MOVING DATA.

THE iPHONE AND THE FUTURE OF MEDIA

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CHAPTER 12

Slingshot to Victory

Games, Play, and the iPhone

MIA CONSALVO

In announcing the creation of the iPhone, Steve Jobs proclaimed "every once in a while a revolutionary product comes along that changes everything." He went on to explain why the iPhone was being developed and what features it would offer, stating more specifically that "the killer app is making calls." Yet while the iPhone has been derided for its poor call quality and connectivity, it has met with unexpected success in another area—it has become a key global platform for digital games.1 Even before the release of the iPhone, researchers had already been mapping out the ways that communication and media consumption were being changed by mobile phones. In 2001, Richard Ling concluded that mobile users had "a means of group communication, media content (entertainment, information, data, pleasure) and the ability to 'synchronise everyday life.'" But the iPhone did something else: it put a gaming platform in the hands of millions of people who had never considered (and likely will never consider) themselves gamers. And with the opening of the App Store in 2008, the iPhone began transforming smartphones into agents of play, reconfiguring how its users relate to a mobile technology.

Several years later, millions of iPhone owners across the globe now use their expensive, advanced technological devices to slice flying fruit (Fruit Ninja), match multicolored jewels (Bejeweled 2), cut rope to release candy (Cut the Rope), trim a client's hair (Sally's Salon), and successfully land cartoon airplanes at a busy airport (Airport Mania). One of the most popular activities on the iPhone involves flinging cartoon birds through the air in order to crash through obstacles and destroy helmeted pigs. As the story transpires, the pigs have stolen the birds' eggs, and the birds are itching for revenge. The player determines an overall strategy and each bird's trajectory as she slingshots them toward the pigs, who hide underneath elaborate structures of wood, glass, and concrete. Such mayhem from the Finnish developer Rovio created the best-selling iPhone application for much of 2010 in more than sixty countries, including the United States, the United Kingdom, Canada, Germany, Sweden, Singapore, Chile, and Panama. The developers have sold more than 12 million copies of the game so far, across the iPhone, iPad, and other smartphone platforms, such as Android. Angry Birds is clearly a success for its developers as well as for Apple's App Store in general. And although no longer exclusively for the iPhone, Angry Birds is illustrative of games on the device as well as games on contemporary mobile phones.

This article takes Angry Birds as a case study of how games are played on the iPhone and how the platform has redefined the audience for games, created new forms of gameplay, and changed how games are marketed and sold. More broadly, Angry Birds and many other games like it have redefined our relationship with digital technologies, in this case mobile phones, as well as how we have incorporated play activities into our daily lives in an increasing and more pervasive manner.

From Keizers to Game Play

Early research on videogames was driven by social scientists, who studied the platforms and games available to them—starting with arcade games and then moving to home console systems such as the Atari VCS and Nintendo's NES and SNES systems. Researchers usually explored representations found in games, mostly focusing on violence and gender themes, and the games rarely appeared in a positive light. They also investigated the effects of games on individuals, usually concerned with the violence in games and how it might affect youthful players. Yet as game studies has evolved as a field, a broader variety of games and systems to play them on have appeared, and methods and approaches have likewise expanded. Researchers have started doing deep
analyses of individual games, have investigated the preferences and practices of players, and have done important work studying the structures of the industry and its global presence. Yet the vast majority of that work has continued to focus on console and PC games, with mobile gaming a peripheral interest at best.

The earliest research mentioning mobile game players or games was often a minor part of broader studies of mobile phone use. Researchers were concerned to discover how mobiles fit into everyday life and tended to focus on societies with the greatest early adoption of mobiles—Japan and parts of northern Europe. Probably the best known work on this subject is the edited volume Personal, Portable, Pedestrian: Mobile Phones in Japanese Life. While helpful in conceptualizing how the mobile phone (or keitai in Japanese) has become a key mediating factor in diverse social situations and relationships in Japan, there is no discussion in the book of how games figure into mobile use. Speaking to mobile use more globally, Harvey May and Greg Hearn argue, “The mobile phone has begun to offer people entrenched in metropolitan lifestyles ways to expand limited leisure time.”

Even more recently, little attention continues to be paid to studying play in relation to mobile games, apart from a few highly specific areas. Most commonly, researchers have explored the use of mobile games for education—particularly health care and museums—and have written about mobile game designs as well as initial reception of those games. Likewise, researchers have studied how mobile devices can be used in the creation of urban games as well as hybrid-reality games that employ localized spaces as part of the game’s space, objectives, and play. Generalized studies have concluded that playing mobile games is “an essential part of the mobile phone culture of teenagers” in Finland. Likewise, other researchers found that for youth in the United States, Spain, and the Czech Republic, “visual appeal, perceived ease of use, escapism, and especially perceived convenience are major factors shaping widespread acceptance of mobile phone games.” Relative to the concept of play, Michal Dafiot-Bul argues that during the mid-2000s in Japan, the keitai was transformed from a technological gadget into “a little friend that is an intensely personal part of users’ lives and is an outlet for fun and play-thrills.” Importantly, play was a central feature of that experience for users, contributing to what he saw as “the merging of play into everyday life.” Play here is conceptualized broadly to include not only games but also nonserious applications such as ring tones, screen savers, horoscopes, and sports applications. And in addition to the normalized use of such applications, playfulness via mobile activity was key in inserting itself into “the in-between moments of everyday life, and their transformations into enjoyable, pleasurable breaks.”

Taking an industry perspective, Dean Chan has examined how Japanese game companies have adapted to the growing ubiquity of mobile use and tried to create a space in that use for games. During the early days of such activity, arcade classics were popular, forming “the backbone of casual mobile gaming.” He details in particular how Square Enix expanded into the mobile market, bringing its well-known franchises Final Fantasy and Dragon Quest to the platform, primarily through ported versions of its early single-player titles, sold on preloaded handsets. He points out that such games not only engage current Square Enix players and fans but also broaden the market to casual gamers who don’t necessarily play console games, thus enlarging the player base for the entire franchise.

Chan also reminds us that assumptions about the context of play must continually be challenged and kept in mind: for example, that the home is an increasingly popular space for mobile gaming, where previously consoles and personal computers were thought to be dominant. Likewise, while mobile games in South Korea might be crossovers with PC-based MMOGs such as Ragnarok Online, such games don’t necessarily transfer well to Japan, where consoles remain much more popular as gaming devices than computers.

Thus although we know a bit about how mobile games are employed by youth, if not adults, there is still much to learn. Mobile games, as they have become more popular on phones, are merging with a technology already being used as a broad communications device and a media player. But with the iPhone, these games were introduced to a mass audience, leading to an explosion in the mobile game industry. Researchers are only now beginning to investigate what this means. For example, how might such devices transform the spaces we travel through, from the mundane to the playful, and, likewise, how might more of our interactions be mediated in a playful manner? There are no answers yet, but the iPhone is moving us in interesting directions.

The Mobile Game Industry

While research about mobile games has been scant, that's partly because mobile games are a fairly recent entrant into the larger digital games industry. Before 2002, only simple games such as Tetris were playable on mobile phones, and such games came embedded or preloaded onto phones at the time of
purchase. The games that appeared were mostly ports of arcade classics or simple single-player games that could be played in short bursts of time.

After 2002, mobile developers began to experiment with different distribution models, allowing users to download games onto their phones or purchase and download games onto a PC and then transfer those games via cable or a sync connection to the phone. There were several problems with this model, however, that continued to slow the widespread adoption of games on mobile devices. Many mobile companies charged users for all air time used, meaning downloading games onto a phone incurred costs simply for the download itself, above any actual purchase cost for the game. Additionally, the market at the time featured a large number of phone models for each mobile company, and those companies usually employed their own pricing and use plans. Although there were some third-party sites, most phones could only access their provider’s site for licensed games, thus ensuring walled gardens and limited choices. Developers also had to negotiate varying technological standards, including different screen sizes and display options, programming languages, and methods of payment for each mobile company. All of those challenges provided little incentive for game companies to try and create games for mobile devices and for consumers to try them.

In 2007, changes to the various infrastructures of the mobile industry led to wider opportunities for mobile game development and therefore player use. At that time, smartphones were becoming more widely available, in conjunction with mobile broadband connections with relatively flat data fees; the most important development, however, was the release of Apple’s iPhone. Although it seems difficult to believe now, at launch in 2007 the iPhone did not allow users to download independent applications—or apps—onto their phones. The only apps available were created by Apple and featured no games at all. Yet by mid-2008 Apple opened its App Store and began allowing third parties to offer apps for download. Consumers downloaded more than 10 million individual apps in the first three days, and by November 2009, 100 million iPhone and iPod Touch apps were being downloaded each month. In January 2011, Apple announced that more than 10 million different apps had been downloaded across its various devices.

Such data show that games have played a significant role in the app explosion. Initially, games constituted more than three-quarters of all apps available, suggesting developers were finally seeing the potential for reaching a broader audience for mobile games. And data from 2010 suggest that games continue to be a hugely popular category for consumption, yet they do not dominate the app landscape as they previously have. Overall, however, games are now considered a central part of the iPhone experience and feature regularly in the App Store’s most popular and heavily downloaded offerings. As of January 2011, games were the second most popular app category (after books). And of apps submitted to Apple for approval, 14 percent of those for the month under review were games. In January 2011, the top three Paid Apps (in the U.S. store) were all games—Angry Birds, Fruit Ninja, and Cut the Rope. The diversity of the offered games has evolved from simple 2D ports of older games to include original creations that fall into varied genres such as action, first-person shooter, role-playing, and adventure, as well as games that feature full 3D graphics, even if the best-selling games reflect simpler styles of play. Providing yet more choices, the App Store’s section for games includes separate categories for educational, strategy, simulation, trivia, music, and other types of games.

Although games are a significant presence in the App Store as well as on many users’ phones, their pricing model is still in flux, ranging from the more expensive titles such as Square Enix’s Chaos Ring (US$39.99) to the more popular, cheaper games such as Fruit Ninja (50.99), to games that cost nothing at all. Free games constitute a large portion of the games in the App Store, yet “free” can mean many things. The category includes fully free games, free games that are mainly demos or samplers for paid versions, and freemium games, which can be played for free but require payment to unlock various elements, such as additional levels, areas, items, or skills. There is still debate about which model is best for pricing and how much certain games should be priced at, with some developers worried that there is a “race to the bottom” of pricing that will result in declines in quality and opportunities for independent developers. Yet others argue that there are other ways to make a profit from mobile games, beyond a specific charge to buy the title. According to data on average prices for apps, the average game price in 2011 was $1.66, while the average app price was $4.92. This suggests that either games are popular because they are less expensive than other apps or that perhaps there is room for a price increase. Only greater experimentation among game developers will answer that question, however.

Thus, in only a few years, the iPhone went from being a games-free device to a platform that (along with the iPod Touch and the iPad) Apple now sees as a serious contender in the mobile gaming world. Of course, simply offering games isn’t enough to ensure they are purchased and played. Developers worked to build games that went beyond early ports and arcade classics and that specifically fit the context of use—mobility with a touch screen. And while multiple types of games featuring quite different play styles are available
on the iPhone, some have been more successful than others in insinuating a particu- lar type of gameplay into the domain of the everyday iPhone user. One such company is Rovio, via their game Angry Birds.

Angry Birds

The company that developed Angry Birds—Rovio—is based in Finland, and has been making games for various platforms since 2005; it is no newcomer to game development or to mobile games. The company has in the past made games for Nokia's N-Gage and other platforms, although nothing that generated the success of Angry Birds.

One of the challenges for iPhone game developers has been pricing. Rovio takes a common approach for Angry Birds: it offers both a free (limited) version of the game and a full version for ninety-nine cents. The free version serves as a demo for the full version, allowing players to try the game and see if they'd be willing to pay for more content. As of December 2010, Angry Birds had been downloaded (across all platforms) more than 43 million times, with about 25 percent of those downloads being the paid version.

Compared to conversion rates of 2 to 3 percent for downloadable casual games, such numbers point toward success. Yet it's likely the price point has been key—while other games can cost upward of ten dollars, most successful mobile games are either free or priced at ninety-nine cents.

Indie developers have noted their concern over this unwillingness by consumers to pay more for games—arguing that “it forces a lot of developers, specifically indies, to devalue their games to significantly increase the number of sales needed for developers to get back their investment.”

Echoing that concern, the three games listed as top sellers for January 2011 all cost ninety-nine cents, and, indeed, all of the games listed in the top ten Paid Apps for this period (only two apps were not games) were priced the same. But although the price is a point of concern for developers, the majority of consumers have gravitated toward low- and no-cost games. Of course, price isn't their only concern—a game must be “good” in some way to succeed—and what makes a mobile game good is quite different from traditional console games. Examining the gameplay of Angry Birds makes this clear—the title has minimal story and basic graphics, yet gameplay is polished, is accomplishable in brief bursts, has multiple paths to success, and features mechanics and themes basic enough for almost any user to pick it up and play successfully.

Angry Birds has been described as a physics-based or platformer game that takes particular advantage of the iPhone's touch screen. The game has a nominal storyline (distracted birds have their eggs stolen by greedy pigs, at whom the birds then launch themselves for revenge via elaborate structures and bird-destruction choices) that plays as an introductory cut scene and offers the player a simple motivation for why one would want to fling birds at various structures. Each bird is launched via slingshot and has a special power—blue birds when tapped in midflight will multiply into three birds, yellow birds when touched will use a burst of speed, large red birds will drop a bomb, and so on. The birds are given to the player in a particular order, and the player must strategize how best to destroy each level's unique structure and thus reveal and destroy the pigs before running out of available birds. The player must also strategize her use of birds and where (at structures and pigs) they should aim and when.

The game's levels are arranged in chapters, and players must beat each individual level in order to advance. Levels are likewise scored, with the player receiving points for each pig that is destroyed, barricade elements that are demolished, and remaining birds left unused. Players can earn from one to three stars on a level but must clear the level in order to advance, even if only with one star. Each level can generally be played in under a minute, with levels varying in difficulty based on the challenges involved. The world of Angry Birds is a colorful one, with multihued birds and comical pigs that often wear helmets to keep themselves safe. Graphics are minimal, however, since the main point of the game is movement—figuring out the best trajectory for each bird and how best to use birds of various types—which part of a structure a bomb-dropping bird should target, as opposed to how best to launch an explode-upon-impact bird. The slingshot allows the player a fair amount of control over trajectory as well as speed, although simple force is never enough to clear levels and kill pigs. And while early levels are fairly straightforward and forgiving—almost any trajectory will work—later levels force players to strategize how to launch birds, where to detonate them, and how collateral damage can be used to add points as well as bump off a seemingly invincible pig.

The length of time it takes to play a level is key for a few reasons. First, clearing a level provides the playing of the victory theme, along with the player's score for the level, hopefully leading to gratification and a sense of accomplishment for the player. While easy levels can be easily dispatched and thus might pass in a blur, the endless barrage of levels is punctuated by the sounds of success every minute or so, giving the player short bursts of positive feedback. Likewise, if a player fails a level, it's over quickly and immediately available to retry—no long loading times or cut scenes to wade through. Levels can also be instantly interrupted and restarted. Thus if I know I need
to use each bird in a particular way and one bird fails in its mission, I can quickly restart the level, rather than finish it knowing I will lose. The ability to replay and retry is a key element of the gameplay—normal, expected, and facilitated by the developers.

Another reason for short levels is to accommodate the varying nature of mobile gaming. Although mobile games are increasingly played in the home, in a person’s bedroom, they are also ubiquitous in public places. At the time of this writing, Angry Birds is probably currently being played on buses and subways, in grocery store and bank lines, while waiting for friends and relatives to be ready, and in many other interstitial spaces and times. A level can be completed in as little as ten seconds. Yet once started, those quickly accomplished levels, as well as the annoyingly difficult levels, can also lead players to a “just one more” mindset, allowing gameplay to balloon outward in time, sometimes spilling over into and interrupting the events the game was supposed to help one get to or past.

Another way that Angry Birds finds success with the market is through its varied play style. While for some players it may be effort enough to progress from one level to another and unlock new birds and chapters, Rovio also built in elements for those desiring different experiences. For example, each level must be completed to advance, but players can earn from one to three stars for completion. Stars are awarded based on points earned via destruction of pigs and structures, and via conserving the birds allotted to the player. Those desiring perfect scores can thus replay levels to achieve full stars, which can also unlock special bonuses in the game. The final level is the addition of leader boards and achievements. These are not an overly obvious part of the game but do figure into its success. Players can compete against a worldwide population or against friends. Likewise the game awards for certain achievements that the player unlocks. For players desiring to compete or earn visible recognition of their Angry Birds scores, these add to the pleasure of the game. Finally, the game is regularly updated by the developers, who add new levels and birds to keep the game from growing stale. All of these elements combine to give different types of players multiple paths to play through and enjoy without requiring all of them.

Those multiple options and simple form of play ultimately help us take games along with us more easily throughout our days. Although dedicated gamers have always had the option of mobile game systems such as the Nintendo Game Boy (or more recent 3DS) and Sony’s PSP to move gaming out of the home or away from a stationary arcade, games on the iPhone make games more accessible for many more people. Games are being democra-

tized and destigmatized—the app for Angry Birds sits quite easily beside its owners Facebook app, weather app, and Nike+ app. The owner doesn’t need to purchase a dedicated gaming system to engage in some playful activity. Games are thus normalized, becoming part of the everyday landscape that is an iPhone owner’s screen. That sharing of screen space indicates the banality of games just as it signals their move—quite literally—into pedestrian life and their resulting mainstream acceptance.

Conclusion

Although mobile games existed before the iPhone, the device created a common platform that developers could exploit to reach more players and widen their potential audience. The large number of games available upon the opening of the App Store to third-party developers indicates some of that pent-up demand finally being released. Developers now have a sizable, preinstalled base of potential customers and have worked to create games that fit the portable, tactile, motion-sensitive device. Likewise, consumers were eased into buying games through the iTunes storefront and have made games one of the most profitable segments of app development.

One of the greatest successes of that system is Angry Birds, although many other games have also developed similar styles of play and reached many people who otherwise do not play games. What’s key about Angry Birds (and the games like it) is its success in normalizing play in the everyday lives of a growing segment of society. While consoles are still seen as being for “core gamers” and thus a smaller, more easily identified demographic group, iPhone game players defy categorization. They likely do not even identify themselves as game players or, worse (to them), as gamers. Games are simply more apps on their phone—to use to pass the time, avoid interactions, relax and unwind, compete, or learn. As previous researchers found in Japan, iPhone users more broadly have incorporated play as a nonexceptional activity into their lives and thus normalized the practice. In part thanks to the iPhone, now no one is a gamer—instead, we are all players.

Notes

CHAPTER 13
Reading (with) the iPhone

GERARD GOGGIN

At Xerox PARC, to spur interest in high culture cum computers, I made a slide presentation about a wonderful technology called Basic Organization of Knowledge (B.O.O.K.). It was solid state; held several megabytes... weighed only a few pounds; had low power drain; had a high resolution, high contrast readable display that was highly legible in daylight, and had the capacity to represent the most important segments of the world's knowledge. "Yes, folks," I used to say, "the B.O.O.K. will revolutionize our culture, lead to better forms of politics and technology, and bring about a new kind of modern world."

—ALAN C. KAY, "A Review Article: Dynabooks: Past, Present, and Future"

Ebooks promise to revolutionize the way the world reads.

—BILL GATES, "Beyond Gutenberg"

It doesn't matter how good or bad the product is, the fact is that people don't read anymore. . . . Forty percent of the people in the U.S. read one book or less last year. The whole conception is flawed at the top because people don't read anymore.

—STEVE JOBS, 2008

The book. . . just turns out to be an incredible device.

—JEFF BEZOS, 2007

The use of handheld electronic devices—recently termed e-books or e-readers—for reading has a relatively long history, spanning at least four decades. There were many experiments, prototypes, commercial developments, and some early reader fascination. In the 2010s, mobile phones and media have become well positioned as important forces in contemporary reading. New genres associated with text messaging and "cell-phone novels" (popular notably in Japan) are already well established. Moreover, the advent of smartphones promised to offer new applications to make the mobile a reflex technology for reading.
It is fair to say, however, that neither the market for e-readers nor their extensive use really coalesced until 2007. A key reason that e-reading finally started to capture the wider public imagination, in Western countries at least, was the appearance of the iPhone. It was the iPhone that really catalyzed the potential of mobiles to be full-fledged reading devices with its new affordances—haptic manipulation of text, dexterity of the handset, characteristics of its screen resolution—and, of course, the fertile possibilities of iPhone apps. For many users, the iPhone really became a flexible, cheap, relatively easy-to-use reader, competing with the e-readers still languishing in their infancy, such as Sony's e-reader. Consequently, this chapter argues that if we wish to understand the dynamics and contours of the iPhone, its social functions, historical "moment," and cultural implications, then reading is an important part of its story. Conversely, if we are interested in contemporary reading practices, then our itinerary takes us through the iPhone—indeed, a notable stop on such an exploration.

In this chapter, I reprise the iPhone’s career as one of the first viable e-readers. First, I briefly sketch the prehistories of electronic reading that shaped the iPhone, including types of reading on mobile phone devices. I then look at the design of the iPhone and what Apple imagined as the reading possibilities for the technology. I consider how users, the people formerly known as readers, took up the iPhone, discussing the kinds of reading practices they devised—and also what kinds of reading apps were developed and became popular. I place the development of reading on the iPhone in the wider scene of the digital transformation and politics of reading and publishing. Here I consider the advent of Amazon’s Kindle and the panoply of e-readers around the world and where the iPhone fits into these dynamics. Finally, I look at Apple’s third device, the one in the middle between the laptop and smartphone, as CEO Steve Jobs famously described the iPad at its January 2010 launch. With the iPad making a trio of the duo of laptop and smartphone, not to mention, in point of fact, many other kinds of devices and shades in between, reading becomes a full-fledged part of the moving data and personalization of media that the iPhone moment represents.

Prefiguring iPhone Reading

The history of reading is a large, rich topic, with much recent research, theorizing, and revisionary discussion. There is a wealth of work on the closely related topics of writing, authorship, and publishing but also on the relatively new research area of the history of the book. We also have a substantial literature on technologies of reading, especially electronic and digital technologies and books. Until comparatively recently, however, these discussions on the history of online reading, e-books, and digital technologies have tended to focus on the computer and online media, such as hypertext and the Internet—rather than mobiles. However, an interesting aspect about attempts to grapple with the iPad, especially, has been the way that commentators, notably in the tech press and blogs, have had recourse to popular, available histories of computing and portable technologies—and how these figured in new notions of reading and writing.

The most obvious precursor device for the iPad is the Dynabook, devised by Alan C. Kay in the late 1960s and described as a prototype in a famous 1972 paper. Reflecting on the Dynabook thirty years later, Kay wrote:

I proposed a notebook-sized ‘Dynabook’ (‘Dynabook: A Personal Computer for Children of All Ages’) that would act as a new kind of electronic book for content of all kinds—especially dynamic and high content—and could also serve as a supermedium for authoring a wide range of ideas in new and important ways... it struck me that a child’s computer had to be mobile (just like them) and should look more like a notebook than a time-sharing terminal on a desk (an Aldus book vs. a Gutenberg Bible)... [Children] needed to be able to read about important ideas of all kinds and to ‘write’ in a variety of media to make the ideas their own. This meant that the display had to be really readable (not just decipherable).

Extolling its virtues in 1972, Kay suggested that:

‘Books’ can now be ‘instantiated’ instead of bought or checked out. The ability to make copies easily and to ‘own’ one’s information will probably not debar large existing markets, just as easy xerography has enhanced publishing (rather than hurting it as some predicted), and as tapes have not damaged the LP record business but have provided a way to organise one’s own music. Most people are not interested in acting as a source of bootleggers; rather, they like to permute and play with what they own. A combination of this ‘carry anywhere’ device and a global information utility such as the ARPAnet network or two-way cable TV, will bring the libraries and schools (not to mention stores and billboards) or the world to the home.

In his study of the Dynabook, John Maxwell comments: ‘If the invention of the digital computer can be compared with the invention of the printing press, then it follows that there is an analogous period following its initial...
invention in which its role, function, and nature have not yet been worked out. In the history of printing, this period was the late 15th century, commonly called the incunabula, when early printers experimented with ways of conducting their craft and their trade. Maxwell's observation is a telling one for the field of electronic books, as well as personal computers, to which Kay and his colleagues at Xerox PARC made such significant contributions. The parallels between the Dynabook and the iPad have been remarked on by several commentators, among them the tech writer Wolfgang Gruener. Gruener interviewed Alan Kay about the similarities, and Kay told the following story:

"When Steve [Jobs] showed me the iPhone at its introduction a few years ago and asked me if it was good enough to criticize, which is what I had said about the Mac in 1984, I held up my Moleskine notebook and said 'make the screen at least 3"x8" and you will rule the world,' Kay said. . . . Of course, I meant do more than just that, but it was clear the iPhone was going to be really appealing and very useful for most people," Kay said. "When I saw the iPhone, I figured that they had already done a tablet version, which is easier to make work than the iPhone, so I was partially joking with Steve."7

In the years between the Dynabook and iPad, the personal computer developed enormously. Much reading of documents, texts, and books was actually done on desktop computers until portability became possible with laptops, notebooks, and tablets. Yet the personal computer does not appear to be directly conceived via the metaphor of the book. By this I mean that while the computer certainly was the subject of much experimentation, habituation, and discussion as a new kind of reading device—a catalyst for innovations in both reading and writing—its materiality was quite different from existing books, their forms, tactility, associations, and affects. Rather, the concept of an e-book developed—twinning the portability of a book with its ability to contain and represent words, writing, and texts. The origins of this "dream of electronic books" has been traced to Vannevar Bush's famous paper "As We May Think," where he proposes a device dubbed a "memex" that operates, like the human mind, by association. "Consider a future device for individual use, which is a sort of mechanized private file and library," Bush wrote. "It needs a name, and to coin one at random, 'memex' will do. A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory. . . . Wholly new forms of encyclopedias will appear, ready-made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified."9 One trajectory from Vannevar Bush obviously leads through hypertext narrative and writing and the World Wide Web—and now through the contemporary visions of social media. Another trajectory neglects the emphasis Bush puts on imagining a new associative technology and realizes, even if only as an intermediate goal, the idea of storing and retrieving books. This later trajectory is largely what commercially available e-books have followed, since the term become widely used in the late 1990s. As Terje Hillesund explains:

In the broad sense e-books have been around for several decades. In the Gutenberg Project thousands of books, mostly classic and public domain literature, have been made available for free as digital documents since the 1970s. . . . Before the term e-book came around in the late 1990s it was not unusual to talk about electronic books in terms of files collected in the Gutenberg Project or books formatted on compact discs. There were also early unsuccessful attempts at making reading software for computers. . . . In 2007 the term e-book refers to digital objects specially made to be read with reading applications operating on either a handheld device or a personal computer. This modern concept of e-books came into common use after Martin Eberhart and Jim Sachs both started their own companies and developed Rocket eBook and SoftBook, the first two handheld e-book reading devices.10

Some commentators talk of the first generation of e-book readers, including the Sony Data Discman (1990), the Franklin Bookman, and the early Rocket eBook and Softbook. The second generation—with "modern capabilities, greater memory, better screen resolution, and a more robust selection of available titles"—included the SoftBook Reader (1998), Librius Millennium device, and Everybook Dedicated Reader. In 1998, an organized effort began to create a common standard, and the Open eBook Structure was produced the following year. It became a precursor to the standards now produced by the International Digital Publishing Forum. Sensing the mood of the late 1990s, Bill Gates—promoting Microsoft's development of the font-display technology "Clear Type" as well as the corporation's involvement in the open e-book standard—declared that "e-books promise to revolutionize the way the world reads. Whereas paper books are stand-alone entities, e-books can
include hypertext links to additional content, whether it is in other books, databases or websites.” Gates also stressed that “you will also be able to customize e-books by adding your own notes, links and images. In a paper book, content is fixed; with e-book technology it is flexible. Finally, you will be able to get sound and moving images to support the text, creating an entirely new multi-medium.”

Despite the enthusiasm shown by large booksellers, computer companies, and e-book technology developers, the road still remained bumpy. Standards remained a problem, especially with e-books, whereas some types of proprietary software, such as Adobe PDF, were gaining acceptance and portability across devices, amounting to de facto standards. Moreover, the affordances of the devices themselves were underwhelming. In reviewing available e-books, no less than Alan Kay himself judged that “little of what is good about books and good about computers was in evidence.” The metaphor of generations is, of course, too pat, but if it does hold, this can be seen to commence in 2005, when Sony launched its e-book reader—the “Sony Librie”—using E-Ink technology for its screen. I will return to the Sony e-book reader shortly, but for the present I want to depart from the history of e-books, as they were regarded from the late 1990s through 2005, to consider cellular mobile phones and reading.

Cellular mobile phones were launched commercially in the late 1970s, and for their first decade and a half were principally associated with portable voice telephony and communications. With the advent of second-generation digital mobile phone standards, notably the Global Standard for Mobile, various kinds of writing and reading became possible and popular. The most distinctive textual feature of mobile phone culture was text messaging. Text messaging commenced as a form of subcultural exchange of messages and witnessed the development of abbreviated language and even argot among users. The possibilities for messages, letters, and even longer texts soon became something that attracted experimentation and even a genre of literature based on text messaging. There were different varieties of such writing—especially based around sending of messages as installments, epistles, or parts of dialogue. Most prominently, however, cell phone novels emerged in a number of countries, first Japan (in 2003), then other countries in Asia, Europe, and Africa. The largest Japanese cell phone novel site, Maho i-Land, attracted considerable attention in English-language press, especially notable as a gendered form. The cell-phone novel, or keitai shosetsu, is the first literary genre to emerge from the cellular age. For a new form, it is remarkably robust. Maho i-Land... carries more than a million titles, most of them by amateurs writing under screen handles and all available for free.” According to the figures provided by the company, the site, which also offers templates for blogs and home pages, is visited three and a half billion times a month. The phenomenon of the mobile phone novel highlights the potential of these portable devices to go beyond simply functioning as useful document readers. With the availability of Windows Office, Adobe PDF, and other software on mobiles, especially smartphones—to compete with the PDA market—more computer-screen-like reading on mobiles began to occur. A French company, Mobipocket, founded in 2000, became the leader in e-book reading on mobile devices. Mobipocket is one of the three main e-book formats based on the Open eBook standards, focusing on offering book titles for reading on PDAs or a range of mobile-device operating systems (Windows Mobile, Blackberry, Symbian, and so on). Acquired by Amazon.com in 2005, Mobipocket promotes its e-books under rubrics such as “Did you ever try to read a book one handed?”, “Did you ever try to read in the dark?,” and “Read everywhere”:

Reading on a phone? What a funny idea. . . . the screen is too small and I don't even read PDF documents! This is what I thought before trying, but . . . 3 minutes to kill? I always have a phone in my pocket. Packed subway? There is always enough room to pop out my phone. On vacation? I've my entire library with me. It's dark? It's cool to have a backlight. The screen is too small? Of course not, I like to read on my phone.

Similarly, the resurgence of mobile Internet from after 2006 (it had been introduced but flopped in the late 1990s), also saw many kinds of online reading familiar from computer and laptop screens migrating to mobiles. These developments continued, but a new direction emerged with the appearance of the iPhone.

Reading with the iPhone

When Apple first launched its iPhone to rapturous reviews and strong sales, its capabilities as a reading device were not well-publicized. Apple's first official media release announced:

Apple® today introduced iPhone, combining three products—a revolutionary mobile phone, a widescreen iPod® with touch controls, and a
breakthrough Internet communications device with desktop-class email, web browsing, searching and maps—into one small and lightweight handheld device. iPhone introduces an entirely new user interface based on a large multi-touch display and pioneering new software, letting users control iPhone with just their fingers. iPhone also ushered in an era of software power and sophistication never before seen in a mobile device, which completely redefines what users can do on their mobile phones.19

In the early flush of enthusiasm for the iPhone, Apple emphasized music, maps, browsers, touch, and the device’s sensors, without any mention of reading books. In its early advertising, however, Apple did focus upon newspapers. A 2008 advertisement for the iPhone on the Apple website prominently featured a page from the New York Times to show the ease of browsing on the device. News on mobile media devices had been in development since the mid-1990s offering alerts, information, messages with breaking headlines, premium mobile services, and, with better mobile Internet, reading newspapers via their online websites.20 So the promotion of the iPhone as a news-and newspaper-reading device should be seen as a significant development in this trajectory. (It is interesting to note here that the New York Times has been a prominent sponsor and partner in many Apple events to promote the iPad.)

Apple seemed to devote little or no effort to promoting e-books and e-reading, apart from news; less than two years later, however, the iPhone was forging ahead in the e-book market, apparently without even trying, according to a much-quoted article in Forbes magazine:

It’s official: The iPhone is more popular than Amazon.com’s Kindle. And not just in the obvious categories like listening to music, browsing the Web or the other applications where Kindle barely competes. Now, the iPhone is also muscling into Amazon’s home turf: reading books. Stanza, a book reading application offered in Apple’s iPhone App Store since July, has been downloaded more than 395,000 times. . . . By comparison, Citigroup estimates Amazon will sell around 380,000 Kindles in 2008. . . . Sony’s Reader [it is estimated] will sell only a fraction of that number. In other words, Apple may have inadvertently sold more e-readers than any other company in the nascent digital book market.21

One year later, the iPhone had been hailed as a genuine force in the e-reader market. "One of the most popular e-reader devices on the market could soon be the iPhone," an article in eWeek stated. "In October [2009] one out of ev-
Books. Best-selling titles were gradually made available via e-reader apps for the iPhone, including popular genres such as romance, fantasy, science fiction, and so on. In the meantime, "classics" were heavily featured in the Classics app. In early 2011, the Classics website featured titles such as *Alice in Wonderland*, *Robinson Crusoe*, *Gulliver's Travels*, *Paradise Lost*, *Pride and Prejudice*, and *Treasure Island*: "Some of the greatest stories ever written." Beyond the cultural legitimacy offered by these choices, a practical reason is that classics are typically out of copyright (unless copyright resides in a particular recent edition). So machine-readable e-texts are widely available at little cost, not the least via projects such as Gutenberg, even if, as the case is with Classics, the company spends "countless hours working on them to look just right on the screen." Ultimately, iTunes was not so much a way to offer books for purchase as to make the apps themselves available—and then to provide a way for users to load, transfer, and organize their book purchases or existing free books via iTunes. A more adventurous development occurred in the modification or creation of interactive books as apps for the iPhone. These included genres such as children's books, with titles such as *Princess Dress-Up: My Sticker Book*, *Dr Seuss's Fox in Sox*, *Winnie the Pooh Pussle Book*, and *True Ghost Stories from Around the World* (with new stories regularly added). Children's books had long had different kinds of interactivity, users expectations, and play (pop-ups, tactile features, tear-offs, stickers, and so on), so iPhone apps provide a new medium for realizing these features.

No sooner had the iPhone established itself as a handy medium of choice for many readers through the unexpected user-driven success of e-reader apps then the real battle in the economy of reading began. In November 2007, Jeff Bezos launched Amazon's much awaited Kindle e-reader device. *Newsweek* called the event the "reinvention of the book":

Though the Kindle is at heart a reading machine made by a bookseller—and works most impressively when you are buying a book or reading it—it is also something more: a perpetually connected Internet device. A few switches of the fingers and that zoned-in connection between your mind and an author's machinations can be interrupted—or enhanced—by an avalanche of data. Therein lies the disruptive nature of the Amazon Kindle. It's the first "always-on" book.

Quickly adopted by readers, particularly in the United States, because of its potential for easy purchase and wireless and mobile download of books—but also because of the well-known Amazon brand—the device proved so popular that it eclipsed the early-to-market Sony e-Reader. The Kindle became the first dedicated e-reader to gain wide adoption in the consumer market. This presented both a challenge and an opportunity for Apple's iPhone. On the one hand, Apple, by dint of the e-reader apps available for the iPhone, had become popular for reading, echoing its popularity in the games and music markets. Kindle also was forced to create an app for iPhone because of its popularity—and the need to ensure that Amazon, rather than Kindle per se, was represented on the iPhone platform. On the other hand, the Kindle was a worthy, if not formidable competitor to the iPhone because its larger format, customized for reading, was a preferred reading experience for many. And the Kindle opened the door directly to the vast trove of Amazon's book wares, quite an advantage given that Amazon was the leviathan of online book retailing. Kindle also departed in important respects from the iPhone and other smartphones because it was, after all, a device centered on book lovers. Its early versions were anomalous in this regard: it was devoid of Web surfing and e-mail capabilities, and its wireless feature functioned as a delivery mechanism rather than something the user could configure or customize.

At the end of 2009, the bricks-and-mortar U.S. book giant Barnes & Noble launched its own e-reader, the Nook. With the Nook, Barnes & Noble claimed to offer access to more books, newspapers, and magazines than Amazon, and also, via its Wi-Fi, free in-store browsing of complete e-books. The Canadian Kobo e-reader launched in May 2010, a venture in which Indigo Music and Books holds the majority interest and has partnered with Borders to offer the device in Hong Kong and Australia. At the same time, Kobo launched its software, which works on other e-reader devices, such as laptops, smartphones, and tablets, and allows access to a Kobo account for purchasing e-books, audiobooks, and other materials.

The launch of the iPhone in the United States, and especially as it slowly rolled out in the rest of the world, occurred only a little before the e-reader market gained a great deal of energy and consumer acceptance. Although Apple was not lacking for business and profitability with the great success of its iPhone, the device still unexpectedly won them a toehold in the e-reader market. Of course, Apple, with its reputation for secrecy, was doubtless developing its e-reader strategies in private. Yet the furious incubation of e-readers all around the world after late 2007—including in countries like China, which have received little notice from the Anglophone world—also posed serious challenges for Apple's directions in smartphones and its next gambit—the reinvention of the tablet.
Apple’s First (Official) Reader: the iPad

Gossip about Apple’s plans to develop a tablet device, perhaps called the iTablet or iState, was rife for some years before the iPad premiered. The press release announcing the iPad outlined its main selling points:

Apple today introduced iPad, a revolutionary device for browsing the web, reading and sending email, enjoying photos, watching videos, listening to music, playing games, reading e-books and much more. Apple also announced the new iBooks app for iPad, which includes Apple’s new iBookstore, the best way to browse, buy and read books on a mobile device. The iBookstore will feature books from major and independent publishers.

When Jobs unveiled the iPad, he also touted the iBooks app, claiming that it would be a breakthrough in e-reading. Apple deliberately targeted the publishing community and actively began to negotiate deals. Unlike the iPhone, however, in which e-reading grew “ unofficially,” the “official” iBook app and the iBookstore were slow to develop—especially in countries other than the United States. “When Steve Jobs launched the iPad this year, he predicted its iBooks app would be the way forward for publishing, purchasing and reading e-books. But the months since the tablet’s launch in Australia have been frustrating as Apple concentrated on setting up US and British markets, leaving merely out-of-copyright classics in the local iBookstore.”

Even toward the end of 2010, the Apple iBookstore lacked titles, compared to its chief competitors: Kindle, Nook, and Kobo. With the case of use and features of these e-reader apps, and others, there was no compelling reason for iPad users (including this author) to wait for Apple to finally offer comprehensive offerings through its iBookstore.

Apple’s iPad had a slow start as an official, authorized, and self-proclaimed entrant into e-books. Yet in other respects, the iPad built upon the achievements of the iPhone in becoming a reading technology, extending upon the smartphone’s features and uses. As a tie-in—rhetorically, at least, if not materially significant yet—with Rupert Murdoch’s News Corporation’s publishing interests and his drive to find a “pay wall” solution for his newspapers, the iPad has been used by the press to experiment with iPhone apps. Many newspapers were quickly available in iPhone apps for a modest monthly subscription of a few dollars or bundled in with the regular hardcopy newspaper delivery. These newspaper iPad apps were as much prototypes as mature software, as much an innovation—or incubula—as online news websites were in the 1990s (and indeed to the present day).

The iPad has also become the e-reader and document reader of choice of many of its early adopters because of its size, resolution, and compatibility with other Apple computers and e-reader software. This is surprising in one sense, but there are many difficulties in using the iPad as a versatile computer or e-reader: its operating system is not easily accessible; unless hacked (voiding the warranty), software can only be installed via the app store; it has no ports; and available software for document reading was still clunky when this article was written (I have made do with Documents to Go, an unsatisfactory, but workable solution). The user finds all these poor design aspects of the iPad and its apps (Apple’s and those of third-party developers) curious for a corporation praised for its hip design achievements. Some of these issues are likely to be addressed with the iPad 2. However, they underscore how the iPad is skewed toward consumption of media content, reading included. The iPad certainly has had its success and become a necessary complement (or supplement) to the computer for many, including those who would rarely choose to read a long PDF or other document or book on-screen if the more amendable version for the tablet is available.

Phoning in the Future of the iBook

The Apple iPhone represents a surprising development in the technologies of reading. As I have argued, its achievement, thus far at least, is in many ways accidental—or, to put it another way, coeval with other features of the iPhone that have made it a striking development in mobile personal media. It is obvious that Apple’s genius, as received by, appropriated by, and cocreated with its users, does not lie solely in the technical, social, cultural, or imaginative breakthroughs of a Vannevar Bush, Theodore Nelson, or Alan C. Kay. Nor does it stem from a longstanding engagement with, say, the roots of contemporary online and electronic reading and writing in hypertext narrative and systems (associated with Mark Bernstein’s Eastgate Systems in the 1990s), nor from a deep research and development immersion in e-reading, e-ink, and so on of the likes associated with Sony or various other pioneering corporations. Rather, Apple is able to bring together various inventions and capabilities; combine them, with an eye to attractive design, good user interfaces, and new navigation conceptions; and, with particular classes of devices,
thematize an area of media—whether computing (Mac), music (iPods), games, telephony, messaging, maps, and e-mail (iPhone), and digital consumption of convergent media, news, and other people's e-readings (iPad, after the iPhone).

Apple's iBookstore may well start to make headway against its vertically integrated e-reader competitors. If it does not yet have the know-how or cultural capital possessed by other booksellers, nor solid relationships with major publishers, what it does have is a simple, well-established advantage: iTunes. With business models and billing systems for digital goods under development since the mid-1990s, and still changing, Apple's iTunes gives the corporation a handy advantage—apparent in the recently launched Mac App Store. The many consumers of Apple computers, iPods, iPhones, and iPads are accustomed to using iTunes for purchasing music, games, videos, apps—and, eventually, audio and e-books. Indeed, it is difficult to overstate the importance of iTunes as the backbone for the distribution platforms that undergird all of Apple's devices. Consumer acceptance of iTunes in terms of security and ease of use is strong, and payment requires only a credit card or purchase of iTunes vouchers or credit. From iTunes Apple gets a significant advantage, not only over its competitors in the smartphone, e-reader, tablet, computer, and other device markets but also vis-à-vis suppliers of content, distribution, and billing systems.

Yet it seems that reimagining reading is something that Apple still struggles with. A sign of this lies in the dull image of the iBook app itself. It is simply a wooden bookshelf, one of the most obvious figures of books and reading. Indeed, it rather resembles the image chosen by the Classics app, a similarity for which Apple has been accused of copying without attribution or appropriate acknowledgment. Probably the best thing that Apple has done so far in its adventures in reading was to open itself up to the wide range of software of its third-party apps developers and, despite its efforts at control, the unauthorized and permissible acts of domestication, hacking, modification, and innovation by its millions of everyday iPhone and iPad users. In all other respects, however, when it comes to reading futures, we still await the magic and revolution Apple has promised.

NOTES


CHAPTER 14

Ambient News and the Para-iMojo

JANEY GORDON

There are pivotal moments that identify a change in the way that our societies function far beyond the significance of the event itself. For example, when Heinrich Hertz detected radio waves, he dismissed the phenomena: “I do not think that the wireless waves I have discovered will have any practical application.” However, when Hertz died in 1894—and his obituary summarized his work—Guglielmo Marconi, who was then nineteen years old, is said to have read one obituary and realized the possibilities that Hertz’s work presented. Naturally, Marconi could not have foreseen the far-reaching effects that wireless technologies would have on our lives in the twenty-first century.

A similar key event in the timeline of communication technology and its relationship with journalism took place on 15 January 2009, when Janis Krums, a nutritionist, was travelling on a ferry across the Hudson River in New York. Along with many others, including the local Coast Guard, he witnessed the emergency landing of a passenger jet on the river and the successful evacuation and rescue of all its passengers and crew. Significantly, Krums used his iPhone to take a picture, which he sent to the social networking site Twitpic with the comment, “There’s a plane in the Hudson. I’m on the ferry going to pick up the people. Crazy.”

Krums’s use of his iPhone to take a picture and disseminate it with a short textual comment and without reference to other media organizations testified