

# Social Media and Emergent Organizational Narratives

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## ABSTRACT

Organizational identity is a key part of managing commercial, governmental and charitable organizations. It informs relations to external stakeholders, and also affects the internal working culture. One way of understanding organizational identity is to look at how it is shaped through narratives, and increasingly these narratives are happening on the Web and through Social Media. In this position paper we outline some of the existing work in organizational identity and narrative systems, and argue that narrative systems might be able to help human analysts identify and manage emerging organizational narratives. To this end we propose a high-level framework of how such a system might function and identify some initial technical challenges.

## Categories and Subject Descriptors

H.5.4 [Hypertext/Hypermedia]: Theory.

H.2.8 [Database Applications]: Data mining.

## General Terms

Management, Theory

## Keywords

Identity, Brand, Social Media

## 1. INTRODUCTION

Organizational (or Brand) Identity is key to organizations, whether they are based in the commercial, governmental or charitable sectors. Not only does a strong sense of identity help an organization connect with its key partners and customers, but it also has an internal function to help stakeholders in the organization make sense of both the institution as a collective entity and their place within it.

Identity is a complex phenomenon but one approach to understanding it is to look at how it is shaped and defined through narratives. These narratives may be the stories that the organization uses to describe itself, examples of practice, or grand narratives about its history and place in the world. But much of the narrative that helps shape identity is outside of the control of the organization itself, and occurs in the wider world in communication and media, and increasingly in social media such as the Blogosphere and Twitterverse.

Organizations that wish to manage their identity and reputation need to understand these narratives as they emerge, in order to respond to them either through engaging with the conversation, or changing the underlying behavior and activities that are motivating and driving them.

This engagement with the social media milieu can be very straightforward, such as companies that employ customer services staff to respond to customer complaints on Twitter, but it can also be very complex and form part of a broader public relations strategy. Unfortunately this is not yet well understood, as demonstrated by the ‘Pepsi Refresh’ Social Media campaign, which saw Pepsi-Cola invest in a multi-million pound social media marketing project, only to see little impact on sales or reputation<sup>1</sup>.

In this paper we argue that there is a need to develop technical tools that help organizations model and monitor emergent narratives, and thus develop business strategies to help them respond. We present a brief overview of some of the literature in organizational identity and brand reputation, explore how computational narrative systems have been used to identify emerging narratives, and discuss how technical methods of narrative analysis could potentially be applied to the problem of organizational identity in social media.

## 2. ORGANIZATIONAL IDENTITY

The concept of identity is becoming central to understanding what it means to be an organization in today’s society [12]. The field has flourished since Albert and Whetten’s seminal study [2], with researchers taking many different theoretical and methodological approaches to the concept in a variety of settings.

Whetten defines identity as “the central and enduring attributes of an organization that distinguish it from other organizations” [25], and proposes a tripartite formation of organizational identity with aspects that are ideational (members shared belief in ‘who we are’), definitional (the central, enduring and distinctive features of an organization), and phenomenological (discourse in conjunction with organizational experiences). Brickson builds on research in individual identity and argues that organizations have three distinct identity orientations [5]: individualistic (their traits and views), relational (dyadic connections to others), and collectivistic (participants in a larger social group).

Despite these attempts to define and describe identity many practitioners have divergent views of the fundamental components of identity and its relationship to organizational culture [17].

Other researchers have made links between identity and reputation management, which can be defined as the more or less favorable regard in which a firm is held by its stakeholders [10]. For

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<sup>1</sup> The Ad Contrarian. ‘Social Media’s Massive Failure’, March 21,

example Uncles showed how brands develop through consistent and positive consumer experience over time [23].

However, identity is more than the perception of an organization, it is an intrinsic part of that organization. Nag et al. describes how the sense of identity in an organization is entwined with its knowledge processes [18], and present a case study where a strategic change in identity met resistance from those protecting expert working practices. And Fiol describes the organizational identity paradox: that a strong sense of identity will bind people together in an organization, but can blind them to the possibilities of change [9].

Identity construction is not just a one-off, but an ongoing process [8]. In other words, identity is not fixed, it is polyphonic and context dependent. For any organization there is no one essential identity or reputation that can be examined, but a dynamic set of interlocking narratives. This narrative identity changes over time as the narratives about an organization evolve [15], and problems can quickly arise if there is a mismatch between internal and external perspectives on the reputation of an organization.

### 3. COMPUTATIONAL NARRATIVES

Narrative has long been a subject of technical research, with interest from computational linguists, hypertext systems engineers and researchers in artificial intelligence.

For example, narrative systems have been used to generate the text of simple stories and prose (based on lexical rules and grammar) [7], to orchestrate the actions of characters in virtual environments [3] and to guide visitors around exhibition areas in UbiComp settings [14].

The Web and Social Media are a rich set of potential resources for narrative systems to mine and reuse. For example, in the author's own ArtEquAKT project [24], biographies of artists are generated through an author-centric narrative generation approach that populates a grammar with relevant media automatically harvested from a variety of web sources.

The 'Memories for Life' grand challenge is about using technology to supplement human memory<sup>2</sup>. Memories for life projects use data mining techniques and narrative creation strategies that are similar to the ones needed to understand organizational narratives.

For example, the SemanticLIFE project uses various techniques to examine personal data and communications in order to create a queryable semantic database of work-related knowledge [1]. The MyLifeBits system took a similar approach with more personal data and used simple narrative constructs to present memory stories back to users [11].

The Semantic Logger and Photocopain Image Annotator aggregated data from many different personal sources (such as GPS, iCal, Browser History, etc.) in order to create semantic data that can both be reasoned about, and used with heuristics (such as clustering) to create second order information about a person [21]. This is then used to choose images to populate narrative scripts and build simple stories from personal photo collections.

These autobiographical narrative systems show that it possible to extract information from both the open web and personal information stores and use it to recreate narratives that help users

make sense of that information. It is a short leap from this to the idea that automatic narrative analysis could be used to identify emerging organizational narratives in social media.

### 4. TECHNIQUES FOR EMERGING ORGANISATIONAL NARRATIVES

So what are the appropriate narrative methods and tools to apply to social media (and other web content) in order to build sensible organizational narratives?

In our view it is highly unlikely that any automated tools (at least with today's level of sophistication) will be able to construct complete and lucid organizational narratives, so we argue that any automated organizational narrative tools need to aim to produce a first-pass narrative analysis that can be used by human analysts as the starting point for a more nuanced investigation that would itself lead to management strategies.

We propose a five-stage framework that could provide this first-pass analysis:

1. Content Selection and Analysis
2. Categorization into Sub-Narratives
3. Identification of Key Events
4. Annotation of Key Elements
5. Classification

**Content Selection and Analysis:** In order to utilize third-party material (such as blog posts or twitter comments) the content must be understood to some degree. Techniques such as term co-occurrence [6, 16] allow for *sentiment analysis* [22], where the opinion of an author in a piece on a particular matter may be ascertained by examining the relationships between topics and positive and negative terms. Tags and annotations can also be used to understand the Mood [4] and (in our own work) Theme [13] of a set of content.

**Categorization into Sub-Narratives:** Organizational stories are likely to be complex, with multi-layered and overlapping sub-narratives. These sub-narratives can be identified from the analysis of the collected media using the meta-data generated through the content analysis process. Heuristic tools such as automatic classifiers and clustering algorithms could tease related content from the broader collection, and numerical analysis would reveal significant threads.

**Identification of Key Events:** Narratives are likely to be most interesting to analysts when there is some detectable change. By analyzing the key terms within the narrative using term frequency and keyword extraction methods [16] it should be possible to detect when this pattern of key terms changes significantly. This could represent a change in story arc for the organization and potentially could be seen in terms of Todorov's theory of equilibrium [20] where a disturbance of equilibrium and the subsequent reforming of a new one identifies a plot. A challenge for the system will therefore be in distinguishing a rapidly changing narrative from two sub-narratives.

**Annotation of Key Elements:** Within any identified plot structure the key roles that individual elements play might be further identified by analyzing the effect of significant terms that reoccur (representing concepts, people, and events associated with the organization) or individual sources of media themselves. Such roles might be identified either using sentiment analysis to reveal

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<sup>2</sup> The Memories for Life Network:  
<http://www.memoriesforlife.org/>

substantially positive or negative elements or the level of attention the element receives in proximity to times of equilibrium or disequilibrium to reveal typically chaotic or peaceful elements. This may lead to the identification of character archetypes within the organizations narratives in a way that parallels Propp's formalist approach to fairy tales [19] where 'villains' and 'heroes' and other archetypes might begin to form a model of narrative elements and their roles within an organizations story. For this to be successful we would need to build a model of how individual roles are represented within the narrative and populate this with definitions so that they might be identified.

**Classification:** Finally the sub-narratives could be classified in order to help determine their importance to organizational identity. Analysis might be done to detect the genre of each sub-narrative by identifying the presence of identified conventions. While these might hold parallels with traditional narrative genres ('comedy' and 'thriller' for example) more likely this will lead to the need to identify particular genres of organizational narrative by analyzing the pattern of particular reoccurring terms and the attention they receive. This would allow for the identification initially of beginning narratives that are likely to follow a similar pattern as those that have preceded it within its genre. Genre identification might also be used to predict the occurrence of particular reoccurring elements (and their associated roles) that have been associated with that genre in the past. However for this to be possible a significant investigation of what characterizes a genre within organizational narrative would need to be performed and individual genres defined based on a history of organizational narratives. The identification or reoccurring themes within both the grander narratives and sub-narratives would lend further evidence on which to base both genre identification and association between elements and particular roles. This would be done utilizing a thematic model such as demonstrated in our previous work [13] which when correctly populated might be used to identify themes through the presence of motifs associated with defined keywords.

## 5. CONCLUSION

In this position paper we have argued that there is a potential for narrative systems to address the serious challenge of managing organizational identity in a world of social media and public commentary. We have outlined the importance of organizational identity and explored how narrative techniques could be employed to support human analysts working in this area.

We have also proposed a five-stage framework for organizational narrative analysis consisting of content selection and analysis, categorization into sub-narratives, identification of key events, annotation of key elements and final classification. This has revealed a number of technical challenges that would need to be addressed including the problem of distinguishing either side of a Todorov equilibrium from two separate narratives, and the need for models of structural roles, themes and genres within organizational narratives.

Social media represents a serious challenge for organizations, but also an exciting opportunity to engage with stakeholders outside of the organization and help establish a healthy culture within the organization. This is not only true for commercial organizations, who wish to build good customer relations and run effective marketing campaigns, but also for governmental and charitable organizations who need to engage effectively with society in order to function at their best.

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