Chapter 3

The Next Wave of Digital Storytelling Platforms

The technological environment for digital storytelling advanced rapidly after the start of the twenty-first century.[1] Some technologies and platforms disappeared or were marginalized. A portion of digital content followed the same route, as multiple forces compounded to deepen the still-unsolved problem of digital preservation: device and format succession, link rot, ever richer media and session states. Other technologies and content survived, finding new niches or defending already held ones in the ever-emergent information ecosystem.[2] Web pages, Web browsers, desktops, and laptops continue to play key roles, even as their respective fields hold new arrivals.

The Second Web

A single year in internet time can be like a decade in ordinary history—so a decade of internet history implies a large catalogue of events. It is possibly with this historical perspective that Tim O'Reilly coined the term "Web 2.0" in 2004.[3] The term has, in turn, lasted for six years at least, surviving a great deal of criticism and parody. Like "deconstruction," *Web 2.0* is often put in quotes, hedged, redefined, considered to be dead, and then used once more with resignation. *Social media* seems well on its way to supplanting *Web 2.0* and may eventually supersede it.[4] Throughout this book, we shall use both terms interchangeably.

How did the Web change so as to make a new name meaningful? We can describe the transformation by exploring three trends and their mutually reinforcing relationships: microcontent, social architecture, and new platforms.

The first feature, microcontent, rather obviously, describes small forms and items of content. "Small" is a comparative term, set in relation to the rest of the Web. Microcontent pieces are easier to produce and consume than full-scale Web sites in terms of information architecture. They can sometimes be reused in multiple ways and places, including syndication and remixing. Microcontent is often much smaller than Web sites in terms of the amount of storage that each chunk takes up: blog posts, wiki edits, YouTube comments, and Picasa images are usually only a few thousand bytes. Some types of microcontent, interestingly, can be quite large from a storage perspective but are so easily managed and self-contained as to fall into the microcontent category: for example, audio files (podcasts), .pdf files to Slideshare, or video (for Web platforms such as YouTube).

Getting microcontent, be it large or tiny in memory size, to the modern Web is also a relatively simple matter for the user, requiring little if anything in the way of Web design expertise. Such was not the case in the 1990s. That first iteration of the Web required multiple tools, phases, and reiterations. First, there was the creation of an HTML (Hyper Text Markup Language) document on a computer, which meant either entering the text by hand, after learning the HTML syntax, or obtaining and learning how to use an HTML editor such as Netscape Composer or Dreamweaver. Second, the would-be Web author required a Web server space, which entailed either locating and purchasing some, along with a domain, or obtaining permission to do so from a friendly institution. Third, HTML files had to be sent to that Web space, meaning using yet another tool, a file transfer protocol (FTP) application, and learning the ins and outs of directory management. Finally, once this third component enabled the transfer of the first to the second, the Web creator, gazing at his or her handiwork, then discovered the necessity of learning Web design—that fraught combination of visual aesthetics, style, accessibility, and information architecture.

In contrast, Web 2.0 services deliberately winnow down the process to a single Web site, with a narrow selection of options, then authoring content to the Web. Templates are made available, obviating the need to study and practice detailed design. Design freedom is thereby curtailed, but production enormously eased. Hence the vast torrent of content appearing through blogs, modern wikis, and other social media services. Users can focus on content, rather than form (or, in ignoring the former, cause grievous aesthetic harm).[5] One way of shaping content through these new channels is, of course, to tell stories.

Web 2.0 represents one of the strongest moves to mitigate the digital divide, and one of the least appreciated. The ability to create content for zero software cost is historically significant, and now par for the course. Access to enabling hardware, once an issue, has dwindled in importance as the number of computers available has increased, especially through public schools and libraries.[6] Internet-enabled mobile phones have also increased access, offering still more ways for users to create through social media.[7]

The second piece of Web 2.0 is the social element, or social architecture. Before Facebook's rise, certain services—MySpace, Orkut, Friendster, LinkedIn—called themselves "social software," existing primarily to connect people with each other. Those represent a narrow instance of Web 2.0's general social approach. Compare any Web 2.0 site with a first-generation Web page. For the latter, the browsing experience was primarily one of reader and computer. The page's author was not openly present, unless he or she had exposed an email address and been drowned under resulting spam. A reader had few options for connecting with the author, and fewer still for adding content to that page, beyond the unlamented guest book function. Beyond the creator and consumer, a third party would have no way of knowing that the first two had even remotely connected.

Web 2.0 sites, in contrast, allow multiple channels of communication between site visitors, site creators, and other parties. They are fundamentally designed to encourage such connections through wiki editing, comment threads, media embedding, tagging, Facebook Liking, Digg and Reddit services, and more. A site's visitors can leave comments or add tags, or link to it from their own site. Other visitors can see these comments and other connections, like a party guest entering a room where a conversation is in full swing. Multiple users can build objects and collections together, from an iterated wiki page to a shared Flickr photo pool to a co-drawn Gliffy image.

One side effect of re-architecting the Web along social connective lines is the acceleration of distributed conversations. Consider, for example, a single blog post. Its author shares her thoughts about a current event. A reader disagrees, and so he writes a comment appended to that post, arguing against the blogger's interpretation of, say, military policy. A third person then adds a following remark, agreeing with the original post and arguing against the critic's comment. A fourth writer decides to write a blog post about this whole exchange, seeing it as indicative of another idea in the present age. This fourth writer also adds an embedded media file, one which copies content from and points to an article hosting by Scribd.

The original blogger sees all of this—from the comments on her post to the fourth writer's post—to which she was alerted by an automatic ping between their respective blog platforms. She then (1) writes a comment on her own blog, (2) adds a comment to the fourth writer's blog, and (3) tags that Scribd page to bring out her perspective.

Admittedly, this kind of conversation happened in "Web 1.0" and on pre-Web platforms. Usenet, after all, was driven by distributed conversations. Email listservs also thrived on conversations distributed in time, if focused in space. What's significant about this Web 2.0 shift is that it redesigns the experience of Web content. Rather than assuming a default mode of reading, with rare and distanced exchanges, we now expect sociality to underpin most publication. Rather than a dyad of reader and written, we experience a tripod, where two people connect through a shared interest in an object. "Social software works in triangles," observed one early analyst.[8] "Object-oriented sociality" is the phrase applied by one social media designer.[9]

Based on this combination of easy Web content authoring and social architecture, Web 2.0 platforms continue to emerge. The number and variety of hosted services is now large enough to be difficult to track. Bookmarks: Delicious, Diigo, Amplify, CiteULike. Image sharing: Flickr, Google's Picasa, Facebook. Image creation and editing: Gliffy, Picnik. Blogging: Blogger, LiveJournal, WordPress. Collaborative writing through wikis: Mediwiki, PBWorks, Confluence; otherwise, Google Wave. Social networking: Facebook leads the planet, but others continue to function, such as MySpace, Orkut. LinkedIn leads the resume-sharing and job-seeking domain, alongside smaller services like VisualCV. Presentation building and/or sharing: Slideshare, Google Spreadsheets. Pdf sharing: Scribd. Video editing and sharing: JumpCut, Google Search Stories. Microblogging or social status updates: Twitter, Facebook. By the time you read this paragraph, not only will more services have emerged and some disappeared, but new categories may have appeared as well.

Aggregation tools have grown, unsurprisingly, in the wake of such a services explosion. The RSS standard lets creators syndicate their content, so that readers can collect it or update it with new material. RSS readers now include Google Reader, Bloglines, Cooliris, FeedDemon, NetNews-Wire, along with plug-ins for the Firefox browser and Outlook email. The iTunes application uses RSS to gather podcasts. Alongside RSS readers are user-built (or, more precisely, user-customized) Web portals, including PageFlakes, iGoogle, and MyYahoo!. Other sites function as distributed

portals, wherein users aggregate and rank stories and other Web content—Digg, Reddit, Memeorandum, and Techmeme being some of the leading examples.

Some services encompass many of these functions. RSS readers consume updates from blogs, wikis, social image sites, podcasts, and even searches. Facebook lets users upload and share images, status updates, and social gaming. Various Google services include most of the preceding. Some blog platforms let users set up feeds for their images, Twitter and Facebook updates, and other blogs. An increasing number of Web services include connections to other services, so that one can quickly tweet a blog post or send a new story to Digg.

Cyberculture Ludens

While Web 2.0 grew explosively during the twentieth century's first decade, another cybercultural development progressed in tandem. Computer gaming had grown enormously in diversity, size, and reach through the 1990s and the following decade after a crash in the 1980s. As of this writing, digital gaming rivals cinema and music as a global cultural force. In fact, it would be as foolish to consider contemporary storytelling without dwelling on gaming as to describe storytelling without movies, the spoken word, or print.[10]

Statistical research varies, but the trends and scope have been fairly clear for several years: "Almost all teens play games."[11] Twenty percent of the entire U.S. population over age six had played browser-based social media games (example: *Farmville*) by 2010.[12] The stereotype of gamers being children and teens has been incorrect for some time, as the average age of a game player has risen, from 33 in 2007 to 34 in 2010, and "the most frequent game purchaser is 40—old enough to remember the early days of Atari."[13] In short, digital storytellers should assume that an increasing proportion of their audience, constituting a majority, has game experience.

As with any other significant media experience, this has implications for an audience's expectations, worldview, and participatory practice. Oral storytellers have always paid attention to local listeners—their physical location, speech patterns, political situation, and so on. Films began by referencing print fiction, and fiction went on to return the favor. TV, books, movies, and oral traditions are audience touchstones for presenters, teachers, and other storytellers, offering points of personal connection and cultural resonance; we should now add games to that referential list.

Games are already being used as storytelling vehicles and are increasingly seen as such. In chapter 6, we will explore small-scale games in more detail, followed by large-scale games in chapter 7. One especially interesting and unusual form of gaming will be the focus of chapter 10. A more practical or project-based approach to making stories in games will be seen as parts of chapters 12 and 13. Before reaching those points, though, we will first set the stage via a survey of the current gaming landscape.

The diversity of the gaming world is driven partly by the depth and difference of gaming platforms. Playing a computer game can not only require a substantial investment in time but also obtain to (access) multiple platforms, with combinations of often very separate hardware and software. Many of these platforms are deeply siloed or closed, not allowing interoperability. An Xbox 360 game, for example, cannot be played on a PC, phone, or Nintendo DS. When one game is re-created for another platform (a process known as "porting"), the game interface, the way it uses the new platform's hardware, and all of its content can be altered. For players, time is also needed to learn new devices (what each button does, where the keyboard is or isn't) and the social situation of that gaming platform (Xbox Live vs. the *World of Warcraft* universe). In other words, an investment in one platform can mean playing more games there rather than elsewhere.

As a metaphor, compare playing games across platforms with learning world literature, if translation were not possible. You would learn one language in order to read its writings, but be unable to explore another's without making *that* investment in time. Once you learned Chinese, becoming fluent in French would let you read that language's novels, stories, poems, and plays. Those formal story structures will seem familiar, though their contents may profoundly differ based on the rich history of that language. Learning those two languages will make studying a third somewhat easier, but it will still require time before advancing into the new tongue's writings. Compare this with exploring social media, which is more like learning film with decent subtitles: images and sounds are generally understood, and the text is good enough to allow initial comprehension. Moving from wikis to blogs to social bookmarking requires far less effort than jumping from browser-based PC games to the Nintendo DS.

This platform-determined gaming in depth can be seen in the way some critics write about gaming in general, as they tend to remain focused on one hardware/software combination. It also points to gaming's diversity, which is wider than it often seems, given the sheer amount of time it takes to survey.

Console gaming is one of the more recognizable families of gaming platforms today. The term describes a hardware combination of base station (a small computer, including a hard drive) and handheld controllers, connected wirelessly. The base station is usually corded into a TV or monitor and can also be connected to the internet. Games are either played from a compact disc inserted into the main unit or downloaded from the internet. The controllers are designed to fit comfortably in one's hand, with buttons positioned to be pressed easily. Some contain tactile or haptic feedback mechanisms, such as vibration. For most, their buttons are the sole means of input; the Wii, however, added its physical orientation as an additional way for users to communicate with the game. Leading console game platforms include Wii (Nintendo), Xbox (Microsoft), and PlayStation (Sony).

Console game genres tend toward action, based on their interface's affordances. A Wii or Xbox controller makes it very easy to rapidly press buttons, get haptic feedback, or move the unit in space. Therefore sports, first-person shooter, and adventure games proliferate. Users may play by themselves, with players using the same unit, or with players across the network.

PC gaming contrasts with console games in several key ways. This term refers to any games played on laptops and desktops, using inserted disks, the unit's hard drive, or a Web browser. Input mechanisms include the computer's keyboard and mouse, and less frequently a microphone or camera.

The types of game content available to the PC are far broader than those for the console, due in part to the different interface. Action and sports games are present, along with puzzle and strategy games. The latter do not require an especially responsive interface, so the relatively slow keyboard and mouse serve well enough. As with console games, PC users can play by themselves (against a game's artificial intelligence or AI) or with several networked fellows. In *Rome: Total War* (see chapter 7), for example, one player can take on the role of the Julii family, trying to defeat the Claudii on a Gallic battlefield; the other family is played by a user located elsewhere in the real world or by the game's AI.

Massively multiplayer online games (MMOs) have been a particular success for PC gaming. These games are based on persistent virtual worlds, housed on servers elsewhere and populated by avatars, some of which are played by users located elsewhere. A game program is downloaded from the internet or installed from disk, making available a game client through which to enter and interact with those worlds. Leading examples include *World of Warcraft, Eve Online, Lineage*, and *City of Heroes*. MMOs are

social games, meaning that interpersonal relations are crucial to their play. Asking other players for information or goods, or fighting them, is a key component to interacting with the world. Players organize into guilds or raiding parties in order to accomplish tasks. These connections are maintained by both in-game means (text or audio chat) and the many out-of-game social media currently available, from Skype to wikis.

PC-played MMOs differ from multiplayer console games in terms of where complexity resides. The latter expend an enormous amount of processor power and memory to realize very sophisticated multimedia, while the former devotes development power to supporting millions of simultaneous users in a single game. PC MMOs can also require more PC-suited actions, such as using more input keys than a console allows.

At the other range of complexity and scale from PC MMOs are *casual games*, which are played from within a Web browser or a downloaded program. As the name implies, casual games are far easier to play than MMOs, requiring less memory, processor power, and learning time. Users can play them while doing other computing tasks, Minesweeper alongside Excel, for instance. As with other PC games, users can play casual games alone or across networks.

Perhaps the ideal casual game hardware platform is handheld devices, including but not limited to mobile phones. Phones constitute another platform entirely, with radically different interfaces as compared with consoles or PCs. The relatively small screen and input mechanisms (touchpad, basic buttons, numerical keypad, alphabetical keypad) challenge developers to maximize gameplay and content in a very small situation. Casual games often come preloaded or are available for download—card games, backgammon, and word puzzles being early successes. The iPhone App Store's growth has been partly driven by a very rapid creative boom for gaming on that platform. Bandwidth limitations have kept phone games largely asocial; they do support social play, however, in the context of augmented reality games (see chapter 11).

Other mobile devices besides phones serve as gaming platforms. Handheld game consoles are portable, self-contained devices, combining a hard drive with console-like button inputs (and sometimes a stylus, touchscreen, or microphone) and multimedia outputs (screen and audio). Examples include the Nintendo DS and the PlayStation Portable (PSP). Games for these handhelds occupy a middle ground between PC and phone games, being more ambitious than the latter due to a focused design (phones serve other functions besides gaming), but less powerful and featured than the

former. Genres accordingly include casual games, basic action games (racing), and adventure games in *Dungeons and Dragons* style.

Yet another handheld platform is available in the second-generation tablet computer, of which the most notable example as of this writing is the iPad.[14] While similar in interface to the Touch and iPhone, the iPad's increased size has yielded a very different computing experience, eliciting another creative rush in game development. Unlike the Tablet PC, the iPad uses a touchscreen interface, which drives changes in game design. Fingertip-based movable icons need to be larger, for example, than icons driven by a mouse pointer, with more of the background obscured thereby.

Even this rapid survey of the current game platform situation should give the reader a sense of its diversity and possibilities for depth. At the same time, we should also explore different genres or classes of games, at least in a big-picture, schematic view, for major divergences in game category cut across hardware-software platforms and represent still other venues for storytelling.

A set of computer game genres have stabilized over the past decade, meaning players can expect certain things from such games. A 2008 Pew Internet and American Life study of teen gameplay offers a good catalog, including racing, puzzle, sports, action, rhythm, strategy, fighting, simulation, first-person shooter, role-playing, and horror.[15] Many of these are recognizable on their face—horror games involving monsters threatening the player, racing games providing vehicles on courses, and so forth. There is strategic overlap and hybridization between many of these, as with any domain marked by genre. *Bioshock* blends first-person shooter and horror, along with a healthy number of puzzles. And, as with any genre classification scheme, each category can blend into others without seeming avant-garde. First-person shooters *are* fighting games, in a sense, unless we insist that fighting games must be third-person (in which case, the two combine into a new genre). Role-playing games often involve action, puzzles, and some form of combat. Simulation and strategy overlap extensively, as do adventure and role-playing.

We can also break out subgenres within these. Platform games, or platformers, are a type of action game. Hunting games are a strand of the first-person shooter tapestry. Real-time strategy (RTS) and exploration games are part of the strategy genre. Simulation games have multiple instances of the same object being simulated: political problems, vehicles, physical processes. Point-and-click games are a subset of adventure games, and so on.

Other genres can be identified as well, such as exercise games or "adver-games." Flight simulators, artificial life games (e.g., Tamagotchi), gambling games, mazes, and quizzes can be separated out.[16]

This process of game classification and reclassification can be pursued indefinitely, given the sheer scope of the gaming world and its continuing growth. But the purpose of this short survey is threefold. First, exploring the diversity of game platforms and genres provides some tools for getting more rapidly into understanding gaming. As friable as such categories may be, they can help organize a sprawling, heterogeneous mass. This may prove especially useful for someone interested in storytelling, but new to considering gaming under that aegis. Second, these frameworks suggest possible avenues to explore for those interesting in building a storytelling game. A creator should think through which platforms' affordances are best suited to the story they are developing; genres may give shape to stories in initial stages. Third, for creators interested in digital storytelling but not in developing a game, thinking through these categories may help in better understanding game-playing audiences.

We should also note two genres or design approaches with special relevance for storytelling. The *serious games* model appeared roughly around 2001, in an attempt to distinguish a certain style of game as being engaged with art or politics. Michigan State University's academic program on the field offers a representative description: "Serious games are games with purpose beyond just providing entertainment. Examples include, but are not limited to, games for learning, games for health, and games for policy and social change." From the creation side of gaming comes a different description: "Designing effective, engaging serious games requires theoretical understanding of learning, cognition, emotion, and play."[17] Serious games have also been associated with education, both as objects of study and as a way of thinking about educational gaming. While the term is sometimes contested, it has yet to be replaced, and the concept remains.[18] Games like *Oiligarchy* (Molle Industries) and *Jetset* (Persuasive Games) aim to make political points; the *Great Shakeout* (State of California) and *DimensionM* (Tabula Digita) are very different types of public educational games, each seeking to improve players' knowledge and skills in their areas of disaster response and mathematics, respectively.[19]

Another style of game is different enough to sometimes be considered not a game at all. *Virtual worlds* are digital environments that emphasize their nonstructured nature. They are spaces to explore, platforms to build upon, rather than games with clearly stated objectives. The leading example

of this approach for some time has been *Second Life*. Like an MMO, *Second Life* consists of a large world populated by user-driven avatars. Unlike an MMO, however, there are no centrally determined quests, puzzles, organizations, or anything else suggesting a game. There are many games played within *Second Life*, but they are organized by and among players, rather than by Linden Labs, provider of the service. Linden Labs maintains the service, but the content of *Second Life* in all its richness was created by participants.[20] Other virtual world services exist, such as *Activeworlds* and *Smallworld*, and open-source virtual worlds are also under development, including *OpenCroquet* and *OpenSim*.[21]

As with serious games, virtual worlds as a concept is an attempt to distinguish some work from the broader world of digital gaming. Perhaps building a castle in *Second Life* or creating a game to encourage citizens to vote are different enough experiences so as to represent something other than genre. The distinction opens up at another level, either strategic or ontological. The desire to create (or create within) such gamelike entities mobilizes a set of expectations very separate from that summoned up by, say, a hunting or karate game. The experience of play should also be deeply other: being taught to find wind-up radios is fundamentally different from learning how to blow up barrels.

Yet these two categories cannot remain entirely distinct. We can identify examples of projects that serve overlapping purposes. *Rome: Total War*, for example, can be considered a serious game in its extraordinary educational depth. The amount of historical documentation is vast, and play requires learning about various aspects of the Roman Republic: geography, politics, economics, warfare. *Rome: Total War* can also be played as a classic war game, with richly designed battles. *America's Army* is a first-person shooter, but also a serious game in the sense of persuading some Americans to join the military. Similarly some games, especially ones with "sandbox" versions (allowing free, unstructured play), are both games and virtual worlds. One may explore the section of our galaxy imagined by *Mass Effect 2* for long periods of time, before returning to its intricate plot. *Eve Online* does all three: as a political simulation, it offers very detailed models of trade and political organization; as a game, great space battles; and as a virtual world, a large universe to explore.

For the purposes of digital storytelling, it can be useful to keep these categories in mind. Games still possess a negative reputation in many areas, which makes the serious games division potentially productive for audiences and outreach. Focusing on games under that header may also be a useful guide in

researching games, especially for those new to digital gaming. Virtual worlds do not have as sober a reputation as do serious games,[22] but the ontological difference radically structures game design and play. As with serious games, the "virtual worlds" term still has impact with some audiences.

Storytelling Segments

In the following chapters, we will explore the diverse landscape of new digital storytelling platforms, projects, and movements. We have seen several movements progress in parallel over the past generation: social media, gaming, and a range of digital storytelling efforts. In part II, we will see how they are starting to combine.

The term *digital storytelling* has often been used to describe the Center for Digital Storytelling curriculum specifically or, less often, to refer to the broader world of computer-mediated narrative. Since both realms of practice have advanced over the past two decades, due to technological and storytelling developments, we can now prefer the broader sense of the term. "Digital storytelling 2.0" is how marketing might label that idea, but "new digital storytelling" does the same semantic and historical work without the clichéd numerical sequence. From now on in this book, we shall simply use "digital storytelling."[23]

The relationship between these three domains—social media, gaming, and storytelling—is complex. Given our focus on storytelling, we will emphasize the ways that domain overlaps the others, and when all three coincide.

The next four chapters of this book will explore these overlaps in pairs: social media and storytelling, then gaming and storytelling. The four chapters after those, comprising part III, examine what happens when the binary overlaps become threefold ones through experiments and their extension into mobile devices.

As a way to knit these connections together, we can abstract out some storytelling themes from our discussion in chapters 1 and 2, applied to these digital domains and platforms. Each of these will appear in every chapter, apropos of at least some of the styles and strategies described therein. Some will describe large portions of a story, as a biography is necessarily committed to personal presence; others will see these principles functioning at a lower intensity, as when a podcast series only lightly establishes a serial sequence. We will refer to all of them as we proceed in a critical or surveying way, then review them in a more practical, applied setting in part IV.

Serial Structure. Many digital stories and storytelling approaches arrange content as separate iterations over time. This can mean episodic style, or material issued in a series, or accepted positions for supplemental content.[24]

Scott McCloud argues passionately for a definition or renaming of comics as "sequential art,"[25] referring to a smaller scale, to the level of individual panels in a sequence. We can borrow the term, or at least be with it in spirit, and use it to emphasize the segmented nature of much digital storytelling.

Some of that segmentation is distributed in space. As McCloud observes: "Nothing is seen between the two [comic] panels, but *experience* tells you something *must* be there! Comics panels *fractures* both *time* and *space*, offering a *jagged, staccato rhythm* of *unconnected moments*. But closure allows us to *connect* these moments and *mentally construct* a *continuous, unified reality*."[26] Perhaps we can refer to much digital storytelling as "segmented art," or segmented storytelling.

Personal Presence. Many digital stories depict one or more characters, either fictional or historical. These representations are often in the third or first person, biographical or autobiographical. A good number of games and some storytelling frameworks involve the audience as a second-person character through some mixture of address and presence. Every medium can be mobilized to support character. Establishing a personal sense is a powerful storytelling strategy.

Social Framework. In the Web 2.0 age, every story is ultimately part of social media. Stories engage with social media directly through positioning content on the Web via platforms supporting linking, commenting,

editing, sharing, and other audience co-creative activities. Story segments may well include content produced by other creators and hosted elsewhere. Indirectly, even the most asocial story can be discussed, remixed, shared, and otherwise amplified through the social Web. Moreover, we can build stories using content made available through that social Web.

This aspect of digital storytelling should seem familiar to most readers, whatever one's experience with Web 2.0. It echoes the ancient oral practice of transmitting tales from person to person, reflecting on stories, and talking before creators who eventually repurpose others' words for their own story. Current social media operations also recall print and electrical media practices of commentary, from critical reviewers to gossip columnists. What's different, simply put, is that these preexisting practices are now democratically accessible and capable of persisting far beyond the evanescence of verbal communication.

A related point about digital stories being necessarily included in social media is that story boundaries are often blurry. Once a story is launched directly into the Web, determining its beginning and end is not always an easy matter. A blog's termination, for example, is usually not clear, as it may be extended indefinitely until the site disappears (only to probably persist in the Internet Archive and a Google cache, not to mention locally saved copies). Supplemental content may appear in the form of Web video clips, a newly published podcast, or further wiki page edits. So much for story materials produced by creators; the boundaries of story content produced by others are even more difficult to pin down. Remixes, fan fiction, comments from involved or interested parties, wiki resources generated by friendly or hostile parties, game walkthroughs and cheats—stories can be surrounded by a halo or aura of secondary material.

Multiple Proscenia. Increasingly, there is no single point of story experience. If digital stories are distributed in space and time, this can necessitate multiple platforms for experiencing them. Henry Jenkins's model of transmedia storytelling means creators and audiences meet each other across multiple stages for the same story or world (see chapter 8). Social media routinely cross locations, media, languages, and styles. The ease of copying and embedding media means echoes and versions of stories can be reflected across different hardware and software ecosystems. We may read a book in print, on a handheld device, or on printouts, or hear it read aloud (either automatically or by humans). TV content shifts from broadcast to cable to authorized video (Hulu) to unauthorized (bit torrent) to some gray zone in between (YouTube).

Timeshifting is a key part of this "multiple proscenia" notion. Recording a TV program in order to experience it at another time is already commonplace and has transformed the social reception of television. Formerly inaccessible historical media may appear in digitized form on YouTube or as podcasts, from obscure TV commercials to Golden Age radio.[27] Stories are segmented in time, both because creators release them that way and because audiences choose to experience them on their own schedules.

Platform Affordances. Every digital story can take advantage of the unique affordances of each digital platform it uses. Games for the Xbox can vibrate controllers to indicate unusual stresses, bloggers categorize and allow comments upon posts, Flickr images are capable of being tagged and pooled, and interactive fiction supports replaying a game/story. Each segment of a story can push the unique nature of its digital housing to accentuate the story's power.

Janet Murray argued in 1997 that deeply exploring such affordances is a sign of a medium's evolution. When a new medium appears, we copy preexisting practices into it, in what Murray dubs "additive art": theater staging for early films, for example. Creators next determine how to use the new platform on its own terms, "seizing on [its] unique physical properties," "exploring its own expressive power." Filmmakers, in this example, developed montage, new forms of lighting, and the moving camera point of view.[28] Digital storytelling sees both of these types of technology usage, additive and expressive, first and second stage. Their combinations, too, progress along that arc, as we shall see.

We will now explore digital storytelling as it occurs in various platforms, seeing how the preceding principles play out in each.