

# Design for digital storytelling in journalism

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## ABSTRACT

The opportunities for telling tales in novel ways are fast emerging in the age of digital media. This paper discusses how emotional design can enhance the quality of digital stories in journalism. Emotional design theory model emotions in three levels: visceral, behavioural and reflective. Digital stories in journalism are characterised by three main categories: foundational elements, structural elements and features enabled by a digital environment. By combining the model of emotion with the characteristics of digital storytelling in journalism, the author of this article attempt to connect the field of emotional design and digital storytelling. Most noteworthy is the concept of message substance, from the design perspective meaning that the design of the story should augment the social message the storytellers intend to send to their audience.

**KEYWORDS:** Digital storytelling, emotional design, message substance, journalism

## 1. INTRODUCTION

One may argue that online newspapers for years were essentially like analogue newspapers: consisting of text and pictures. Now a larger share of articles includes audio, graphics and video, formats that also are legacies from traditional radio and television broadcasting. The possible expressions, aesthetics, interaction and storytelling tools enabled by the content being digital are to some extent unexplored (Alexander, 2011).

Digital storytelling in journalism is a field where storytellers are starting to embrace storytelling tools enabled by the digital space (Pavlik & Pavlik, 2017). The internet content is vast, and our attention in comparison is scarce – information overload is a common problem. The American Press Institute estimates that 99% of online content is "pointless babble" (n.d. a). Storytelling can be seen as a means to put meaningful content in context (Alexander, 2011), and thus differentiate journalistic stories from less valuable online content. The definition of

digital storytelling is ambiguous. The essence of most definitions, however, is that the audience is taken on an emotional journey by digital artefacts supporting the story. This article refers to digital storytelling as defined by Alexander: "For a given audience, a story is a sequence of content, which engages that audience with emotion and meaning" (2011, p. 13).

The purpose of journalism is to engage and inform its audience (Orgeret, 2017). How emotional design can be utilised in digital storytelling in journalism to create emotional impact, is the research question of this article. My intent in writing this article is to unite two fields of professions; journalists and designers. I hope both journalists and designers may find use in the coinciding of the two professions presented in this article.

The article is structured in seven sections. The upcoming section concerns the methods and the research aim. Section three provides a theoretical framework of emotional design, the interrelation

between cognitive tasks and emotion and emotions impact on learning. In section four, digital storytelling from a journalistic point of view is defined and the characteristics of the current practice are reviewed. The article thereafter assesses how the field of emotional design coincides with digital storytelling in section five. In section six, the characteristics of digital storytelling in journalism, emotional design and the coincide between them elaborated in section five are applied to real-world examples. Part seven concludes that the concept of message substance, or social meaning of a story, is a good starting point for journalists and designers working together with digital stories.

## 2. METHODS AND RESEARCH AIM

This article is based on a literature review. I was interested in how designers can contribute to making important news stories appealing to the users. My search words were variants of “digital storytelling” and “storytelling design journalism”. I also read a few articles discussing the qualities of traditional oral storytelling. In many definitions, the altered emotions of the audience appeared as the main measurement of a successful story (Alexander, 2011) (Blom & Beckhaus, 2005) (Gruber, 2007). However, I did not find any resources of exactly how the crafters of digital stories could influence the emotions of the users in a serious context like journalism. I followed the trail of emotions by searching for “emotional design storytelling” and “design in journalism”. As emotion and cognition are closely interrelated (Pessoa, 2009), and learning is also an important aspect of news stories, I included “cognition emotion relation” and “emotions learning” in the search.

The overarching aim of this article is to connect the fields of design and journalistic digital storytelling, with particular emphasis on the novel prospects for storytelling enabled by the digital space.

## 3. DESIGN FOR EMOTION

Content distributors like Netflix employ algorithms to personalise and recommend new content based on the user's interest and earlier content the user

has consumed. Media has another purpose than entertainment, and a responsibility to expose its users for a range of subjects that reflect the society. Thus, *what* the media communicate to people are not up for much discussion, and what the designer may name “user needs” are to some extent already defined by the public role of journalism and its democratic purpose (Orgeret, 2017). The user needs which design methods can help to meet in this context are related to how the content is presented and how news consumption integrates with the everyday life of the users. In the field of design within online journalism, it is thus two main areas where the designer may utilise her profession. This article concern design in the core of a story itself: design for supporting and enhancing the story meaning.

Part 3.1 of this section presents a model of emotion and what design implications each layer in the model entails, coined by Donald Norman. Part 3.2 assess the interdependence between emotion and cognitive tasks and the benefit of combining verbal and visual inputs. Part 3.3 connects emotional design with cognition and learning.

### 3.1 Emotional design

The emotional and cognitive system of the brain consists of three levels: Visceral, behavioural and reflective. The visceral level is immediate and innate. Sensory input transmits through the brain, which detects if the input is perceived as good or bad. The visceral level alerts the muscle motor system if urgent action is required, for instance if it detects a dangerous animal. For less rushing matters, the visceral level conferences with the behavioural level before alerting the body to act. The behavioural level controls everyday movements and actions. It is not conscious and includes well-learned skills such as driving a bike or reading a book. Lastly, the reflective level is the place of thought, where humans monitor themselves, their progress and become self-aware. Emotions such as pride, shame and gratitude origins at the reflective level (Norman, 2004). The reflective level can affect the behavioural level, which in turn can affect the visceral level, as illustrated in fig. 1.

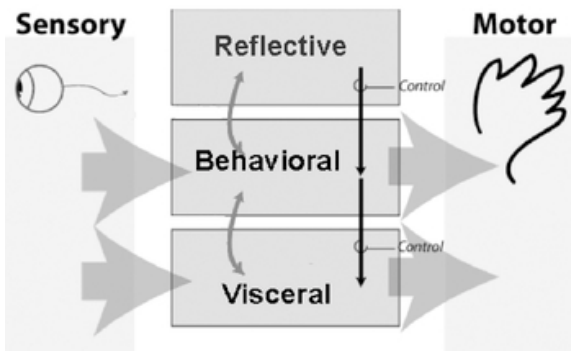


Figure 1: Three levels of emotional processing

When a human is feeling anxious or scared, the neurotransmitters in the brain vires the brain to concentrate on the item causing the distress. The opposite occurs when the human is feeling happy or satisfied; the neurotransmitters broadens the brain processing, which makes it easier to search for new opportunities (Norman, 2004). Psychologist Alice Isen established a link between positive emotions and the way people think: people tend to be more creative when in positive affect because specific structures in the cognition are more flexible in a positive emotional state (Um, Plass, Hayward, & Homer, 2012). In positive affect, the human tends to view the whole picture, while people in negative affect tends to focus on details (Norman, 2004).

The visceral level unconsciously reacts positively towards conditions that through history has been beneficial to humans. Bright, highly saturated hues, round, smooth and symmetrical shapes, smiling faces and harmonious sounds are a few examples of conditions that produce positive affect on the visceral level. Similarly, when humans are exposed to darkness, sharp objects, unexpected high sounds or bright lights automatic negative affect is produced. These are things humans are predisposed to react to, but its experience and the reflective level which ultimately determines how we feel about them (Norman, 2004). For design to be successful, it must excel at all three levels, according to Norman. Visceral level is about appearance and aesthetics. In the behaviour level, design success is about the pleasure, usability and effectiveness of use. It is at the reflective level that the full range of thought and emotion is activated, and it can override the

impression interpreted by the visceral and behavioural levels. Although an item may be attractive on the visceral level, the sense of beauty origins at the reflective level. Something we deem beautiful because of the memories or associations it brings us, may, in fact, be unattractive at the visceral level. The reflective level is highly individual and depends on past experiences and culture. In any real experience, all three levels are in play (Norman, 2004). Emotional design's implications for storytelling is discussed in section 5.3.

### 3.2 Visual and verbal cognitive subsystem

For a long time, scientists believed that emotion and cognition were mostly independent of each other. Emotions were by some viewed as a leftover from our animal origins, and most scholars thought of emotions as something rational thought had to outmanoeuvre (Norman, 2004). Now the consensus is that emotion and cognition are interrelated (Pessoa, 2009). The Oxford dictionary defines cognition as: "The mental action or process of acquiring knowledge and understanding through thought, experience, and the senses". Memory, attention, planning and language are all aspects which lie within the definition of cognition (Pessoa, 2009). Norman simplifies the relation between cognition and emotion as the following:

"Cognition interprets the world, leading to increased understanding and knowledge. Affect, which includes emotion, is a system of judging what's good or bad, safe or dangerous." (2004, p. 20).

*Sensory* input refers to symbols and visualisations that people can perceive correctly without having prior knowledge of them, through the perceptual processing of the brain. *Arbitrary* input describes elements that have to be learned, for example, the written language. The advantage of sensory content is that people comprehend them fast, through the first stages of neural, visceral processing, while the advantage of arbitrary content is that it is easier to communicate abstract information. Sensory elements tend to be stable perceived across time, individuals and cultures, while the arbitrary derives

from experience and culture (Ware, 2012).

The *dual coding theory* suggests that the brain interprets words (both spoken and written) and visual input in two separate channels. It is beneficial to use both channels to maximise the input humans can grasp and decode simultaneously (Ware, 2012). Thus, it is beneficial from a design perspective to include both sensory and arbitrary content, so that active processing of correlated material can take place in verbal and visual cognitive subsystems.

### 3.3 Emotions consequences for learning

There are two dimensions of feelings: arousal (activation/deactivation) and valence (positive /negative.) A positive feeling can be activating (happy, hopeful), or deactivating (satisfied, calm). Anxious or angry are activating negative feelings, while hopeless is a negative deactivating feeling. These feelings induce certain traits on people's ability and motivation to learn (Pekrun, Goetz, Titz, & Perry, 2002).

Positive emotions can better cognition. Memory for instance function better when the human is in positive affect. It is also established that more positive emotions result in a higher eagerness to learn (Um et al., 2012). Research which implies that emotion plays a significant role in other cognitive contexts than learning is also plentiful. The importance of including emotion in cognitive and usability studies is supported by Shih and Lu, who argue that the abundance of usable products leads to other qualities like beauty and emotion differentiates good products from the rest (2007).

For learning, there are three types of cognition involved: intrinsic, germane and extraneous. Intrinsic describes the complexity of the information. Germane refers to the mental effort made by the learner. The extraneous cognitive load is the procession of the learning material not directly related to the information – the effort it takes to understand how to learn from that particular source or platform (Um et al., 2012).

Earlier, attempts to induce positive emotions in instructional learning material were generally viewed as increasing the extraneous cognitive load and thus negative for learning. Researchers added interesting text, visual information and sound to the learning material to induce positive emotion. Based on experiments, the conclusion generally was that the increased interest aroused in their subjects were not sufficiently high to justify the extra strain on working memory inflicted by the additions. The theory is named the *extraneous load hypothesis*. If one asserts the theory as true, the implication is that the use of design to induce emotions in the user is counterproductive regarding learning.

The *emotions as facilitator of learning* hypothesis, on the other hand, suggest that users who are in a positive emotional state also learn better. The supporters of the theory believe both the direct learning outcome and the user's motivation in a long-term perspective are affected by the emotional state of the user. Much in line with the above-mentioned research of Pessoa, the emotions as a facilitator hypothesis relies on the intermediate link between cognition and emotion.

To summarise, the supporters of the extraneous load hypothesis leans on evidence suggesting that inducing positive emotions will hurt learning because of the extra strain on working memory. The followers of the emotions as facilitator of learning hypothesis believe that even though the germane cognitive load is increased, it is worthwhile to induce positive emotions through design features because the benefits of motivation and an altered cognitive state outweigh the added cognitive load (Um et al., 2012).

In their research on emotional design in multimedia learning, Um et al. used principles from emotional design to create an e-learning platform. The goal of the experiment was to establish whether multimedia learning environments can be designed in such a way that it fosters positive emotions and if it thus improves learning.

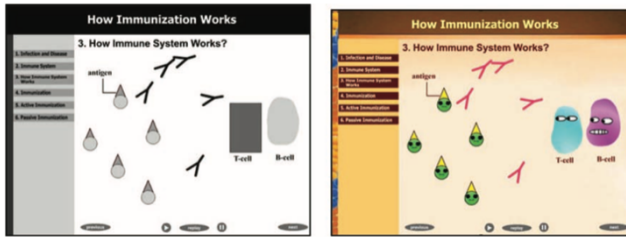


Figure 2: Um et al. used simple design features such as shape and colour to induce positive emotions through the multimedia learning platform.

118 students participated in the experiments and were split into four groups. The groups were respectively exposed to various combinations of:

1. Positive external mood induction
2. Neutral external mood induction
3. Positive emotional design induction
4. Neutral emotional design induction

The results indicated that positive emotion is beneficial to learning and that emotions induced through the emotional design of the multimedia learning platform were more effective than the external induction of positive emotions. The extraneous cognitive load did not increase. The results were thus consistent with the emotions as facilitator of learning hypothesis (Um et al., 2012).

## 4. DIGITAL STORYTELLING IN JOURNALISM

New York Times' story Snowfall from 2012 is by many viewed as the first genuinely successful digitally crafted news story (Greenfield, 2012). Since publishers have continuously developed novel ways of presenting stories. Some of the stories are one-offs, while other story formats are versatile enough to serve as templates the journalists can utilise in new stories. Several major newsrooms have a dedicated department for digital story development, for instance, Norwegian NRK (Kaasin, 2014), Danish DR (Falcon, 2018) and Australian ABC (Porteous, 2017). Such divisions are often multidisciplinary, consisting of journalists, designers, developers and project managers (Engbretsen, 2017).

Technologies like VR and especially AR are proposed to be important for storytelling by mass media in the

future (Webb, 2017), but this article focus on news consumption through mobile and web – currently the most available platforms.

### 4.1 Definition of digital storytelling

Some scholars refer to digital storytelling as a means for ordinary people to share their stories online. An example is the *Stories of Service* web page, where American veterans can share their experience of serving in war (McWilliam & Bickle, 2017). That is not what this article about, and nicely illustrates that *digital storytelling* is an ambiguous term. In the context of online journalism, the author of this article finds the definition by Alexander as mentioned in the introduction to be fitting: "For a given audience, a story is a sequence of content, which engages that audience with emotion and meaning". An addition to the definition is that the story is digitally born, which means that the story employs artefacts solely possible in the digital space (Alexander, 2011). Thus, even though a simple news article consisting of text and pictures may also be digital, it is not included in the term "digital storytelling", because the traditional article is a legacy from print media and not digitally born.

There has been an attempt to separate storytelling used for entrainment purposes, and what the Lugmayr et al. define as serious storytelling. The definition is: "Storytelling outside the context of entertainment, where the narration progresses as a sequence of patterns impressive in quality, relates to a serious context, and is a matter of thoughtful process" (2017, p. 15709). Digital storytelling in journalism probably belongs under that umbrella. Although serious storytelling separates entertainment from other contexts, the divide seems to be mostly on a theoretical level.

### 4.2 Characteristics of digital storytelling

According to the American Press Institute, research has proved that how a story is told is more essential than its theme – treatment trumps topic. Secondly, the greatest stories are more extensive and

complete, have more verified sources and a certain air of enterprise and reportorial effort (n.d. b)

Pavlik and Pavlik have developed a theoretical framework that describes what they call "interactive documentaries", or journalism presented through digital, networked and mobile media. They analysed ten award-winning stories and characterised them according to interactivity, immersiveness, use of multiple media and non-linear story structure.

Firstly, the findings suggested that the crafters of such stories used a broad set of methods in both production and design. Secondly, the findings made the authors able to divide the characteristics into three main categories: foundational, structural and features enabled by the digital media environment, summarised in table 1.

**4.2.1 Foundational characteristics**

Foundational elements are the raw material for storytelling. Extensive reporting refers to the actual reporting, such as written text, document analysis, video and photo. Great writing, thorough fact-checking, ethical judgements and a flair for what's newsworthy are part of the foundational elements. The production values, the quality of photos and videos are essential. These foundational elements do not differ much from traditional journalism. One notable foundational trait is that the nature of the story guides how it should be presented. The nature of the story includes social meaning, significance and the unexpectedness of the story. In short, the message substance, or what the crafters of the story want to communicate to the audience, decides how the story is presented.

**4.2.2 Structural characteristics**

Structurally, the stories are often non-linear, whereas traditional news stories are told with an implied beginning, middle and end. The content is often dynamic, changing based on platform and user choices. Reporting on whole processes, as the role of race, gender or social class in the criminal justice system, is increasingly common. The #metoo campaign is an example of process-oriented reporting, even though the individual incidents are episodically founded. Furthermore, the point of view is shifting from the third-person, to second- or first-person.

**4.2.3 Features of the digital media environment**

Features of digital media environment are qualities that only can be found in said place. Multiple modalities refer to the use of several media formats in one story, i.e. photos, videos, animations, data visualisations and locative media. The digital format enables interaction among the audience, often through social media. Interaction also refers to increased contact between the user and the story itself, for instance, navigation choices or input of data (Pavlik & Pavlik, 2017). A simple example is embedded clickable content like fact boxes.

Furthermore, the content is increasingly data-driven and dynamic. The structure for receiving, analysing and visualising the data is already there, so there is no evident reason for stopping the development of the story at the time of publishing (Pavlik & Pavlik, 2017). One example is VG's "Train stops and delays" originally from 2014, which still receives data on train delays and stays updated accordingly. Lastly, the content is to a large degree contextualised. The authors use the example of a man killed in the

Foundational	Structural	Features of digital media env.
Extensive reporting	Non-linear	Multiple modalities
Production values (Quality)	Dynamic	Interactive
Message substance	Process-centred, less episodic	Contextualised
	First person point of view	

Table 1: Characteristics of digital storytelling in journalism summarised.

Baltimore riots in 2015, where historical context based on inequality, inferior housing for lower social classes are presented (Pavlik and Pavlik, 2017).

### 4.3 Design of innovative news templates

Alexander brings forth the question: "How does being digital enable new aspects of storytelling?" (2011, p. 14). For storytelling in journalism, BBC's R&D executive producer Tristan Ferne has identified 12 novel formats found on the web. His list includes longform *scrollytelling*, videos with captions, time-lines and data visualisations. Ferne concludes that few reusable formats are designed to fit the digital news industry specifically. Instead, the news industry adopts formats from social media such as Facebook and Google. Like Alexander, Ferne believes there is much room for innovation in this domain (2017).

The current relative lack of innovation may create room for exploring what aspects one should consider when testing novel formats. The traditional news article consisting of photos and 800 words is largely predominant still, as a legacy from the printed newspapers. Video and audio presentations on the web are also legacies from the analogue TV and radio (Ferne, 2017). A simple example of design methodology is BBC's rapid prototyping of new mobile format for stories. The target group was users between 18 and 26, which is hard to reach for BBC. They did their user insight and found that the users primarily wanted to skim, dig deeper if they become intrigued, understand complex stories, read the whole story in one place and chose media format based on personal circumstances. BBC's team developed 12 prototypes meeting all or some of the user needs, which they tested consecutively (Ferne, 2018). The latter is an example of how design thinking is utilized in the news industry, and is a method that

#### 4.3.1 Data visualisation

Engebretsen has reviewed 17 stories that contained data visualisations, all developed by significant news organisations in Norway. Data visualisations like interactive charts, graphs, maps and animations are

examples of a much used digitally born tool, intended for simplifying and presenting complex data. At its best, data visualisations can enable the user to explore the data with her situation in mind, for example, to access data from her own municipality (Engebretsen, 2017). Several advantages follow this practice from a user perspective, especially the division of content in both visual and verbal channels.

## 5. COINCIDE OF STORYTELLING AND DESIGN

This section attempts to connect emotional design with digital storytelling and assess where the field of digital storytelling can benefit from design. Part 5.1 will briefly assess how emotion is embedded in the goal of digital storytelling. Part 5.2 will unite the characteristics of digital storytelling in journalism introduced in section four with the principles of emotional design acquainted in section three.

### 5.1 Motivation for emotions in storytelling

Several practitioners of storytelling, both digital and traditional, mention aspects of emotion when describing the goal of storytelling. Gruber states that the spirit "I want you to feel what I feel" (2007, p.3) is what motivates most great storytellers. Blom and Beckhaus judge that: "Storytelling and its various derivatives have an implicit goal of eliciting emotion in the audience." (2005, p.3).

In the context of serious storytelling mentioned in section 4.1, Lugmayr et. al state that utilising "narrative as a vehicle to trigger emotional and cognitive response" (2017, p. 15718) is the ambition of serious storytelling. They do however add that emotional and cognitive response is not an objective in itself in serious storytelling, but a mean to achieve a goal within the solicitation framework. The latter is evident for storytelling in journalism, as the goal of a news story seldom is directly eliciting emotions in the users, but informing the citizens so that they can make informed decisions for their lives, their society and their government (American Press Institute, n.d b). Whether one sees emotions as a vehicle to achieve something else or as a goal in itself does not

fundamentally alter how emotional design can be applied in digital storytelling, as elaborated in the following section.

## 5.2 Emotional design and implications for storytelling

To design for the visceral level in digital storytelling means selecting design features and looks based on what initial emotional reaction we find desirable. The message substance elaborated in section 4.2.1 is useful for deciding how the design at the visceral level should appear. Good stories are presumably not emotionally flat, so the design may be altered and adjusted as the story progresses. Usability is vital to satisfy the behavioural level. The navigation and the prospective interaction should be effortless, and at this level, traditional usability qualities are important (Norman, 2004). The story itself influences the reflective level. The characteristics most important for the reflective level is perhaps whether the story is told through the first, second or third person, how well it is contextualized and how it potentially addresses the personal situation and feelings of the user. According to Norman, all three emotional levels are at play in any real experience, and it is the interplay between the three levels that determine whether the design of the story is successful. However, the emotional design theory does not offer an explicit “how to”-explanation. Thus, Norman’s model seems particularly useful on the conceptual level.

The results of Um et al.’s research on emotional design in multimedia learning platforms revealed that positive emotions improve learning. The implication for storytelling in journalism is thus that emotional design done right does not damage the cognitive outcome. However, not every story is suited to evoke positive emotions. Stories of warfare and hunger have perhaps failed if they bring a smile to the user’s lips. Furthermore, it is not only positive emotions that can enhance engagement. Activating negative emotions can also affect learning, but in a more complicated (and less researched) manner (Pekrun et al., 2006). However, the main take away should be that emotional design inherent in an

interface (a digital story is also an interface) is a powerful tool.

Norman stresses that even though the designer can bring *emotional affordances* into a product, there is obviously no guarantee that people feel the emotions intended by the designer (2004). His view is in line with the view of Blom and Beckhaus. They argue that it is difficult to design for emotions because emotions of the individual user depends on their current mood, their culture and experience. They do however believe that emotions in storytelling is crucial and suggest a kind of parameterisation of possible emotions elicited by different segments of a story (2005). Here is where the necessity of targeting a specific audience, from Alexander definition of digital storytelling, comes in handy. Perhaps a bit controversial in this context, since mass media is supposed to reach ‘everyone’ but aiming a story, and thus its presentation at the user group the editors find most relevant may help the designers when crafting the aesthetics.

The take away when digital storytelling in journalism coincides with emotional design is that aesthetics may change our emotional state. Moreover, our emotional state may alter our cognitive abilities. Thus, in the individual story, it is crucial to design the aesthetic to match what emotions the crafters of the story want to elicit in the user. Which the message substance of the story should determine emotions that are desirable.

## 6. CASE STUDIES AND DISCUSSION

Part 6.1 of this section exemplifies the coincide of emotional design and digital storytelling detailed in section 5.2. Lastly, an assessment of the weaknesses of the method in this article and needed further research is presented in part 6.2. The examples featured in this section are itemized in a dedicated list in the resources, and the reader is recommended to explore the examples for best dividend of the following discussion.

### 6.1 Cases of digital storytelling in journalism



A digital story clearly intended to create negative affect in its users is New York Times' "They are Slaughtering us like Animals". The story concerns Philippine's policy of killing drug dealers and addicts. It features several grotesque photos of murdered men and women. Along with black background, subtle transitions and a straightforward language describing the killings in gruesome details the photos leave strong negative affect in the users. It has several of the characteristics developed by Pavlik and Pavlik: the quality of the photos is high; the reporting is extensive. The story is contextualised in no small degree, and it is process oriented rather than episodic. The author writes in first person. It is to a certain extent interactive, as the user can select to read more about each incident and view its location. This story was selected for analysis, because it is pushing the limit for how much anxiety, distress and anger the users may take in the form of activating negative emotions. As elaborated in section 3.1, negative affect causes the user to be more focused. If the negative affect reaches a certain limit, the user may exit the situation (in this case, the story). If the user finishes the story despite the negative affect, the impact on cognition might be particularly strong (Pekrun, 2006), because of the focus negative activating feelings brings forth.

BBC's "Body on the Moor" is another story that utilises several possible opportunities of being digital. The presentation of this story is flawed in two senses. Firstly, there is too much going on. The dual coding theory, which suggests that activating both verbal and visual subsystems of cognition may speak to the story's advantage but is probably outweighed by the extraneous cognitive load infused by the messy content. The other flaw is that the appearance, aesthetics and functionality (the visceral and behavioural level) does not enhance the message substance of the story.

## 6.2 Method weaknesses and further research

There is no literature on emotional design in digital storytelling. Research on other storytelling areas, like the digital user-controlled storytelling for entertainment presented by Blom and Beckhaus, does

include emotional aspects. However, the story structure presented there is too specific and different from most formats originated in journalism, that I found the transfer value of their suggested parametrisation of emotions to be low. The weakness of this article is that it borrows and transfer knowledge between various professional fields. It's challenging to be sure of the transfer value of emotional design in multimedia learning and storytelling, as contextual considerations can alter the transfer value.

However, the lack of coincidence between emotional design and digital storytelling in literature, suggest that there is much room for further research. As for further research, a systematic review of already published digital stories in journalism could be rewarding. Much like the study performed by Pavlik and Pavlik, but also measuring the user engagement and emotional impact of the stories.

## 7. CONCLUSION

Digital storytelling in journalism and design has much in common. The concept of message substance may be of use to both designers and journalists. When the storytellers has established what the message substance is – what should be the main take away for the users – the designer can utilise her knowledge of emotional, interaction and visual design to enhance the quality of a story. The extraneous load hypothesis suggests that superfluous elements like interesting videos or sound may be harmful to cognitive tasks, even though they are beneficial for motivation. To avoid an increased extraneous load, multimedia elements needs to be deeply embedded in the story itself; a naturally integrated part of the story. The combination of message substance, other favourable characteristics of contemporary digital storytelling and emotional design may lead to the fulfilment of making important stories interesting. Furthermore, as noted by Alexander (2011) and Ferne (2017), there is much room for innovation of digital storytelling, and emotional design combined with the message substance of a story could be essential building blocks of future innovation.

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