the Relative Value? *Economic History Services*, <http://www.eh.net/hmit/compare/>.
- Sears: 1897/1993, *Sears, Roebuck Catalogue*, Chelsea House.
- U.S. Census Bureau: 2000, *Historical National Population Estimates*, <http://www.census.gov/popest/archives/1990s/popclockest.txt>.
- Zakon, R. H.: 2005, *Hobbes' Internet Timeline*, <http://www.zakon.org/robert/internet/timeline/>.

⁷ All links were accessed on 21 April 2006.