VII.

E-Commerce

See http://mashable.com/2013/10/01/future-e-commerece/

The first secure retail transaction on the Web occurred in 1994 – an online purchase of Sting's CD 'Ten Summoner's Tales' was handled by the founders of NetMarket which now is part of Trilegiant Corp which was spun off in 2003 by Cedant Corp which purchased, then sold Orbitz.com (which is now public)

Types of Commercial Websites
There are four general kinds of commercial websites

1) Click –and-mortar: online and offline commerce offered including catalogs and physical locations (both B2C, B2C) ex. Walmart.com
2) Infomediary – content-rich sites derive revenue from online advertisers and are concerned with driving CPM rates through both both quantity of ad impressions and quality (click-throughs) (B2C) ex. chicagotribune.com
3) Portal/Exchange – sites may receive revenue from both transactions and ads (B2B) ex. Yahoo.com
4) Corporate gateway – for organizations who use websites for product and service information. Providing product and CRM applications. (both B2C, B2B) ex. grainger.com

E-Commerce consists of both B-to-C and B-to-B relationships.

B2C
1999: 17 million US households shopped online.
2009: 90 million US households shopped online.
2015: 130 million US households shopped online.

Airline tickets, computer hardware, hotel reservations, consumer electronics, and apparel are top five, followed by books, software, car rentals, health and beauty and toys and games. Largest single consumer e-commerce transaction: Business tycoon Mark Cuban spent $40 million on a Gulfstream V jet.

<u>**Global E-commerce**</u>
1997: $ 2 billion
2007: $260 billion
2015: $2 trillion

The US accounts for roughly 30% (and dropping) of global Internet-based commerce.
The US Internet economy is about equivalent to the size of the auto industry.

<u>Rest of The World's 'Net Disadvantages:</u>
Lack of large homogenous market;
Local telecom infrastructure issues;
Lack of venture capital funding;
Different preferences about look & feel of web sites.

Case Study: Yahoo
Born in 1994 as Jerry's Guide to the World Wide Web, Yahoo began as a directory created by Jerry Wang and David Filo while both were PhD students in EE at Stanford. They incorporated the next year and went public in '96. Yahoo partnered with Alta Vista for algorithmic search and later Google. But Yahoo was slow to move to search advertising away from display ads. Today, Yahoo is one of the biggest portals on earth. Yahoo is losing its position as the Internet's most trafficked web site. Its family of sites barely bests Google in the US, but trails badly globally.

Yahoo is an interesting model: it commands approx. 450 million users – a mass audience which is network TV-sized. Their blogs, photos, metatags and profiles give Yahoo 10 terabytes of data a day to mine to find which ads, in which contexts they want to see.

Yahoo's top three destinations -- Yahoo Mail, the Yahoo.com home page and Yahoo search -- collectively attracted more than 10 percent of the total U.S. audience,.

Yahoo has a larger share of online time spent than any other property -- a key measure for advertisers.

Facebook is the most current most popular social networking website. Twitter Inc., based in San Francisco, was the second-biggest U.S. social-networking site. It had 20 million visitors, an increase of more than 2,700% from the year-earlier period.

Among social networking sites, Facebook and Twitter revenue comes from advertising.

Website Ads
Website ads are booming: in search, classified, display and rich-media ads. Budgets are shifting – a recent survey showed Web-based ads becoming the biggest part of marketing budgets – although only 10% of all ad dollars go to Internet sites.. Marketers like web advertising: they pay for results- not merely presentation. Search-sponsoring is the most direct-marketing tool.

Interestingly, just a few sites rake in big ad bucks. Top 10 sites get 75% of ad revenue – up from 64% a year ago. Google gets 32%; Yahoo: 19%, Everyone else: 48%

Newest: Targeted email or sponsorship agreements with one permanent advertiser for a site. And Bigger banner ads. Google is testing a new pricing model that lets advertisers pay for only completed actions that they define ahead of time – such as getting a lead, sale or page view - making click fraud more difficult.

After years of siphoning dollars from magazines and newspapers, web-based advertising is starting to chip away at TV. TV can quickly reach more people, but their ever-increasing pricing model is under pressure.

Advertisers want motivated buyers – so they take advantage of Internet's ability to identify exactly who is in the audience. While Internet puts customer in charge as never before, sellers can gather and use tremendous info on buyers' purchase patterns.

The Ubiquitous Banner Ad

It is hard to overstate the degree of contempt which banner ads inspire from both consumers and marketers. At issue is the 'click-through' rather which has fallen dramatically from 30% for the first **banner**, run on Hotwired in 1994 to 0.3 percent – well below 1 – 1.4% response rate of direct mail. Banners are still popular compared with **Pop-unders** - based on a scripting language like Java; they take the form of an extra window that suddenly appears when the browser is closed. These are noticed twice as much as banners but also twice as likely to be judged intrusive.

More than 30% of top US websites use **spawning**, where multiple browser windows launch at the same time. About 12% of world sites use **popups**: Others are more aggressive: mousetrapping disables your ability to go back, leave or close the window or page. For some time now, there have been pop-ups that spawn browser windows that stay hidden (pop-outs?) These generate new visible windows when you kill one. 78% of surveyed users found pop-ups very annoying. 12% use blocking software. So why do they persist. 'Cause they work – though there is some debate that most click-throughs are mistaken efforts to kill them. Advertisers are now exploiting Flash plug-ins to launch additional browser windows.

<u>Relative Click-Through Rates</u>:

Traditional Banners:	0.3%
Large Rectangles:	1.3%
Skyscrapers:	1.4% (side or top of page Flash banners)
Rich Media:	2.1%
Superstitials:	6% (Flash movie.)
Pop-ups/Pop-unders:	6.5%
Floating ads:	15%

1994 – Hotwired.com – first banner ads (for AT&T and Zima, click-through 30%
1998– goto.com – the precursor of Overture – then Yahoo Markeintg debuts the first pay-per-click mechanism. Widely mocked.
2000- AdWords – Google's version of pay-per-click. Made performance-based ads mainstream. - provides 95% of Google's revenue ($21 billion)
2001-Pop-ups appear, peak in '03 at 8.7% of all ads. Initially more effective (13x more clicks than banners)
2005-Video ads $121 million (1% of all online ad revenue). Still small part of overall ($1,500 million in '08)
2007-Facebook's Beacon. Opt-in tracker of participant purchases.
2009-'Engagement' ads through social networking

Spyware – see http://benedelman.org – the best adware review site on the web.

'Spyware' is a general term for invisible applications that track your browsing habits as you navigate the web. In IE, the spyware is keeping track of all the sites you visit and sending your trail to a centralized host. There, your surfing habits are analyzed and sold to online marketers. The spyware works whether or not you're running the application it came with. And it is its own independent entity with tendrils all over your Windows directory. Some creators are researchers and ad agencies trying to target audiences. But some spyware is far more potentially dangerous. Some spyware can grab the contents of online forms.
By the end of the year, spyware expected to triple.

Interestingly, most spyware results from the (flawed) system of how a company places an online ad - and eventually loses control of how it appears. A company that wants to advertise online works through an agency that pays distributors operating through a network, which in turn has affiliates, and on it goes, with no one entity having a picture of the entire system. Ire can be directed to search marketing companies (independent firms and also subsidiaries of search engines), who in turn, blame (former) distributors. Also, search firms and large content aggregators beholden to ads such as Google, Yahoo and AOL all have separate policies about malware and various degrees of diligence in enforcing them.

Five Trends Driving the E-Economy
1)Peer production. The most successful web-based companies are building business models based on user-generated content – nearly a million amateur encyclopedists on Wikipedia, Yahoo's Flickr, Facebook /bloggers, Google searchers, Amazon click-trails – use tools to create a shared culture of commentary and reputation.

2)Unlimited video online - music videos supplanting TV, original content, TV shows, time-sensitive news. All increasing, not cannibalizing the 'pie' – challenge: how to generate profits consistently.

3)Personalization. virtual models, suggested, customized products,

4)Carbon reduction. 'Green'

5)R&D by M&A. Buy a company to grow.

Online Selling Success
There is a three-fold approach to successful online selling: **price**, **availability** and **reputation**. Other important issues: having a **strong distribution network**, **proprietary merchandise** and s**trong brand name** - see Lands End) . Buyers now have information on all three metrics: price, availability and reputation.

<u>E-Retailing</u>
E-retail Percentage of total Retail: 20%
Easy to start-up. Brand names rule. Some manufacturers sell direct. On the other hand, some users do not buy online because of fears of victimization.

Example: Amazon.com
Amazon's formidable edge – annual sales equal to much larger brick-and-mortar operations. But Amazon spends far less in fixed assets & infrastructure. Amazon's investment in warehouses can support far more sales. That's why Amazon's market capitalization is far higher than B&N. On busiest day of holiday season, 5 million items ordered, 100 items per second – shipped to 217 countries.

The ten largest Internet retailers garnered nearly 40% of the revenue from online sales. Smaller firms netted remainder. The Internet is still a market with low barriers to new entrants but will have biggest impact if you're first or fastest to dominate in your niche.

Case Studies in B2C E-Commerce

Keeping It Fresh
See http://landsend.com. Lands End sees the Internet as just another channel and doesn't set specific sales targets for the online division. It regularly launches new online services

Looking for the Next Big Thing see http://eBay.com
When Pierre Omidyar created eBay in 1995, the software programmer wanted to test the Internet's ability to support an efficient online marketplace. The story that eBay was created as a site for his then-fiancé to trade Pez candy dispensers with other collectors is pure fiction- the creation of his PR manager who was looking for a hook to interest reporters back in 1997. As for the name, eBay, it comes from Echo Bay Web Consulting Services, a name Pierre found 'cool'. Since Echobay.com was owned by a Canadian mining company, he registered eBay and the rest is history. Six years later, eBay is a powerhouse with merchandise in more than 16,000 categories. New category expansion has become of the engines of its spectacular growth. Executives ask themselves: Does eBay have the right to be in this marketplace? Do we add value? The company decided there was role it could play in the used car market. It was a heavily fragmented market, spread among classifieds, collector shows and dealerships. EBay wanted to create a national marketplace of used cars and parts. They entered the collector market first – it purchased a company that ran a series of collector car auctions and used it to coax sellers and spread the word among buyers. Then they launched a dedicated category and it took off - by the end of the first weekend – there were 8,000 items. They let the category grow, removed obstacles that appeared, added more categories and subcategories. Once 'natural momentum' takes the category to a certain size, eBay decides whether to invest more aggressively to stimulate supply and demand. They partnered with a large classified-listings marketplace and have more than 150,000 new items listed each day. Today, the category which generates enormous profits is growing a bit soft. EBay's purchase of ticket reseller **StubHub** provides another market.

Online Penetration of the Retail Market Total: 20% - Internet is third most popular shopping channel – after supermarkets and mass merchandisers. Up from 6th in 2008. 45% of consumers shop online weekly, up from 32% a year ago.

Category	1999	2000	2001	2003	2004	2007	2009
Computers	15.6	17.7	22.6	32	41	51	65
Books	8.5	11.1	13.3	12	18	24	28
Travel	5.7	10.5	14.9	17	21	32	38
Music/video	4.3	8.3	9.3			14	18
Auctions	2.8	4.6	6.2			11	12
Toys	1.7	3.7	6.2			10	11
Event tics	2.3	3.5	4.9			9	10
Flowers/gift	1.7	3.4	5.7			8	9
Electronics	1.2	3.1	4.8				
Sport. Goods	0.8	1.4	2.9				
Apparel	0.5	1.1	1.7				
Home office	0.2	0.7	1.4				
Jewelry	0.3	0.6	1				
Dept. Stores	0.3	0.6	0.9				
Health beau.	0.2	0.5	0.9				
Automotive	0.2	0.3	0.4				
Food/bev.	0.1	0.1	0.1				
Garden/hard.	01.	0.1	0.1				

Sticky Web Sites
EBay is the web's stickiest site – source Nielsen / Netratings
Average time spent per person

EBay:	1 hr, 39 min
Yahoo:	1 hr, 31 min
Google:	17 min

Factoids and Tips
- 3/4th of all shoppers browse online first.
- Privacy issues are e-tail barriers: 90% want to control their personal info, 80% support policies that prohibit sale of personal info - but only 8% do anything about it.
- Biggest reason shop online - easier to locate products - easier to locate critiques of products
- Safest to start with stores with brand names you recognize
- Use shopping apps to price compare -- basically a specialized search engine for shipping, be careful - some don't work so well –
- Browser-ad-ons or apps for coupons
- Make sure it has secured ordering (Secure Sockets Layer: SSL) – https
- 70% of web traffic concentrated on fewer than 4,500 sites.
- Traffic at online shopping sites during last Xmas was up 50%. Mostly last-minute
- Average of 51.3 million unique visitors hit online shopping sites. Brick-and-mortar sites benefited the most: top 7 brick-and-mortar sites up 73%
- Amazon.com remained top online retail site, with 2.5 million unique visitors per day.

Why Some Companies Choose Not to be Cyber-Merchants

See Ten Reasons the Internet is not the Answer: http://thenextweb.com/insider/2014/12/07/ten-reasons-internet-answer-2/

Although 95% of leading brick-and-mortar retailers have a website, only 45% market their products online. Reasons:

- There's no point going online if your customers don't do much shopping there. About a quarter of US homes lack 'Net access – this number much higher among lower and middle income homes so retailers, catering to those households aren't going find many opportunities selling online.
- The cost of doing business online can be a barrier – rural banking group whose customers don't want to do business online but is finally doing so for defensive purposes
- Shipping costs can be a huge burden – example Ikea
- Angering your main distributors - example Norwegian Cruise Lines, Levi Jeans.

Wireless - History
1st Generation (1G): analog systems (car phones) of the 1970s and 80s.
2nd Generation (2G): digital handhelds of the '90s;
3rd Generation (3G) focuses on bandwidth - high speed data and multimedia acess - up to 2Mbps on multiple voice lines, streaming audio, video, animation, on an always-connected device.

4th Generation (4G): Transmissions speeds 50% higher (ubiquitous TV) – example Sprint's $3 billion WiMax network – data transmission streams 100 Mbps plus.

Cell traffic uses 500 megahertz of frequency spectrum in the US – with an addition 50 Mgh set aside for business. The industry looks to take some from broadcast tv which probably won't happen. A voice call consumes more bandwidth than just about anything

The most popular wireless mobile applications:
Maps , Banking, IM, News, Mobile TV, Internet, E-Mail, Buying Music. – Nearly 1 billion will access the mobile Internet by 2011.

See Making an App: http://cultofmac.com/278816/making-mobile-app-now-super-quick-easy/