NARRATING THE OPAC:
HOW STORYTELLING AND NARRATIVE ANALYSIS
CAN IMPROVE THE ONLINE PUBLIC ACCESS
CATALOGUE (OPAC)

Abstract:
We address the question of how narrative analysis can positively affect the design of
technologies. After discussing theory and applications in the literature, we apply narrative
analysis to the design of the library’s online public access catalogue (OPAC) while alluding to
pre-existing fictional and reality-based storytelling prototypes.

Résumé:

1. Introduction and Background
A question posed for this conference’s call for papers is: ‘how is technology affecting the
way we analyze personal and social narratives?’ This question could actually be analysed
and answered in the reverse. While new media and technologies certainly create “new
forms” of storytelling and continue to do so (Polletta, Chen, Gardner and Motes, 2011;
Sturm, 2010), there is also evidence that old storytelling practices can and are impacting
the development of new technologies. It is on the latter premise that I propose to address
the alternate question of how can narrative analysis positively affect the design of modern
technologies. This latter question is relevant considering what the literature has to say
about the impact of stories and storytelling on technological development and the benefit
of applying folkloric approaches to the analysis, study and design of new technologies.

Within the literature there is evidence that folkloric, mythical or fictional perceptions
about technologies have to some extent shaped and influenced modern technological
advances. Science fiction and even the Old Testament Bible are credited with impacting
technological developments in space exploration (Weizenbaum, 1976; Laurel, 2001).
Storytelling and ancient folkloric approaches have also been found relevant to the study
of computing and information and communication technologies. One folklorist
contemplates that studying the Internet and virtual communities is a new area of
expansion for folklore studies (Ivey, 2007). Another has found that textual
communications produced by new devices such as the mobile phone retain traditional
folklore communication practices (Domokos, 2007). Still, others document how
computer programmers and system designers benefit from applying folkloric approaches
to their work (Powell, 1999; Kendall & Losee, 1986) or in designing new systems and
interfaces for users (Laurel, 1993). Such scholarship provides inferences that folklore and storytelling are and continue to be useful in the modern online communication practice.

Further evidence that narrative and storytelling can inform the design of information systems come from actual prototypes of information systems. Laurel (1993) uses storytelling principles and dramatic performance to convey information in a multimedia encyclopaedia to users. Lombardo and Damiano’s (2012) storytelling application prototype uses mobile technology for providing information on a cultural heritage site based user’s movement in the physical space. Further, virtual agent life-like characters are used as narrators and storytellers facilitating knowledge sharing among conference participants and for sharing personal stories or experiences of an event in visually engaging and appealing ways (Sumi and Mase, 2004). While these applications and prototypes indicate how storytelling and narrative can be applied to technology for the purposes of information provision, none of these approaches directly consider libraries, though Lombardo and Damiano’s application (2012) is applied to the related institution of museums. This paper thereby synthesizes the literature on storytelling and presents a new approach considering how narrative and storytelling can inform the designing of the library’s online public access catalogue (OPAC).

2. The approach and method
In examining how storytelling and narrative practices can positively inform the design of online information retrieval systems, the example of the library’s OPAC is used. The authors create and analyse two narratives about online search of a library’s OPAC based on a sample query developed to find information resources on restaurants.

The first narrative is fictional (based on imagination) about how the world of search should be or logically operate. It potentially shares similarities with philosophy’s thought experiment or the use of scenario in design. The first narrative also attempts to use sense-making of future possibilities based on historical and present prototypes. The fictional narrative is analysed and highlights how OPAC results can be conceptually displayed and organised.

The second narrative is created from dialogue with an artificial intelligent conversational agent or chatbot about an actual search. After conversing with the chatbot, the authors retrieve the transcript of the conversation, modifying the agent’s response to more interesting and relevant responses. This approach attempts sense-making of the present (about how the world currently operates), analysing how OPAC results are actually displayed and organised based on a Canadian metropolitan public library OPAC.
Using examples of both the fictional and real stories, the authors illustrate how one can reconceptualise the OPAC and make changes to improve its design. In doing this, we illustrate how the design of library technologies can positively benefit from applying folklore and storytelling perspectives and analysis. This approach is significant as in an environment where users seek information online through computer devices and are accustomed to engaging in online narratives through social media, some have argued that it is time to explore new means of getting information seekers to the information they need (Sadeh, 2007). Rather than considering traditional ways of organising results to a user’s query in an online database, we consider a new approach that utilises narrative and storytelling concepts and theory to design, present and display information for the library’s online information seekers.

Our approach is both conceptual and practical. A number of conceptual frameworks are examined, namely Laurel’s (1993) computer as medium metaphor, Bates’ (2005) berrypicking theory, Orr’s (1996) concept of the bricolage, Dervin’s (2005) sense-making metaphor, and Fisher’s (2005) information grounds theory. We argue that storytelling or narration possess representational value that places information in the context of viewpoints. We indicate that information resources in one’s collection could be conceived as viewpoints to be represented in the library’s catalogue through using characters that can be considered ‘experts’ sharing their knowledge or what they ‘know’ about their field or subject. The authors propose that this approach more truly reflects reality and how the real world works, where users experience information coming at them from storytelling and narrative in various media. Such an approach will also allow the information seeker to visualise information within the library’s collection as vantage points. The information seeker/user can then select which viewpoint is most relevant to them based on the personal role that they are cast in or the task or role for which they require the information. We also conclude that storytelling also makes sharing and accessing information an enjoyable and memorable learning experience.

Focusing on the library’s online catalogue is very important as the OPAC is an essential online library product and service. Wells (2007) states that even though the OPAC “functions against a background of alternative information-gathering technologies it is likely to remain at the centre of library operations for the foreseeable future as the primary automated point of connection between library users and those information resources which the library owns or otherwise wishes to promote” (p. 386). Hence, the centrality and probable transcendence of the OPAC seems like the perfect library service mediated by online computing technology on which to apply storytelling principles to improve current design, affect and function.
While this paper looks at primarily the question of how storytelling and narrative can positively impact the design of the OPAC in order to extend its functions and capabilities, it also structurally addresses these other issues:

1) What constitutes a story and/or a narrative based on major theories and research about storytelling from the scholarship of organisational storytelling and knowledge sharing, and digital storytelling and computer interface design?
2) How have computing and even library and information science applied storytelling to communication practices and to prototypes for delivering information?

3. Conclusion
While countless stories and narratives are told and shared via social media in videos, text and images, signifying that new technologies seemingly produce new storytelling and narratives, there is evidence that the technologies do not produce new stories, but rather resuscitate ancient practices sidelined by business communication practices embedded in the ‘era of the document’. This is evident in the literature that indicates that folklore and storytelling traditions are important in understanding and creating successful computer systems and better computer-mediated communication. Additional evidence from the literature points out that utilising ancient storytelling and folkloric practices can create and share knowledge and that even in the midst of new media, folklore communication practices are still be retained.

The authors conclude that since storytelling can be and has been applied to information systems in order to provide information to information seekers, one can reasonably consider applying storytelling analysis and practice to informing improvements in library OPAC designs. We tackle the issue of how personal and social narratives can be applied to affecting the design of the OPAC allowing for library professionals to see a directly practical application of theoretical research on storytelling and narrative to improving the design of an important library online information retrieval system.

We also conclude that stories can be told about a library’s collections, using fictional (imaginary), historical or even real characters as narrators representing the perspective of information resources/knowledge available through the library. We also argue that OPAC designers can also base the narrators or narrative representation of a library’s collection based on the demography of users, creating characters that are imagined experts or others that represent people that users would consult in the real world for advice based on their task requirements.
References:


