Chapter XLII
Digital Storytelling from Artificial Intelligence to YouTube

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ABSTRACT

In this chapter, the concept of digital storytelling will be introduced by sketching its historical and intellectual origins from artificial intelligence to current trends. Illustrated by examples and case studies, two main approaches will be presented: a "top down" approach on stories within the context of high-tech laboratories and technology, and a "bottom up" approach deriving from private publishing on the Internet such as YouTube's video stories or the workshop-based digital filmmaking practice hosted by the BBC (UK). The analysis will focus on innovative configurations of media and on the specific implications of video stories on computer mediated communication. Here, the main emphasis will be put on presentation strategies and possible modes of user participation and interaction, with the purpose of clarifying and contributing to future modes of computer mediated storytelling.

OLD STORIES—NEW WAYS OF TELLING

Stories are a key form of cultural expression. Still, the ways of storytelling changed with every introduction of new media and technology. Today's computer mediated communication is no longer limited to text only, nor to any other of the traditional one-sided forms of mass communication such as radio or television. Therefore, growing attention is being paid to the development of services that distribute consumer-generated media on the Internet and let people engage in new ways of viewing and using, sharing and commenting on media. Well—known examples for these trends are Flickr™—"the best way to store, search, sort and share your photos" (Flickr, 2006)—and, above all, YouTube™. As its slogan "Broadcast Yourself" (YouTube, 2006) suggests, YouTube™ is an Internet service that allows users

to view, upload, and share short homemade videos. Considering the amazing amount of around 70 million videos received in the first year since the start of the site in December 2005, with an additional 65,000 uploaded videos each day, and a corresponding amount of almost 20 million visitors per month (Reuters, 2006), YouTube™ is undoubtedly the biggest Web site for private video clips right now. It is not surprising that international press was quick to declare YouTube™ TIME magazine's "invention of the year for 2006" (Grossman, 2006), and the "epitome of Internet video" (Graff, 2006, p. 12), as well as to recognize its particular function as an archive for authentic presentations of everyday life (Graff, 2006, p. 12; Grossman, 2006).

However, digital storytelling in general and video stories distributed on the Internet in particular cannot be regarded as entirely new and original forms of media practice. In fact, there is quite a history of distinct and recognizable modes of computer mediated communication behind current storytelling trends. The purpose of the chapter is to present this history of digital storytelling by sketching its milestones. Furthermore, it will be argued that the field of digital storytelling has developed through two main approaches: firstly through a "top down" approach to stories used for institutionalized knowledge transfer deriving from high-tech laboratories and technology, and secondly through a "bottom up" approach to personal stories within the context of private publishing of user-generated content on the Internet.

HISTORICAL AND INTELLECTUAL ORIGINS

While digital storytelling is neither clearly defined nor commonly used as a term in the humanities, it has a long history within computer science–if not always under this name. Within computer science, digital computer-based stories as well as computational ways of story generating and telling have been developed and researched since the early 1970s. When talking about computer scientists' early interest in narratology, that is, the science of narratives or stories, one has to keep in mind that back then, personal computers did not exist. Nor did, accordingly, the concept of personal digital media, that is, of computer mediated communication as we know it and use it today.a Hence, research concentrated on the most promising field of that period: on artificial intelligence (AI). Gregory Bateson, a cultural anthropologist and famous cybernetics expert, was asked in the 1950s if he believed that computer artificial intelligence was possible. He responded that he did not know, but that he believed that if you asked a computer a simple yes-or-no question and it answered by saying "that reminds me of a story," you would be close (Lambert, 2003, p. 1). Taking the question—and Bateson's answer to it—more seriously, Schank and Abelson (1977) argued that the road to understanding human intelligence, and therefore to constructing artificial intelligence, is indeed built on stories.b Up to 1977, scientists in the field of AI had been dealing mainly with mathematics and formal logic. During the following two decades, these fields of study would be complemented by narrative theories derived from the humanities. Yet research would still concentrate on cognitive and formal aspects of natural languagesc, and on the understanding of storiesd. As a consequence, narratives were perceived as "*less formal forms of knowledge*" (Davis & Travers, 1999, p. 3, italics added), usable for knowledge representation and structuring. Aesthetics, communicative modes, or media were of no greater interest for AI research.

The latter aspects found their way into computer science in the late 1980s, at a time when artificial intelligence research was in decline. In 1986, Brenda Laurel received the very first PhD in interactive narrative for designing a computer-based interactive fantasy system (Laurel, 1986). Combining her experience as computer

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