Narrativization in Information Systems Development

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ABSTRACT

People see the world and convey their perception of it with narratives. In an information system context, stories are told and collected when the systems are developed. Requirements elicitation is largely dependent on communication between systems designers and users. Thus, stories have a significant impact on conceptualizing future users' needs. This paper presents a literature review on how stories and narratives have been considered in central IS literature. Narrative-theoretical parameters are used as a lens to analyze the literature. This shows that explicit discussion is non-existent, and the characteristics are considered partially. The result is a biased and narrow understanding of the informants' needs and wishes. This may be significant in the requirements because narratives are not as simple a form of communication as is usually assumed. It is proposed that better understanding narratives would equip systems analysts with an in-depth understanding about the nuances inherent in communication when communicating with users.

KEYWORDS

Analyst, Interaction, Literature Review, Narrative Analysis, Narratives, Requirements Elicitation, Stories, User

INTRODUCTION

Stories and narratives are a natural form of human interpretation and communication (Brown et al., 2008; Fisher, 1984; Raatikainen, 2023; Weick et al., 2005). Stories and narratives also appear in an information systems development (ISD) context where different techniques and methodologies are used to elicit users' requirements, needs, and wishes (Alvarez & Urla, 2002). Our concern arises from a potential gap in the field's comprehensive understanding of the fundamental nature of these narratives.

Most elicitation methods rely on two-way verbal communication between systems analysts and users (Amna & Poels, 2022; Ferrari et al., 2022; Ramesh et al., 2010). Typically, requirements elicitation processes provoke competing interpretations about the system and the organisational context in which it is developed, implemented, and intended to be used (Davidson, 2002; Iivari et al., 2010). This makes requirements elicitation a vital yet problematic activity, as the failures often result from

its difficulties (Bano et al., 2019; Beimel & Kedmi-Shahar, 2019; Coughlan & Macredie, 2002; Poels et al., 2013; Siau et al. 2022). Our concern lies in the possibility that the lack of a comprehensive understanding of narratives could contribute to these challenges.

Fundamentally, requirements elicitation is dependent on human communication and knowledge transfer (Appan & Browne, 2012; Bano et al., 2019; Holmström & Sawyer, 2011; Palomeres et al., 2022; Oran et al., 2021; Rosenkranz et al., 2014). Developers try to understand the context and users' needs so that the system fits the situation (Kirsch & Haney, 2006; Poels et al., 2013). However, this knowledge transfer is challenging. For instance, work context descriptions are partly tacit and ambiguous (Alvarez & Urla, 2002; Ferrari et al., 2016); therefore, they are not easily transferred into concrete development efforts. In addition, users have difficulties processing information from their surroundings and communicating it to developers (Appan & Browne, 2010; Thew & Sutcliffe, 2017). Thus, system developers cannot fully absorb what users convey. Quite often, the context is simplified or distorted, resulting in unsatisfactory results (Holmström & Sawyer, 2011; Oran et al., 2021; Poels et al., 2013; Saghafi & Wand, 2020; Urquhart, 2001). We argue that limited understanding of the role and influence of narratives are contributing factors in this situation.

The narrative concept has been adopted, for example, in organisational research (Dailey & Browning, 2014; Geiger & Antonacopoulou, 2009; Sahni & Sinha, 2016), where organisations are viewed as *storytelling systems* in which the narratives construct an organisation's social reality (Boje, 1991; Geiger & Antonacopoulou, 2009). However, narratives have received only little attention in ISD research (Avison et al., 2017; Sahni & Sinha, 2016). Narratives have been utilised, for instance, as a method for analysing information system (IS) projects on a general level (Avison et al., 2017; Hekkala et al., 2018). While this has educated the IS field on the insightfulness of the narratives, it offers almost no ideas for their role and influence in ISD practice. Rather, when looking into more specific ISD activities, such as requirements elicitation, narratives seem to be taken as messy or uncodeable data (Alvarez & Urla, 2002). The narratives from numerous users are then aggregated and, for example, use scenarios, use cases and generic requirements are constructed. These narratives are the predecessors of use scenarios and use cases. However, it is rather concerning that practitioners lack knowledge to critically analyse these narratives. After all, the narrative theoretical discussion appears to be relatively limited in the IS literature (Raatikainen, 2023). As a result, narratives in ISD practice can frequently lead to overly generalized, abstract, or even distorted interpretations of real contexts and needs.

Narratives are not just a discourse or an interpretation. Narrative theorists have specified the prototypical characteristics and the communication type the audience most likely frames and conceives as a narrative. Herman (2009) defined a prototypical narrative as being a situated account that conveys an ordered temporal and causal sequence of events, a storyworld with particulars, an event that disrupts this storyworld and the experience of what it is like for a particular individual to live through this disruption. Critically analysing the prototypical narratives make it possible to understand and analyse the organisational context, its narrated reality and, ultimately, the ISD process. Narrative theoretical discussion implies that future users construct narratives while interpreting their operational reality. They then share these narratives with system developers, who elicit information relevant to the ISD process from users' personal experiences. In individualised disruptive experiences, the prototypicality of narratives explains the dynamics of competing narratives and clarifies and translates this mess into ISD-relevant information. This issue is significant since developers tend not to appreciate the socially constructed nature of requirements elicitation (Holmström & Sawyer, 2011). For example, values, motivations, and emotions are not thoroughly considered (Thew & Sutcliffe, 2017), and the contextual influence is disregarded (Poels et al., 2013; Sarkkinen, 2006). This lack of awareness easily results in splintered views and non-comprehensive understanding (Chakraborty et al., 2010; Holmström & Sawyer, 2011; Poels et al., 2013; Sarker et al., 2019). Thus, it is proposed that lessons from narrative theorists could improve the understanding of how human actors, such as users and systems analysts, transfer the information that will be used to design the ultimate system.

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