

Recognising A Stranger

Can An Interactive Narrative Format Increase The Effectiveness Of Missing Person Alerts?

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Abstract

Missing person alerts (MPAs) are a very common tool utilised regularly by law enforcement agencies to request help from the general public in finding a missing person. Although previous researchers have deemed MPAs ineffective in making the person depicted memorable, they continue to be used worldwide in their current format. The present study investigates the effects of narrativity and interactivity on face recognition ability. It suggests that the application of narrative and interactive formats to MPAs could improve their effectiveness and increase recognition rates for the people depicted as missing. To test this hypothesis, three surveys were developed to compare the recognition ability and willingness to search for the missing person of participants when exposed to three types of MPAs (traditional, narrative and interactive). The present study failed to find an effect of MPA type on recognition ability and willingness to search. It did, however, find an effect of MPA type on participants' emotional engagement towards the missing people depicted, which correlated positively with their willingness to search for them. Among the first studies to investigate the effects of narrativity and interactivity on face recognition, the present study offers initial insights into ways to make MPAs a more effective tool in the future.

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It is an often overlooked problem, but thousands of people disappear every year in the EU leaving no trace. The Association of Chief Police Officers of England, Wales and Northern Ireland (ACPO) defines a missing person as: *'Anyone whose whereabouts are unknown whatever the circumstances of disappearance. They will be considered missing until located and their well-being or otherwise established.'*¹. Going missing involuntarily might be the first sign of a major crime case. Among the reasons behind the involuntary disappearance of a person, we find: homicide, abduction, sexual exploitation, domestic violence (either as a victim of it or a perpetrator), human trafficking and forced marriage. Statistics on the actual number often disagree and vary depending on the demographics taken into account. The European Parliament identified in 2016 the number of adults going missing in the EU as around 10.000 every year². The NGO "Missing Children Europe" has calculated that police and NGOs across the EU have worked on 8.845 cases of missing children in 2018 alone³. AMBERALERT.EU ("The European Child Rescue Alert & Police Network on Missing Children"), an NGO supported by the European Parliament, has been working on 21 cross-border cases of missing children in the first 6 months of 2019 alone⁴.

When a member of the public disappears, the police might request the help of the general public in finding the person again. A Missing Person Alert (MPA) is a poster

¹ Source: <http://library.college.police.uk/docs/acpo/Missing-Persons-2005-ACPO-Guidance.pdf>

² Source: http://www.europarl.europa.eu/doceo/document/E-8-2016-005443_EN.html

³ Source: <http://missingchildreneurope.eu/Portals/0/Figures%20and%20Trends%202018.pdf>

⁴ Source: <https://www.amberalert.eu/statistics/>

distributed either physically or through any media (including social media) through which the police requests the help of the public in finding a missing person.

Traditional MPAs tend to follow specific conventions and always share some basic features. They usually have a title in upper case which reads either “MISSING PERSON ALERT” or phrases such as “HAVE YOU SEEN ME?” Or “WHERE AM I?”. This is often followed by the missing person’s name, a clear face picture and some basic information (e.g., age, clothes worn at the moment of disappearance and the local police station number to call in case of a sighting). An example of such traditional MPAs can be seen in image 1, below.



Image 1, showing a traditional MPA being broadcast on television in the US

When presented with MPAs, the general public does not always respond as expected and officers claim they must be particularly careful when requesting help from members of the public. According to ACPO, “people will contact the police with sightings of missing persons. For various reasons, however, they are often mistaken and rarely, but occasionally,

deliberately wish to mislead the investigators"⁵. This statement hints to some of the shortcomings of MPAs.

Some research has been carried out over the years to investigate the effectiveness of MPAs. Authors, such as: Griffin, et al. (2007) and Lampinen and Moore (2016) pointed out that traditional MPAs are often unsuccessful, overlooked by people, and non-memorable. Among the reasons they have proposed to explain the failure of traditional MPAs we find: habituation, attentional blindness and poor activation of Prospective Person Memory, a type of memory involved in the recognition of faces one is on the lookout for. Despite these attempts to understand the ineffectiveness of traditional MPAs, very few solutions have been offered to address this issue.

In order to propose ways to improve MPAs as a tool, we have looked at the field of narrativity. Research on narrativity has demonstrated that narratives, through development of mental models (Johnson-Laird, 1983) and their ability to evoke emotions in the reader (Kensinger, 2009), can make events more memorable and motivate the viewer to take action (Green and Brock, 2002). If applied to traditional MPAs this could result in higher recognition rates of the person gone missing and an increased willingness in the person seeing the alert to be on the lookout for the missing person. To add to this, actively interacting with content, by choosing where to focus attention and taking action to achieve the intended result, has also been linked with increased scores on recall and recognition. This has led some scholars to believe that interactivity can positively affect memory for the interactively presented content (e.g., Girgis, 2012; Xu and Sundar, 2016). Applied to MPAs in the form of an interactive narrative, this might further increase the positive effects brought by the use of the narrative itself. Based on this existing evidence, it is proposed in this study that the

⁵ Source: <http://library.college.police.uk/docs/acpo/Missing-Persons-2005-ACPO-Guidance.pdf>

application of an (interactive) narrative format to MPAs might lead to higher recognition rates of the person gone missing and increased willingness to search for the same person. More in general, the study also tries to investigate, for what seems to be the first time, whether an (interactive) narrative format can positively affect people's ability to remember a face and discriminate among faces at a later stage.

The present study aims to understand to what extent an (interactive) narrative format affects recognition and willingness to search and to what extent emotional engagement towards the narrative mediates prospective person memory and willingness to search.

Theoretical Framework

Considering how central MPAs are to the procedure that unfolds once a person goes missing and the police request help from the general public, it makes sense to suggest improvements to this tool. Such improvements are especially necessary since scholars have already deemed that this tool is not effective, captivating or memorable, as we will see in the next pages. There is evidence in the literature that both interactivity and narrativity elements can have a positive effect on memory and that they could positively influence people's willingness to take action and actively look for a missing person. If applied to traditional MPAs, these elements could prove beneficial and increase the effectiveness of the MPA itself.

The goal of this study is to investigate how MPAs can be improved by the effect of (1) a narrative, and (2) interactive elements on (3) memory and (4) willingness to search, through (5) emotional engagement.

Missing Person Alerts

Traditional MPAs simply present the viewer with a picture of the missing person's face and a short description of their features, clothes and last known whereabouts. Investigations of traditional MPAs have often found them to be hard to remember, easy to become habituated to and too often overlooked. Griffin, Miller, Hoppe, Rebideaux and Hammack (2007), for example, point out that MPAs do not routinely function as intended and that their reported success rates might not reflect their actual effectiveness. In fact, a vast number of people who go missing do so voluntarily and quickly resume their lives before the public has a chance to respond to the MPA. Lampinen and Moore (2016a) questioned the alleged success rates of MPAs and pointed out that when police use MPAs to ask for the public's help in finding a missing person, people quickly become habituated to such alerts, and this decreases their intention to look for the missing person and reduces their expectation that they would ever encounter them.

Displaying MPAs in places where they are easily spotted by as many members of the public as possible appears reasonable, and MPAs are routinely placed in supermarkets and on billboards (in addition to news channels and newspapers). Harder and Bloomfield (2003) investigated the effectiveness of MPAs placed on freeway billboards. They, probably unsurprisingly, found these to be ineffective due to the limited attention a driver can devote to them while driving. Lampinen, Arnal and Hicks (2009), concentrated instead on MPAs placed at supermarket checkouts and, in line with previous studies, found that these MPAs receive very little attention, confirming the ineffectiveness of this tool in attracting attention and remaining memorable over time.

Lampinen et al. (2009) also highlighted the role of prospective person memory (PPM) in identifying a missing person. Recognising a face is a cognitively complex task that involves the acquisition, retention and retrieval of a person's facial features (Gier, Kreiner, &

Hudnell, 2012). PPM is described by Lampinen et al. (2009) as event-based prospective memory. They state that a person who receives a specific “prospective memory cue” (e.g., an MPA) will have to go through specific pre-processes in order to activate PPM: (1) the person must encounter the alert, (2) the alert must receive the viewer's attention, (3) the target individual must be seen by the person, (4) the individual must receive attention, (5) the person must be reminded of the individual's circumstances, and (6) the person must finally decide to take action. In the case of MPAs, the cue is the missing person's face, and the response is to contact the police.

There is evidence that PPM is too often poor (e.g., Lampinen, Curry, & Erickson, 2016; MacLin, Tapscott, & MacLin, 2010). Even in experimental settings, people routinely fail to recognise a target face and take the expected action. In older studies, and contrary to what we have mentioned so far, scholars such as Berger (1999) and Bluck and Li (2001) suggested that repeated exposure to MPAs might increase their effectiveness by increasing PPM. This is, however, not in line with more recent studies carried out by Lampinen and Moore (2016b), who found a negative effect of habituation on memory.

There is still little research on the effectiveness of MPAs and the possible psychological processes behind their potential success. At times, findings in the field have produced contrasting results, but in general they all seem to agree to various degrees on the ineffectiveness of MPAs. Regardless, traditional MPAs in their current format, which is not regulated by law, remain the tool of choice, if not the only tool available to law enforcement agencies to request the public's involvement in finding a missing person.

Interactive Digital Narratives (IDNs) have been found to positively affect memory and promote behaviour change thanks to their interactively presented content and application of a narrative. The emotions evoked through the use of a narrative presented interactively might

prove beneficial when applied to MPAs. So far, however, no one has investigated how the application of such elements to traditional MPAs could increase their effectiveness.

Narrativity, Cognition and Memory

While the format of MPAs might seem straightforward, it only offers the viewer descriptions and exposition. Expository writing is a technique used to convey factual information, and since its purpose is to deliver information, its ability to evoke emotions in the reader is lower than for other forms of narrative (Hidi & Anderson, 1992). In traditional MPAs, their expository nature is reflected in the form of mere descriptions. It is argued in this study that the lack of a narrative structure might be responsible for their inefficacy.

One of the many definitions of narrativity was provided by Prince (2004), who described narratives as representations of how a situation is transformed from an earlier to a later state through causal relationships. This definition focuses on the causal links within series of events and, as argued by Kinnebrock and Bilandzic (2011), it distinguishes narratives from other forms of texts, such as descriptive texts (as in the case of traditional MPAs).

Many scholars have investigated the cognitive links between narrativity and memory. According to Bruner (1991), memories of events and experiences are arranged in a narrative fashion. Research in the fields of psychology and narrativity has demonstrated the important link between memory and narrativity in the way memories are created, stored and retrieved. Schank and Abelson (1995) claim that human memory is based on the stories we tell about ourselves and others. Since information is generally shared in the form of stories, there is evidence suggesting that this allows for better recall (e.g., Rubin and Greenberg, 2003; Schank, 1990).

Among other scholars who have tried to explain why narratives seem to be stored more effectively in memory, Graesser and Nakamura (1982) attributed it to the fact that the events in a narrative are concrete and organised cohesively and causally, while description and exposition are abstract and loosely organised.

Graesser puts particular emphasis on the concept of causality, which is also an important principle in Johnson-Laird's theory of mental models (1983). According to Johnson-Laird, we understand and remember situations through mental models: we comprehend a situation when we have been able to construct a coherent, correct mental model of it. For Johnson-Laird (1983), mental models are cognitive structures representing the real or imaginary world. They are also described as integrated representations that can be mentally scrutinised and processed (Graesser, Holding, & Long, 1991). Since the human mind connects events based on their causal relationships, a narrative that follows this pattern has the ability to activate mental models by facilitating, rather than hindering, this innate tendency.

If applied to the context of MPAs, it might make sense to predict that the development of mental models about the missing person and the circumstances around their disappearance might positively influence the perception of the MPA itself. We know, in fact, that mental models are used to anticipate events and play a role in understanding and recalling narratives because the narrative structure matches the structure of mental models in our minds (Graesser & Nakamura, 1982). The information displayed in narratives resembles commonplace experiences, so the processes used to understand these experiences are more instinctive than those at play when exposed to different discourse genres, as might be the case with expository text (as used in MPAs) (Graesser & Nakamura, 1982).

The situations presented in the narrative lead to the reader developing a mental situation model, which is described as a deep level of representation. According to Graesser, Olde and Klettke (2002) the situation model “is the mental microworld of what the story is about. The situation model includes the spatial setting and the chronological sequence of episodes in the plot” (page 8). Another important mental model that affects how narratives are understood and remembered is the character model, through which characters in a narrative are represented (Rapp, Gerrig, & Prentice, 2001). To form an initial representation of these characters in the mind, people rely on what they already know, usually through a stereotype (Graesser et al., 2002). It is only gradually, as more information about the character becomes available to the reader or interactor, that these models incorporate information about who the characters are, how they behave and what motivates them (e.g., Magliano, Zwaan, & Graesser, 1999). Abandoning a stereotype in favour of a deeper representation of a missing person might prove beneficial in the context of MPAs, and Rapp et al. (2001) suggested that a character’s traits are often inferred by readers or viewers based on their ever-developing behaviours.

The development of situation models and character models associated with the missing person might make the person more recognisable and improve PPM in viewers.

ROI: To what extent does the use of a narrative applied to MPAs positively affect person memory through recognition?

H1: The application of a narrative format to MPAs will positively affect person memory through recognition.

Emotional Engagement and Character Likeability

Another benefit of using narratives to enhance memory is their ability to trigger emotions. It is widely reported in the literature that humans tend to develop clearer memories of events that have evoked strong emotions (e.g., Kensinger, 2009). Interestingly, Xie and Zhang (2016) find in their study that positive induced emotions lead to more accurate face discrimination when compared to neutral and negative induced emotions. Evoking emotions is one of the goals of narratives, and when this goal is achieved, the emotional events told in the story are recalled vividly and in great detail (Kensinger, 2009). These emotional responses can be the result of processes typical of the narrative experience, such as transportation and identification with a character (e.g., Gerrig, 1993; Nell, 1988). Emotional engagement, transportation and identification result in what Cohen (2001) described as a loss of self-awareness while emotionally and cognitively connecting with a character.

Oatley (1999) describes emotional engagement as the construction of worlds that are both cognitively and emotionally engaging, and suggests that sometimes these worlds can be engaging to the point that the reader does not easily return to the real world. Gerrig (1993) even suggested that the reader might perceive the real world differently after having emotionally engaged with the story world.

For Green and Brock (2000), transportation is a holistic experience. They describe it as a process whereby a person devotes all their mental resources to the narrative.

For Cohen (2001), identification is a phenomenological process. The reader or interactor loses self-awareness to deeply connect with a character. Researchers have found these processes often influence the behaviour of viewers or interactors (e.g., Green and Jenkins, 2014).

The ability of narratives to evoke emotions in the reader does not only result in increased memorability. The way in which a specific character in a narrative is perceived can

go beyond making the story memorable – it can make the reader decide to take action. However, although they play a part, claiming that behaviour change can simply be achieved through transporting the reader or interactor into the context of a story and developing their identification with a character would be too simplistic. Many variables contribute to such results, and among them, and probably most relevant to the context of MPAs, are liking a character (how likeable a character is perceived to be by a reader) and the likeness of a character (how similar, and hence relatable, to themselves readers perceive the character to be). Both liking and likeness contribute to identification and transportation and have been identified by a number of scholars (e.g., Oatley, 2002; Slater & Rouner, 2002) as necessary for behaviour change as well as to make the narrative memorable.

The development of the reader's emotional engagement through identification with a missing person they perceive as likeable and relatable and transportation into the circumstances of their disappearance might increase the positive effect of narrativity on person memory through both recognition and increasing the reader's willingness to search for the missing person.

RO2: To what extent does emotional engagement mediate the effect of narrativity on person memory through recognition and willingness to search?

H2: The development of emotional engagement will increase the positive effect of narrativity on person memory through recognition and willingness to search.

Interactivity

As communication technologies have developed at an unprecedented pace over the last 20 years, interactivity has attracted ever-increasing interest (Sundar, Bellur, Oh, Xu, & Jia, 2014). Interactivity is often considered a characteristic of the medium and is achieved

through the use of interface tools (Chen, Griffith, & Shen, 2005). According to Sundar and Limperos (2013), interactivity is an affordance of the medium through which a user makes immediate changes. Studies have found that interactivity while experiencing a narrative has the ability to increase information retention afterwards (e.g., Xu and Sundar, 2016).

Unfortunately, most of the research carried out to date in the fields of interactivity, memory and behaviour change focuses almost exclusively on ludic (e.g., video games) and educational settings, which, although interesting, are not relevant to this study. To the author's knowledge, there is no research that investigates the effects of interactivity on face recognition and face discrimination. This study represents the first attempt to investigate the link between interactively presented narrative formats and the ability to discriminate among similar faces while measuring willingness to take action in the viewer. As a result, this section is not comprehensive as it focuses only on those few studies deemed relevant to the research being carried out in this instance. The sources mentioned are often masters and doctoral theses as they provided the insights deemed most useful to the purpose of this study.

Different levels of interactivity can be applied to narratives, and these vary depending on the level of agency given to the interactor. In some instances, for example in video games, an interactor is given enough agency to alter the storyline and make dramatic changes that will lead to specific outcomes. In the case of interactivity applied to more traditional narratives, the interactor is usually only given enough agency to interact with marginal elements of the narrative to decide how deep, immersive, informational or emotional they want their experience to be; this type of interactivity, easily applied to most narratives, might also be applied to MPAs.

Interactivity takes many forms and users can interact with products in numerous way (e.g., by clicking, dragging or zooming). The act of interacting with a screen (either through

touch or click) while experiencing a narrative affects the way in which the narrative is perceived (Girgis, 2012). Girgis (2012) suggests that the user can associate their movement with the change that occurred on the screen, resulting in increased recall of the displayed content.

Non-interactive screens do not allow any interaction and still represent the majority of our televised experiences, including MPAs. With such screens, the user has no choice but to watch whatever is displayed. In touch- or click-based input screens, in contrast, the user can control what happens on the screen. Girgis (2012) believes this can encourage interaction with the screen on the part of the user and consequently increase interest.

The features of narrativity mentioned thus far can be enhanced by the application of interactivity to a narrative. IDNs have, in the past, been likened to representations of reality (Ryan, 2008; Liu & Shrum, 2009), and some scholars believe that computers' ability to integrate users' actions, paired with dynamic creation, makes the interaction with the computer more realistic than traditional media (Sicilia, Ruiz, & Munuera, 2005). Tanenbaum (2015) suggested that interactors develop a sense of transformation while interacting with IDNs. When experiencing IDNs, interactors have the possibility to press pause on their own identities and a new point of view from which to experience the world is offered to them. Tanenbaum (2015) believes transformation to be one of the affordances of IDNs and describes this experience both as "transformative" and leading to persuasion and behaviour change. This is made possible by the interactor's ability to project themselves into contexts that are alien to their daily experience and which must be dealt with emotionally.

Interactivity is not only persuasive; in experimental settings, interactivity was found to also have an effect on participants mnemonic abilities and led to increased recall and recognition rates (e.g., Girgis, 2012). Recall and recognition have been used by some scholars

in the context of interactive advertisements as two indicators measuring the awareness of and interaction with a specific product (Muller, Walter, Bailly, Nischt, & Alt, 2012).

Xu and Sundar (2016), investigated interactivity applied to online content and found that higher levels of it increase recognition memory and cognitive capacity to process information when content is presented interactively, and decrease them instead for the remaining non-interactive content.

While some levels of interactivity can help facilitate transportation and identification, care must be used when applying it to a narrative as its use might be counterproductive. In fact, limited capacity theory (Lang, 2000) suggests that too many interactive features would overload an individual's limited set of cognitive resources and hinder how they attend information. It is possible for an individual to only partially process information if this requires more resources than one has available (Lang, 2000).

There is evidence in the literature that the (moderate) use of interactive elements can lead to improved mnemonic performance and increase identification and transportation. When applied to MPAs, these could lead to increased memorability of the missing person and increased willingness to search for them.

RO3: To what extent does the use of interactive elements applied to MPAs positively affect person memory through recognition and willingness to look for the missing person?

H3: The moderate application of interactive elements to MPAs will positively affect person memory through recognition and increase willingness to search for the person.

Conceptual Model

The present study hypothesises that the application of a traditional narrative and an interactively presented narrative to MPAs will result in: a direct positive effect on

participants' ability to recognise the missing people in the MPAs, a direct positive effect on the their willingness to search for the missing people as requested in the MPAs and a positive effect on recognition ability and willingness to search mediated by emotional engagement.

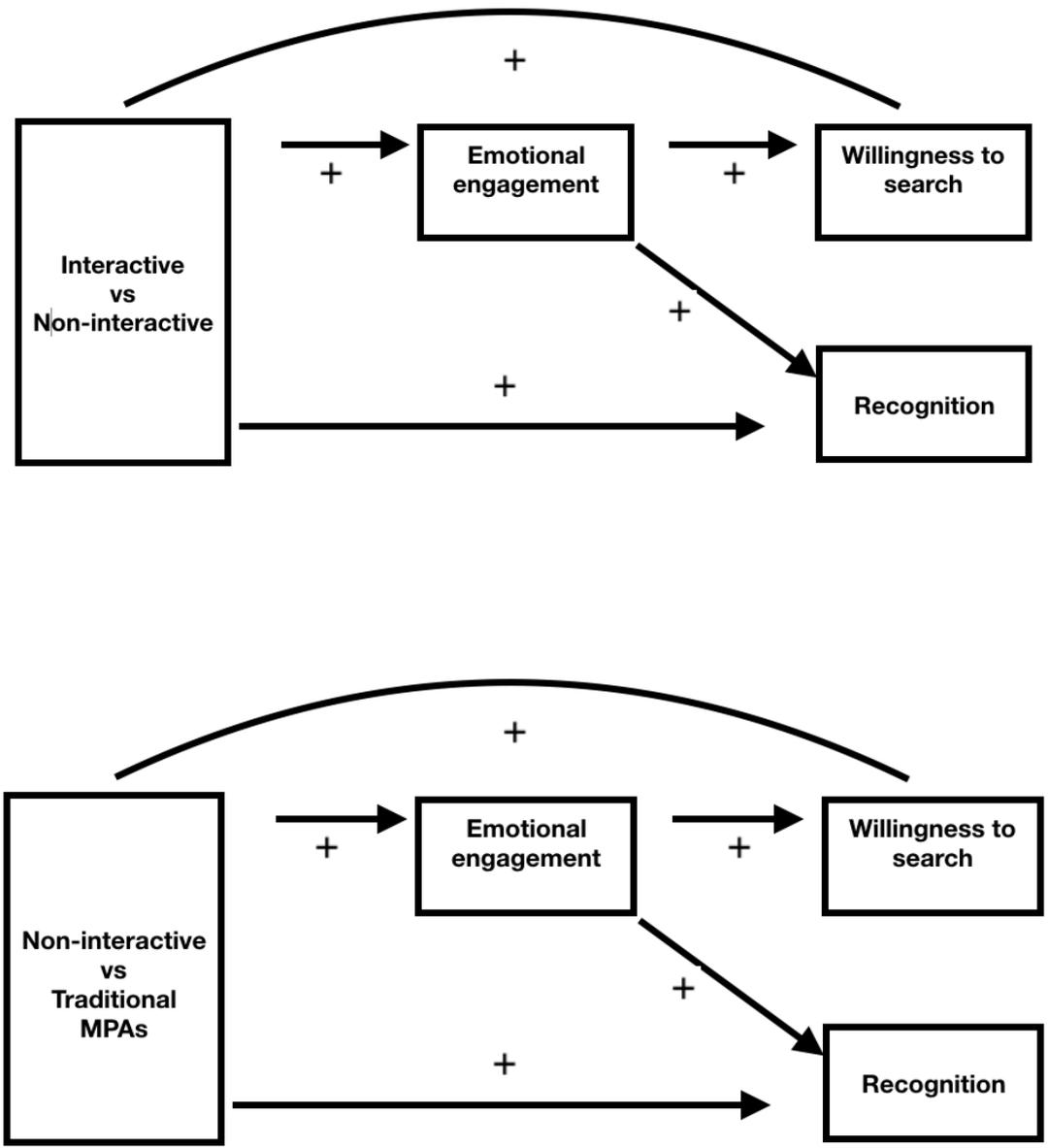


Figure 1: The effect of type of MPA on Recognition and Willingness to search, both direct and mediated by Emotional engagement.

Method

Design

The dependent variables in this study are recognition, which was operationalised by assessing participant's ability to recognise the missing person among other faces; and willingness to search, which was operationalised by means of a self-report. The independent variables of this study are interactivity and narrativity and it was predicted that their effect would be partially mediated by the development of emotional engagement while being exposed to the (interactive) narratives. The mediating variable was operationalised by means of the Narrative Engagement Scale (NES).

Participants

Seventy-eight participants were recruited for this study. No specific demographics were necessary for the purpose of the current study (e.g., age, gender, religion, education level were not causes for exclusion), however, participants were selected based on their ability to communicate fluently in English as the materials were presented in this language.

Participants were randomly selected through SurveySwap. SurveySwap is a website that puts students in contact with each other so that they can fill in each other's surveys, thus connecting researchers in need of respondents for their surveys and essentially "swapping favours", as stated on their website. It allows researchers to reach a large number of participants in exchange for participation in other people's studies. Participation was on a voluntary basis.

The seventy-eight participants were randomly assigned to one of three conditions: control condition (Traditional MPAs - N=30), Experimental condition 1 (Narrative MPAs - N=27) and Experimental condition 2 (Interactive MPAs - N=21).

Materials

The materials were presented in the form of an online survey. Participants were first presented with a sequence of nine randomly presented stimuli. These included three MPAs mixed with six different stimuli (e.g., CVs, online professional profiles) that would serve as fillers. All stimuli, both the MPAs and the fillers, would present similar formats and layouts (e.g., a face picture paired with a clearly visible name and expository personal information).

To measure participants' ability to recognise the missing people, participants were asked to identify them from a collection of 12 passport style photographs. These included the missing people, some of the distractors seen in each condition, and other faces participants had not seen until that point. In order to avoid the possibility of a ceiling effect in which the missing people would be recognised by the totality of respondents, the faces used throughout the stimuli and across conditions were carefully tested and selected after a series of pretests. Initial pretests did, in fact, show evidence of a ceiling effect. After eight pretests on a total of ninety participants, the stimuli used in the final version of the survey were the result of various manipulations to the layouts of the stimuli as well as many attempts with different pictures of the missing people. Among the variables taken into account were the gender of the missing people as well as the distractors, their age and the presence of lookalikes of the missing people. These served as "impostors" among the distractors and helped get rid of the initial ceiling effect. All of these solutions were tested to make up for the shortage of alternative pictures of the missing people to use in the recognition test. The missing people depicted in this study were, in fact, all people that have really gone missing at some in the past. The number of pictures depicting these people and available online because publicly shared in real MPAs or news articles is limited and hard to retrieve. This led to the pictures

used in the exposition phase to be often too similar to the ones used in the recognition phase and, as a consequence, easy to spot. This was partially solved with the use of carefully selected lookalikes or “impostors” that would share, for example, the same hair colour, hairstyle or facial features with each of the three missing people.

The layout of the MPAs was identical across condition and resembling the traditional format widely used in the media, it presented the word “MISSING” at the top and a name (“Corrie McKeague”, “Aaron Murphy” and “Justin Johnson”, randomly assigned, but belonging each to an actual missing person) and, at the bottom, an invitation to contact the police in case of a sighting. The pictures were either presented on the left or on the right of the descriptive or narrative text.

In the control condition, the text followed the same expository pattern normally seen in MPAs on the media and using bullet points provide the reader with some facts about the person.

In the narrative condition, while the layout remains identical, bullet points were replaced with a short text. A totally fictional narrative or loosely based on the real circumstances of disappearance of the missing person depicted was put together by the author of the study. The narrative was developed trying to emphasise either the normal and relatable life led by the missing person or their vulnerability (due to circumstances) in order to increase sympathy in the reader.

In the interactive condition, the MPAs were identical to the ones in the Narrative condition, but the narrative was broken down into two or three segments. The participants had to click forward in order to continue reading the story, see the picture and read the final call to action.

Participants were presented with an online survey containing the following nine stimuli: three experimental stimuli in the form of traditional MPAs displaying only pictures and descriptions of the missing person; two CVs manipulated by the researcher to so that the

picture and the quantity of information on them would be comparable to the MPAs; four online professional profiles manipulated by the researcher to so that the picture and the quantity of information on them would be comparable to the MPAs.

All six fillers were retrieved online from real professional profiles of bankers and doctors operating in the London area (UK) and CV templates freely available online. Pictures and names were changed various times with other face pictures available online during the pretest in order to find the combination of faces, names, and gender ratio that would get rid of the ceiling effect mentioned above. The formats of the professional profile and CV were chosen because they have a similar layout (picture and short text) of MPAs.

Participants in Experimental Condition 1 (Narrative MPAs) were presented with an online survey containing the following nine stimuli: three experimental stimuli in the form of narrative MPAs displaying pictures and a short narrative about the missing person written by the author of the study with the aim to develop feelings of sympathy in the reader and tested during the pretest phase; two CVs manipulated by the researcher to so that the picture and the quantity of information on them would be comparable to traditional MPAs; four online professional profiles manipulated by the researcher to so that the picture and the quantity of information on them would be comparable to traditional MPAs.

Participants in Experimental condition 2 (Interactive MPAs) were presented with an online survey containing the following nine stimuli: three experimental stimuli in the form of interactive MPAs developed through UXPin displaying pictures, narrative elements and clickable buttons; two CVs manipulated by the researcher to so that the picture and the quantity of information on them would be comparable to traditional MPAs; four online professional profiles manipulated by the researcher to so that the picture and the quantity of information on them would be comparable to traditional MPAs.

UXPin is a product design platform that allows users to develop wireframes, mockups and prototypes for web and desktop apps. The narratives in the interactive MPAs (Experimental condition 2) were identical to the ones used in Experimental condition 1 (Narrative MPAs), but they were broken down into segments that the user could freely explore through active exploration and participatory behaviour by clicking on the buttons on the screen.

The three surveys, including all visual stimuli used, can be seen in Appendix A.

Instrumentation

As mentioned above, participants were shown a collection of 12 passport style photographs. To measure their ability to recognise the missing people they were exposed to, participants were asked to recognise the three missing people among nine other distractors by choosing three options out of the twelve available.

In order to measure emotional engagement, participants were asked to fill in a copy of the Narrative Engagement Scale (NES) developed by Buselle and Bilandzic in 2009, measured through a seven-point Likert scale. The scale is a widely used one and already validated. It had nine items that were adapted to the purpose of this study by replacing the word *story* or *character* in the original version with *poster* or *missing person* (e.g., item 2: *while I was reading the poster, I found myself thinking about other things*; Item 9: *I felt sorry for the person gone missing*).

To investigate whether the (interactive) narrative format had an effect on participants' willingness to be on the lookout for the missing person, a Willingness to Search questionnaire was developed on purpose due to the lack of similar existing validated measures. Participants had to answer the following questions on a seven-point Likert scale:

1. Would you be on the lookout for the missing person?
2. Would you share the MPA with friends and family?
3. Would you make contact with the police should they see the missing person?
4. Would you follow up in the future on whether the person has been found?

Initial analysis, however, has shown that Cronbach's alpha of the 'Willingness to Search' scale was = .022, making the scale not reliable. Item 3 (“Would you make contact with the police should you see the missing person?”) was therefore removed from the scale, as a result of which reliability rose to .77 making the scale reliable.

The scales, questionnaires and recognition task used can be found within the three surveys in Appendix A.

Procedure

Participants went on SurveySwap and filled in the survey in order to have their own survey filled in return. They were randomly and automatically assigned by the system to one of three conditions. Before beginning with the survey, participants were explained the details of the experimental procedure, they were made aware of the voluntary nature of their participation to the experiment and informed that they could leave/stop at any time. Participants were also asked to sign a consent form before starting the experiment and informed it would take them around five minutes to complete the survey. Participants were told that the study wanted to *investigate the effectiveness of various page layout formats*, and that they would be shown nine “*layout formats*” and asked to look at each carefully as they will take a quick memory test afterwards, followed by two short questionnaires. The present study has been approved by the University of Tilburg ethical committee.

For each condition, participants were shown the relevant stimuli on a computer screen in the same order, they were invited to look at each stimulus carefully until satisfied before moving on to the next one. After seeing the stimuli and filling in some demographic information, asked at this stage to serve as a further distractor, participants in each condition were asked to take the recognition task in which they had to identify the missing people (seen previously) among a total of 12 pictures.

Finally, they were asked to fill in one copy of the NES and the Willingness to Search Questionnaire for each of the three MPAs they had been exposed to, before answering two final questions on the perceived memorability of the alerts they had seen.

After the experiment, participants were made aware of the true nature of the study which was to investigate the effectiveness of different versions of MPAs. They were given the opportunity to contact the researcher and to ask questions as well as to be kept up to date on the results of the study.

Analysis

Participants were randomly assigned to one of three conditions making this a between-subject design. After recoding negatively phrased items in the scales used and removing item three from the WtS scale to increase Chronbach's alpha, the experiment made use of nine One-Way ANOVAs to investigate the effect of narrative and interactive MPAs on recognition, willingness to search and emotional engagement. The effect of the mediator on the dependent variables was tested by means of correlation analysis.

Results

Recognition

To test the hypotheses that narrative and interactive MPAs would result in higher recognition rates of the three missing people depicted in the alerts (namely “Corrie”, “Aaron” and “Justin”) compared to the control group (traditional MPAs) a one-way ANOVA was run to investigate the differences between the control group (traditional MPAs) and the experimental conditions (narrative MPAs and interactive MPAs) in participants’ ability to recognise the missing people. The dependent variable was recognition of the people gone missing operationalised by means of a face recognition task which included nine distractors. Descriptive statistics regarding the dependent variable are listed in Table 1.

Table 1

Means and standard deviations of Recognition per condition.

		Corrie (Recognition)	Aaron (Recognition)	Justin (Recognition)
Traditional MPA (N=30)	M = 41.11 SD = 20.86	Recognised = 10%	Recognised = 20%	Recognised = 10%
Narrative MPA (N=27)	M = 41.97 SD = 28.63	Recognised = 25.9%	Recognised = 22.2%	Recognised = 11.1%
Interactive MPA (N=21)	M = 34.92 SD = 24.66	Recognised = 14.3%	Recognised = 52.4%	Recognised = 23.8%

Note: Recognition rates shown as percentages of the number of times each missing person was correctly recognised by respondents within each condition.

The one-way ANOVA showed that there is no significant main effect of MPA type on participants’ ability to recognise the missing people ($F(2,75) = 2.24, p = .113$). Levene’s test was not significant ($p = .578$), indicating that the assumption of homogeneity of variance was not violated. The pattern is against expectations and, although not significantly, participants in the traditional condition ($M = 41.11, SD = 20.86$) and in the narrative condition ($M = 41.97, SD = 28.63$) appear to have scored slightly better on the recognition task compared to participants in the Interactive condition ($M = 34.92, SD = 24.66$). This is indicated by higher

mean scores showing that the missing people depicted were recognised more frequently in the first two conditions compared to the latter.

A ChiSquare analysis was run to investigate whether any observed differences in type of MPA on participants' ability to recognise the missing people was likely due to chance by measuring the observed distribution of data against the expected distribution if the variable were independent. The assumption that all the expected cells should have values of 5 and above is slightly violated. The minimum expected count is 3.77, however, since the violation is small, conclusions will still be interpreted. The ChiSquare analysis revealed that the type of MPA does not have an influence on participants' ability to recognise the missing people (Chi-square (4) = 4.34, $p = .362$).

Willingness to Search

To test the hypothesis that narrative and interactive MPAs would result in higher levels of self-reported willingness to search for the missing people four one-way ANOVAs were conducted investigating the differences between the control group (traditional MPAs) and the experimental conditions (narrative MPAs and interactive MPAs) in participants' willingness to search for each of the three missing people. Descriptive statistics regarding the dependent variable are listed in Table 2.

Table 2

Means and standard deviations of Willingness to Search per condition

	Corrie (Willingness to Search)	Aaron (Willingness to Search)	Justin (Willingness to Search)	Total (Willingness to Search)
Traditional MPA (N=30)	M = 3.72 SD = 1.28	M = 3.84 SD = 1.24	M = 3.86 SD = .1.23	M = 3.81 SD = 1.21
Narrative MPA (N=27)	M = 4.11 SD = 1.33	M = 4.24 SD = 1.36	M = 4.12 SD = 1.58	M = 4.16 SD = 1.35
Interactive MPA (N=21)	M = 3.84 SD = 1.27	M = 4.28 SD = 1.30	M = 4.15 SD = 1.25	M = 4.09 SD = 1.18

Total (N=78)	M = 4.00 SD = 1.25
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Note: Willingness to search was measured using a 7-point Likert scale where 1 (Definitely not) indicates lower willingness to search and 7 (Definitely yes) indicates higher willingness to search.

An initial ANOVA was run to investigate any differences in effect of willingness to search for the three people combined across conditions. The Levene test is not significant ($F(2,75) = .15$, $p = .819$). So the assumption of Homogeneity of Variance is not violated. It was found that there is no significant effect of type of MPA on total willingness to search for the missing people ($F(2,75) = .610$, $p = .546$).

In order to investigate whether the specific MPAs differ in their effect on participants' willingness to search for any of the missing people individually, three additional one-way ANOVAs were run separately.

The first one-way ANOVA showed that there was no significant main of type of MPA on how willing participants were to search for Corrie ($F(2,75) = .639$, $p = 0.531$). Levene's test was not significant ($p = .684$), indicating that the assumption of homogeneity of variance was not violated.

A second one-way ANOVA was conducted to investigate participants' willingness to search for the second missing person (Aaron). The Levene test is not significant ($F(2,75) = .042$, $p = .959$), so the assumption of Homogeneity of Variance is not violated. No significant effect of type of MPA was found on participants' willingness to search for Aaron ($F(2,75) = .964$, $p = .386$).

A third one-way ANOVA was run to investigate the effect of the conditions on participants' willingness to search for Justin. The Levene test is not significant ($F(2,75) = 1.30$, $p = .277$), so the assumption of Homogeneity of Variance is not violated. The ANOVA reported no effect of type of MPA between conditions on participants' willingness to look for

Justin ($F(2,75) = .370, p = .692$).

Emotional Engagement

Four one-way ANOVAs were run in order to test the hypothesis that Narrative and Interactive MPAs would result in higher levels of self-reported narrative emotional engagement towards the people gone missing than traditional MPAs. The three one-way ANOVAs were conducted to investigate the differences between the control group (Traditional MPAs) and the experimental conditions (Narrative MPAs and Interactive MPAs) in emotional engagement towards each of the three missing people depicted in the alerts. The dependent variable was narrative emotional engagement towards the people gone missing which was operationalised by means of the Narrative Engagement Scale developed by Buselle and Bilandzic in 2009. Descriptive statistics regarding the dependent variable are listed in Table 3.

Table 3

Means and standard deviations of emotional engagement per condition

	Corrie (Emotional Engagement)	Aaron (Emotional Engagement)	Justin (Emotional Engagement)	Total Score (Emotional Engagement)
Traditional MPA (N=30)	M = 3.22 SD = .87	M = 3.28 SD = 1.00	M = 3.23 SD = .98	M = 3.24 SD = .90
Narrative MPA (N=27)	M = 3.86 SD = 1.02	M = 3.97 SD = 1.00	M = 3.91 SD = 1.00	M = 3.92 SD = .87
Interactive MPA (N=21)	M = 3.78 SD = 1.28	M = 4.33 SD = 1.21	M = 4.04 SD = 1.24	M = 4.05 SD = 1.19
Total (N=78)				M = 3.69 SD = 1.02

Note: Narrative emotional engagement was measured using a 7-point Likert scale where 1 (strongly disagree) indicates lower emotional engagement and 7 (strongly agree) indicates higher emotional engagement.

Four one-way ANOVAs were run in order to test the hypothesis that Narrative and Interactive MPAs would result in higher levels of self-reported emotional engagement

towards the people gone missing than traditional MPAs. The first one-way ANOVA was conducted to investigate any differences in effect of Narrative emotional engagement developed for the three people combined across conditions. The last three one-way ANOVAs were conducted to investigate the differences between the control group (Traditional MPAs) and the experimental conditions (Narrative MPAs and Interactive MPAs) in emotional engagement towards each of the three missing people depicted in the alerts. The dependent variable was narrative emotional engagement towards the people gone missing which was operationalised by means of the Narrative Engagement Scale developed by Buselle and Bilandzic in 2009.

An initial one-way ANOVA was run to investigate the combined effect of Narrative engagement for the three people combined across conditions. It was found that there is a significant effect of type of MPA on engagement towards the missing people ($F(2,75) = 5.26$, $p = .007$, $R^2 = .008$). The Levene test is not significant ($F(2,75) = .15$, $p = .401$). The assumption of Homogeneity of Variance is not violated. Post hoc comparisons using Bonferroni indicated that the mean scores for the Interactive condition ($M = 4.05$, $SD = 1.19$, $p = .015$) and the Narrative condition ($M = 3.92$, $SD = 0.87$, $p = .035$) were significantly different from the Traditional Condition ($M = 3.24$, $SD = .90$). No significant difference was found between the narrative and interactive conditions.

The first of the three one-way ANOVAs investigating MPAs individually showed that there was a marginally significant main effect of MPA type on how emotionally engaged people are towards the first missing person (Corrie) ($F(2,75)=3.89$, $p=.051$, $\eta^2 = 0.07$). Levene's test was not significant ($p = .281$), indicating that the assumption of homogeneity of variance was not violated. Though only marginally significant, as predicted, participants in the traditional MPA condition reported the lowest levels of emotional engagement towards

Corrie ($M = 3.22$, $SD = .87$), while participants in the Narrative condition ($M=3.86$, $SD = 1.02$, $p=.074$) and Interactive condition ($M = 3.78$, $SD = 1.29$, $p=.196$) reported slightly higher levels of emotional engagement towards Corrie.

A second one-way ANOVA was conducted to investigate how emotionally engaged people were towards the second missing person (Aaron) and it was found that there is a significant effect of type of MPA on emotional engagement towards Aaron, $F(2,75) = 6.51$, $p = .002$, $R^2 = .15$). The Levene test is not significant $F(2,75) = .28$, $p = .755$. So, the assumption of Homogeneity of Variance is not violated. Post hoc comparisons using Bonferroni indicated that the emotional engagement for the Narrative condition ($M = 3.97$, $SD = 1.00$) was significantly higher than the traditional condition ($M = 3.28$, $SD = 1.00$) ($p = .049$). A significant difference in emotional engagement towards Aaron was also found between the Traditional and Interactive conditions ($M=4.33$, $SD= 1.21$) ($p=.003$), while, no significant difference was observed between the Narrative and Interactive conditions ($p=.772$).

A third one-way ANOVA was conducted to investigate how emotionally engaged people were towards the third missing person (Justin). It was found that there is a significant effect of type of MPA on emotional engagement towards Justin ($F(2,75) = 4.49$, $p = .014$, $R^2 = .015$) The Levene test is not significant ($F(2,75) = .15$, $p = .859$). So, the assumption of Homogeneity of Variance is not violated. Post hoc comparisons using Bonferroni indicated that the emotional engagement for the Interactive condition ($M = 4.04$, $SD = 1.24$) was significantly different from the Traditional condition ($M = 3.23$, $SD = .98$) ($p = .028$). No significant difference in emotional engagement towards Justin was found between the Narrative condition ($M=3.91$, $SD= 1.00$) and the other two conditions.

Correlations

To test the hypotheses that the effect of condition (traditional, narrative and interactive MPAs) on participants' ability to recognise the missing people and on their willingness to search for them is related to their levels of emotional engagement towards any of the people gone missing, a correlation analysis was run. The effect of emotional engagement towards each of the missing people was found to be moderately correlated with participants' willingness to search for each of the missing people. The results show that participants' emotional engagement towards any of the missing people positively affects their willingness to look for any of the others. On the other hand, no relationship was found between emotional engagement towards any of the three missing people and participants ability to correctly recognise them among other faces.

Table 4

Correlation coefficients between willingness to search and emotional engagement for each missing person.

	Corrie (Emotional Eng)	Aaron (Emotional Eng)	Justin (Emotional Eng)
Corrie (Willingness to Search)	Pearson Corr = .408 Sig = .000	Pearson Corr = .435 Sig = .000	Pearson Corr = .383 Sig = .000
Aaron (Willingness to Search)	Pearson Corr = .459 Sig = .000	Pearson Corr = .530 Sig = .000	Pearson Corr = .459 Sig = .000
Justin (Willingness to Search)	Pearson Corr = .434 Sig = .000	Pearson Corr = .475 Sig = .000	Pearson Corr = .420 Sig = .000
Recognition	Pearson Corr = -.064 Sig = .580	Pearson Corr = -.079 Sig = .493	Pearson Corr = -.042 Sig = .718

Discussion

Upon the disappearance of a person, police will usually release a Missing Person Alert (MPA). MPAs contain brief descriptions of the person and a picture, along with any other information they believe might help the general public identify the person gone missing. The format of the MPA has been utilised for decades and it is currently the only tool available to law enforcement to request support from the general population in finding a missing person. Research has been carried out investigating the effectiveness of this tool and has often found it to be not effective (e.g., Lampinen and Moore, 2016). Among the researchers who have extensively investigated MPAs we find Lampinen, et al. (2009), who proposed that the mechanics behind the effectiveness of MPAs revolve around what is termed Prospective Person Memory (PPM). PPM describes a person's ability to be on the lookout for a face and being able to recognise it through the activation of specific cues (e.g., the descriptions found in the alerts). Lampinen, et al. have often found that MPAs routinely fail to achieve this aim. No alternative to this tool has, however, been proposed or investigated over the years and the aim of this study was to investigate whether the application of an interactive narrative format to traditional MPAs would increase recognition rates of the people depicted as missing. At a broader level, the present study also aimed to investigate, for the first time, whether an (interactive) narrative format can positively affect people's ability to remember a face and discriminate between faces at a later stage. There are, in fact, no previous studies, to the writer's knowledge, that have tried in the past to link the ability to recognise faces with the use of different narrative/interactive styles

In order to improve the effectiveness of MPAs, it was proposed in this study that the development of a (interactive) narrative around the circumstances of disappearance and the way in which this was presented (interactive-narrative format vs traditional) would lead

directly to higher recognition rates and increased willingness to take action and search for the missing people. The claim that a narrative format could lead to higher recognition rates in participants was based on previous research in the field of narrativity. By facilitating the creation of mental models through the use of a narrative (Johnson-Laird, 1983), it was hypothesised that participants would develop a deeper understanding of the circumstances of disappearance of the missing person. Narratives also possess the ability to evoke emotions and emotions can make experiences more memorable (Kensinger, 2009) and lead to a sense of transportation and identification with characters through the developments of feelings of empathy and sympathy (e.g., Oatley, 1999). Based on this evidence, it was hypothesised that a narrative format could help participants develop such feelings towards the missing person, thus making the person more memorable. Finally, even though the present study offered participants a poor interactive experience and the differences between the interactive and narrative conditions were minimal, past research on interactivity has suggested that interactively presented content is more memorable than content that is not presented interactively (Xu and Sundar, 2016). The present study aimed to combine an interactive and narrative format to make up for the shortcomings of traditional MPAs using only expository text identified in previous research.

This study yielded both expected and unexpected results.

Recognition and Willingness to Search

It was originally hypothesised that the format in which the missing people were introduced to viewers (narrative and interactive conditions vs traditional) would directly and positively affect participants' ability to recognise the missing people depicted in the alerts

among a number of distracting faces. The present study failed to show a positive effect of a narrative/interactive format of MPAs on recognition rates.

The present study presents a number of limitations that might have led to this result. Lampinen, et al. (2016) proposed that MPAs might easily lead to habituation and lower people's expectation to actually see the missing person. They described the pre-processes involved in the activation of PPM as follows: (1) the person must first encounter the alert, (2) the person must pay attention to the alert, (3) the person must see the target individual, (4) the person must pay attention to the individual, (5) the person must be reminded of the circumstances of the individual, (6) the person must finally decide to take action. They claim that failure of any of these preconditions will result in failed activation of PPM. Lampinen et al. (2016) also added that people are often likely to encounter many MPAs in relatively short periods of time, often depicting multiple individuals that they might never encounter. The conclusion they reached is that the cumulative effect of repeated exposure to such alerts can hamper the effectiveness of the alerts themselves and lead to habituation.

Habituation is described by Lampinen and Moore (2016) as "a reduction in responsiveness to a stimulus that is repeated over time" (page 6). According to Rankin, et al. (2009), habituation does not simply occur in response to identical stimuli, but also in response to stimuli that are sufficiently similar, through what is termed stimulus generalisation. When encountering MPAs, although the alert might depict different individuals and different details they might be similar enough to produce stimulus generalisation and habituation.

This seems to have happened in the present study, where participants were shown three almost identical stimuli (MPAs) thus leading to the event itself (the disappearance of a person) to lose its element of exceptionality. While the three MPAs were different in the content of the narrative and the pictures in them, the three stimuli were probably still similar

enough to produce stimulus generalisation in participants and thus lead them to habituation towards the stimulus with a consequent reduction in their responsiveness. The three MPAs were shown to participants along with an array of distracting stimuli before being tested on a recognition task where the missing people were displayed along with a whole new set of distracting faces. Such a multitude of faces might have made participants less responsive to them rather than more responsive, especially considering that the survey question was misleading as it deceived participants into believing that the present study wanted to investigate “the effectiveness of different layout formats”. As participants were probably not able to discriminate between MPAs as stimuli and the rest as distractors, the layout of all stimuli might have appeared similar enough to them to lead to generalisation and further habituation. Similarly, the fact that not only one MPA, but three were shown to participants might have lowered participants’ objective expectations about the likelihood of seeing any of them, probably lowering their performance even further. In order to make up for these limitations in the future, it might be advisable to control these variables by presenting only one MPA per condition.

Another key aspect that might have limited participants’ ability to perform according to expectations and to devote enough mental resources into the task at hand might be linked to geography. All participants took part in the survey through an online tool called SurveySwap which is available in most countries around the planet. The totality of participants who responded to the survey came from various regions across the EU and USA. On the other hand, the missing people depicted in the alerts were all geographically located in a very limited area around London (UK). This might have led to an anomaly compared to the way in which MPAs normally work which is on a local basis. It might make sense to believe that participants from far away areas such as the USA would unconsciously devote little attention

to a person gone missing on the other side of the planet as they might realise that the chances of encountering the person are objectively quite low. This is in line with the theory of Reasoned Action (Fishbein and Ajzen, 1975; Montano and Kasprzyk, 2015). This theory would predict that the probability of engaging in action (in this case being on the lookout for a missing person) is a function of the person's attitude toward the outcome and their beliefs about the probability of achieving the outcome. According to this theory, participants might have believed that the probability of encountering the missing person was too low to devote enough resources into the ability to recognise them. In future research, participants could be selected based on their geographic location and MPAs could be manipulated as to depict the person gone missing as a member of the same community.

Another limitation of this study that might have negatively impacted participants' ability to recognise the missing people was the focus on written descriptions that might have stirred attention away from the faces. Although the focus of this study, as participants might have concentrated on the narrative, this may have stirred their focus away from the faces making the tool itself redundant. In fact, although participants were made to read a narrative around the disappearance of someone, they were never tested on their memory of the story itself or the circumstances of the disappearance, instead they were only asked to recognise the faces. In order to make the physical appearance of the people gone missing more memorable, details of these features were inserted into the text (e.g., "with his piercing blue eyes and dark hair") and it might be expected that if tested on this, participants might actually have been able to recall these details. However, the sheer fact of recalling someone's physical/facial description might not be enough for any participant to then discriminate among faces which present similar features, as was the case in the present study. In the future, it might be interesting to test how the use of narrativity applied to multimodality might result in a shared

attentional focus where multimodality complements the narrative without one overshadowing the other (e.g., the participant could listen to the narrative while navigating the components of the alerts, such as: pictures and short videos depicting the missing person).

Similar to recognition, it was hypothesised that the format in which the missing people were introduced to viewers (narrative and interactive conditions vs traditional) would directly and positively affect participants' willingness to search for them. However, no such effect was found. What was found instead was a correlation between emotional engagement developed towards the person gone missing and willingness to search for them. This will be discussed in the next section.

Emotional Engagement

In line with expectations, the present study found that different formats of MPAs do have an effect on participants' emotional engagement towards the people gone missing. It was found in the present study that participants developed higher levels of emotional engagement in the narrative and interactive conditions when compared to traditional MPAs which were reported as less emotionally engaging. Participants showed no difference in emotional engagement in the narrative and interactive conditions. As per the original hypothesis, this might be due to the development of situation and character models through the short narrative in both experimental conditions which in turn might have led participants to develop feelings of identification with the missing people and transportation into the circumstances of their disappearance. The present study was, in fact, based on the assumption that the development of situation models around the disappearance and character models about the person gone missing might have made the experience of reading the alert more emotional.

Again in line with expectations, the present study found a correlation between emotional engagement developed towards the missing people and the circumstances of their disappearance with their willingness to search for them. This correlation could be explained again through the creation of mental models that might have helped participants identify with the missing people and there is evidence in the literature for this. Identification with a character and the development of a character model has been defined differently by different authors. Cohen (2001) postulated its basic dimensions: emotional empathy (the ability to feel what the characters feel), cognitive empathy (adopting the point of view of the characters), sharing the character's goal and absorption (having the sensation of becoming the character). In a much simpler fashion, Oatley (1999) described the same as "empathy and merging". There is evidence in the literature that identification with a character can lead readers/viewers to change their beliefs and attitudes thus leading to changes in behaviour (e.g., being on the lookout for a missing person) (e.g., Green and Brock, 2000, Wilkin, et al., 2007), but there is still little understanding of the mechanisms involved (e.g., Moyer-Gusé, 2008). Similarly to identification, also transportation has been found to have an impact on the beliefs held by the readers/viewers and can lead to changes in their behaviour.

The present study also initially proposed that emotional engagement towards the people gone missing would be positively correlated with an increased ability to recognise them among a number of distractors. The results of the present study clearly disconfirm this hypothesis. In fact, although participants showed higher levels of emotional engagement in the narrative and interactive conditions, this did not translate into higher recognition rates. As we have seen in the previous paragraph, one explanation for this could be the focus on the narrative rather than on the picture. A second explanation could be that the emotional engagement scores were low overall and perhaps not high enough to achieve higher

recognition rates. This might be due to the length of the text which was very short and offered little more than what was available anyway in the traditional version of each MPA. It might be the case that the narrative was either too short for participants to develop emotional engagement or offered too few elements that could lead to it. It might have been wise to pre-test the narrative itself (and not only the pictures presented as stimuli) and pre-test participants on how emotionally engaging they found each narrative or different versions of it. There is another limitation of the present study that has unexpectedly yielded interesting results. The study presented an element of ambiguity between the recognition ability which was requested of participants and the concept of memorability which participants were questioned on at the end of the survey. In fact, at the end of the survey, participants were not asked which person was more recognisable, but which MPA was more memorable and this wrong choice of words might have negatively affected the study. However, the qualitative data gathered from this final open question has offered interesting and unexpected insights on participants' emotional engagement towards the missing people. When asked about what alert/MPA participants found more memorable and why, some participants reported having developed feelings towards the missing people due to reasons such as: "he didn't deserve it", or "the fact that he has no family" etc... Most participants reported empathy towards Aaron. Aaron was probably perceived as a pure victim of the situation and, probably, his story was regarded as the one that could happen to anyone. On the other hand, for the other two missing people the narrative seems to suggest that they could have been abducted or decided to follow someone who's consequently hurt them. These circumstances might be perceived as less relatable by many participants as they seem to imply one of two unlikely circumstances (1 - an adult being abducted is a rare occurrence, 2 - following a stranger is dangerous and most people think they would know better). Aaron, on the other hand, presented a different story -

he was a relatable man, a young father, an ex-soldier who served his country, an ex-soldier who was probably injured while on duty, his undeserved head injury turned him from a strong man to a vulnerable one, this vulnerable man is now in danger as a result of his vulnerability. This preference participants have shown towards Aaron seems to be in line with a number of studies in the literature showing that emotional engagement can be determined by the audience's perception of a character. In fact, many scholars have identified liking a character and perceiving a character as similar to oneself as important drivers of identification which in turn can lead to emotional engagement (e.g., Brown, 2015; Cohen, 2006) and many other studies have reported positive correlations between perceived similarity and identification (e.g., Moyer-Gusé and Nabi, 2010; Murphy, et al., 2013; Pinkleton, et al., 2010). Even more interestingly this seems to also be in line with research showing that people tend to empathise more and are more willing to take action in favour of other people who they perceive as undeserving of the circumstances they are in (e.g., Hoeken and Hustinx, 2007; Weiner, 1995). This seems to describe quite well participants' self-reports towards Aaron. Hoeken and Hustinx (2007), have shown that people are more willing to give money to charities supporting people undeserving of their negative circumstances. These feelings of empathy towards such people led their participants to respond to their study's call to action and donate money to people perceived as victims of circumstances rather than to people whose circumstances are the consequences of their own poor decisions. Similarly, participants to the present study might have been driven by the same mechanisms when reporting Aaron as the one they felt most strongly for and the most likely to receive their support.

Limitations and suggestions for future research

While this study has helped shine some light on some of the features that might make MPAs better tools in the future, it was plagued by a vast number of limitations; some of them have already been discussed in the previous pages. The deceitful nature of the question asked to participants (“Which layout is more effective?”) might have led some participants to concentrate on graphic aspects of the various layouts rather than the content (both narratives and pictures). Another limitation was the unnatural setting in which the MPAs were first presented and then tested (MPAs are not usually associated with CVs and professional profiles as in the case of the present study, but with news on TV, newspapers and billboards). In the future, more research could be carried out investigating the effectiveness of MPAs in more natural context maybe by exploiting videos or even VR where participants are exposed to traditional and interactive MPAs in a virtual, yet natural, environment (e.g., the street) while controlling for distracting variables such as the number of passers-by while looking at the alert. Also, the geographical location of missing people and respondents, so far away from one another, could be a limitation of this study as it may have lowered participants’ expectations to see the missing people. When testing the effectiveness of MPAs in the future, participants might be selected based on their location and the missing people might be depicted as members of their own community. As we have seen in the previous pages, also the use of three MPAs instead of one might have led to stimulus generalisation and, consequently, to habituation. Finally, one of the most important limitations of the present study was probably the loose concept of interactivity applied to the interactive condition. The level of interactivity in that condition was comparable to that of the other conditions and the differences between the interactive and the control conditions might be traced down to the

presence of the narrative alone. In the future, this could be corrected by designing a study that tests all conditions in a lab using both traditional MPAs handed out to participants as printed posters and interactive MPAs presented on tablets, to give just one example. All these limitations fail to make the present study as it is at the moment a useful tool in the development of new and more effective MPAs.

The present study did, however, show that the application of a (interactive) narrative can have an effect on the emotional engagement viewers develop towards the missing people depicted in the alert and that such increased emotional engagement could be used to induce viewers to take measurable action in cooperating with law enforcement in finding the missing person. Unfortunately, on the other hand, the present study did not shed any new light on how to improve recognition rates of the missing people depicted in the alerts through the use of a (interactive) narrative.

In the future, more research will be necessary to identify how to make the people depicted more recognisable by the general population. An interesting idea would be to test the effect of multimodality on recognition ability. Some scholars have, in fact, already started investigating the effects of multimodality on memory with positive results (e.g., Stefanucci and Proffitt, 2005; Tan, et al., 2001). Multimodal MPAs might contain a number of elements that would make the missing person more recognisable and the alert itself more captivating and interactive, such as: hearing their voice, seeing short videos or GIFs, reading or listening to accounts of close ones. Multimodal MPAs might appear on touchscreens in (crowded) public places such as bus stops, train and underground stations, window displays, they could be shared online through social media or might appear as pop-ups when visiting news-channels websites. It might be interesting to test the effect that hearing the narrative, as opposed to reading it, has on participants. Participants might listen to the narrative while

interacting with the multimodal MPA in a fashion similar to what currently happens in many museums offering interactive experiences.

Conclusions

To conclude, the present study was designed with the intention to investigate whether (interactive) narratives can have a positive effect on people's ability to remember faces and discriminate among them. By testing this, the study also aimed to improve a very common, yet ineffective, tool that is widely used by the police worldwide during investigations on missing people. While the present study did not succeed in its intent to improve MPAs as a tool for law enforcement agencies, it was the first study to investigate the possible link between (interactive) narratives and face recognition. As such, it sets a precedent and could probably serve as a base for further research in this field.

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Appendix A

Information Letter

Welcome to this survey on page layouts

This information letter provides all information you need before participating in this experimental study. Please read the information in this letter carefully and contact the principal investigator if you have questions or need more information to cooperate in this study.

The aim of this study is to analyse the effectiveness of certain page layout formats. The specific aim will be discussed in detail in the debriefing.

During the survey, you will be asked to read texts and observe images carefully. After that, you are asked to answer some questions about the stimuli you saw. Completing the survey will take about ten minutes. After answering the questions, you have the opportunity to get the debriefing that further discusses the rationale of this study.

Procedure & risks

This study has been approved by the Ethical Review Board of Tilburg School of Humanities and Digital Sciences. There are no physical or psychological risks involved. There are no right or wrong answers; all data is valuable. Your participation in this study is voluntary and is fully anonymous: the only personal details that are being asked are your age, gender and education level. If you decide to take part in this study, you are still free to withdraw at any time, for any reason, with no costs. If you withdraw from the study before or after data collection is completed, all data will be destroyed. If you do take part, your data are anonymously entered into the dataset and will be stored for a period of ten years. After that, it will be destroyed. Data will only be shared with the research team, consisting of the supervisor and the principal investigator. Each member of the team is fully aware that the data should remain confidential and should be treated with respect. If we publicly present the data, it will only be summarised.

Compensation

Participation to study is on a voluntary basis and we thank you for taking the time to contribute to this piece of research.

Contact information

If you have questions after this study, or you experience adverse effects as a result of participating in this study, please feel free to contact the principal investigator whose contact information is provided on the first page.

In the following informed consent, you will officially be requested to participate in this study. If you decide to take part, we really appreciate your participation in our research and want to thank you in advance!

Informed Consent

Please read this document carefully. Your signature is required for participation. You must be at least 18 years of age to give your consent to participate in research.

The information letter provided all the necessary information to decide to take part in this study. If you have any further questions about the study, the information letter or the informed consent please ask them.

In this informed consent, we would like to ask you to confirm the following statements:

I have read and I understand the provided information of the information letter and have had the opportunity to ask questions. I am at least 18 years old. I understand that my participation in this study is voluntary and that I am free to withdraw at any time, without giving a reason and without costs.

I agree that the research data will be stored for a period of ten years and that the data I provided will be processed anonymously. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

By clicking "I agree" below you are indicating that you agree with the above mentioned statement. Please print a copy of this page for your records.

I agree

I do not agree

Please look at the following examples of page layout.

Block 9 Traditional

JOHN SMITH

EXPERIENCES

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 - Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 - Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 - Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard

EDUCATION

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 - Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard

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CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 - Current

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SOFTWARE

Photoshop ●●●●○
Illustrator ●●●●○
InDesign ●●●●○
Dreamweaver ●●●●○

SKILLS

●●●●○ Communication
●●●●○ Team Work
●●●●○ Creativity
●●●●○ Dedication

CONTACT INFO:

DOB: 01/01/1982
ADDRESS: 1234 STREET ROAD, CITY NAME, UK S67 880
PHONE: 01234 456 0000
EMAIL: HI@PSDFREEBIES.COM
WEBSITE: WWW.PSDFREEBIES.COM

SOCIAL MEDIA:

Facebook: /psdfreebies
Twitter: @psdfreebies

Block 10 Traditional



Reem Al-Jumaily

PARTNER

Telephone: +44 (0) 20 7079 8142

Contact Reem

[Download vCard](#)

Areas of practice

Residential Property

Real Estate

Middle East



Corrie Traditional



MISSING, Corrie McKeague

23 Years Old

Caucasian

Light brown Hair

Wearing:

- Pink Tshirt, White Jeans

Missing Since:

- 28 September 2019

Last Seen:

- Brentgovel Street, Bury St.



Officers are concerned for his welfare and are asking anyone who may have seen Corrie, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019



Nicole Burleigh

Integrative Psychotherapist, Eating Disorders, General Psychiatry

[Home](#) > [Find a specialist](#) > [Nicole Burleigh](#)

Professional qualifications:

Graduate Diploma in Counselling & Psychotherapy (Jansen Newman Institute, Sydney)

Diploma in Practitioner Skills for Eating Disorders (NCFED – BPS approved training)

Certificate in Psychology (Birkbeck College, University of London)

Block 12 Traditional



NATHALIE MAYERS

EVENT ORGANIZER

Follow me

facebook/nathaliemayers
twitter/nathaliemayers
behance/nathaliemayers
dribbble/nathaliemayers

Contacts

52-F Lincoln St.
Mankato City, Mankato

54-123-456789
nathaliemayers.com

Education

Master of Event Organization

University of California
2015-2020
Best in Fashion Design 2017

Bachelor of Event Organization

University of California
2011-2015
Best in Fashion Design 2014

Work Experience

Senior Event Organizer(2018-2022)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Junior Event Organizer(2014-2018)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Event Planner Organizer(2000-2002)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Skills

Event Logistics and Production
Print Collaterals Design and Creation
Public Relations and Marketing
Creative Event Theme
Fundraising Campaigns
Contract Registrations and Management
Assists people in reception
Public Relations and Marketing
Creative Event Theme

Aaron Murphy

MISSING

- **30 Years Old**
- **Caucasian**
- **Brown Hair**
- **Wearing:**
 - Grey T-shirt, Jogging Bottoms
- **Missing since:**
28 September 2019
- **Last Seen:**
Lewisham Shopping Centre



Officers are concerned for his welfare and are asking anyone who may have seen Aaron, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019



Dr James Arkell

Consultant Psychiatrist, General Psychiatry

[Home](#) > [Find a specialist](#) > [Dr James Arkell](#)

My professional qualifications, accreditations and memberships:

- > FRCPsych
 - > MA Hons (Cantab)
 - > Diploma in CBT
 - > Certificate for systemic practice with family and couples
-

Justin Traditional

JUSTIN JOHNSON
Missing

- **21 Years Old**
- **Caucasian**
- **Brown Hair**
- **Wearing:**
 - Black Jacket, Jogging Bottoms
- **Missing since:**
20 October 2019
- **Last Seen:**
Clapham Manor St, Clapham,
London



Officers are concerned for his welfare and are asking anyone who may have seen Justin, or anyone who has information on her whereabouts, to contact the incident room on 01473 782019



Richard Beavan

PARTNER

Telephone: +44 (0)20 7079 8181

Contact Richard

[Download vCard](#)

Areas of practice

Corporate & Commercial

Capital Markets

Mergers & Acquisitions

Entrepreneurs & Investors

International

Corporate Banking & Finance

Hotels & Leisure



Easy to work with

Legal 500 2015

Demographics Traditional

Before we continue, please answer some demographic questions.

How old are you?

What is your gender

What is your education level?

Recognition Traditional

Among other formats, you also saw three posters with missing people in them. Can you recognise the missing people you just saw among the faces below?

Please indicate this by clicking on their numbers in the list below the pictures.



1



2



3



4



5



6



7



8



9



10



11



12

Which people did you see in the posters showing missing people?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

NES, WtS, Vivid Corrie Traditional

Please, only focus on the poster below and answer the following questions.



MISSING, Corrie McKeague

23 Years Old

Caucasian

Light brown Hair

Wearing:

- Pink Tshirt, White Jeans

Missing Since:

- 28 September 2019

Last Seen:

- Brentgovel Street, Bury St.



Officers are concerned for his welfare and are asking anyone who may have seen Corrie, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019

Please, rate how much you agree or disagree with the following statements

Strongly
disagree

Neither
agree or
disagree

Strongly
agree

I found my mind
wandering when I was
reading the poster on
the missing person.

While I was reading
the poster, I found

contact with the police should you see the missing person?

Would you follow up in the future on whether the person has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

NES, WtS, Vivid Aaron Traditional

Please, only focus on the poster below and answer the following questions.

Aaron Murphy

MISSING

- **30 Years Old**
- **Caucasian**
- **Brown Hair**
- **Wearing:**
 - Grey T-shirt, Jogging Bottoms
- **Missing since:**
28 September 2019
- **Last Seen:**
Lewisham Shopping Centre



Officers are concerned for his welfare and are asking anyone who may have seen Aaron, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019

Please, rate how much you agree or disagree with the following statements

Strongly
disagree

Neither
agree or
disagree

Strongly
agree

I found my mind
wandering when I was
reading the poster on
the missing person.

While I was reading
the poster, I found

myself thinking about other things.	<input type="radio"/>						
I had a hard time focussing on what I was reading about the missing person.	<input type="radio"/>						
While reading the poster, for a minute the reality of the disappearance became my reality.	<input type="radio"/>						
I temporarily felt like I was inside the world of the missing person.	<input type="radio"/>						
While reading, I temporarily felt more involved with the missing person than with the world around me.	<input type="radio"/>						
The poster affected me emotionally.	<input type="radio"/>						
While reading about the disappearance I could imagine what it must be like to be in the shoes of the missing person.	<input type="radio"/>						
I felt sorry for the person gone missing.	<input type="radio"/>						

Answer the following questions about the missing person alerts you saw

	Definitely yes		Maybe		Definitely not
Would you be on the lookout for the missing people you have seen?	<input type="radio"/>				
Would you share this alert on social media?	<input type="radio"/>				
Would you make					

contact with the police should you see the missing person?

Would you follow up in the future on whether the person has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract Concrete

Boring Captivating

Vivid Vague

NES, WtS, Vivid Justin Traditional

Please, only focus on the poster below and answer the following questions.

police should you see
the missing person?

Would you follow up
in the future on
whether the person
has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

Choose 1 Traditional

Did you find one of the three posters more memorable than the others?

- Corrie
- Justin
- Aaron
- None of them

Please tell us in a few words what made the alerts more/less memorable in your opinion (e.g. the story, interactivity, layout, empathy).

Layout formats Narrative

Please look at the following examples of page layout.

Block 9 Narrative

JOHN SMITH

EXPERIENCES

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 – Current

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CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 – Current

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CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 – Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard.

EDUCATION

CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 – Current

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CALIFORNIA DESIGN INC.
CREATIVE DIRECTOR
Sept 2015 – Current

Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard.

DOB:
01/01/1982

ADDRESS:
1234 STREET ROAD, CITY NAME,
UK S67 890.

PHONE:
01234-456-0000

EMAIL:
HN@PSDFREEBIES.COM

WEBSITE:
WWW.PSDFREEBIES.COM

SOFTWARE

Photoshop ●●●●●○
Illustrator ●●●●●○
InDesign ●●●●●○
Dreamweaver ●●●●●○

SKILLS

●●●●●○ Communication
●●●●●○ Team Work
●●●●●○ Creativity
●●●●●○ Dedication

CONTACT:

/psdfreebies @psdfreebies
 /psdfreebies /psdfreebies

Block 10 Narrative



Reem Al-Jumaily

PARTNER

Telephone: +44 (0) 20 7079 8142

Contact Reem

[Download vCard](#)

Areas of practice

Residential Property

Real Estate

Middle East



Corrie Narrative



MISSING, Corrie McKeague

Corrie is a last year student at Suffolk University, a friendly 23-year-old young man.

With blond hair, blue eyes and a round face, Corrie can be heard laughing outside the pubs here in Bury St. Edmunds. He lives far away from home. His parents and sisters are terribly worried, so are his friends in Suffolk.



Friends like Lee, who was out with him the night Corrie disappeared in Bury St. Edmunds at 3.20am on Saturday morning, 28 September 2019. He was last seen in Brentgovel Street. 1.76cm tall, Corrie was wearing a pink t-shirt and white jeans that night.

This is out of character and there are concerns he might be held against his will.

Officers are concerned for his welfare and are asking anyone who may have seen Corrie, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019

Block 11 Narrative



Nicole Burleigh

Integrative Psychotherapist, Eating Disorders, General Psychiatry

[Home](#) > [Find a specialist](#) > [Nicole Burleigh](#)

Professional qualifications:

Graduate Diploma in Counselling & Psychotherapy (Jansen Newman Institute, Sydney)

Diploma in Practitioner Skills for Eating Disorders (NCFED – BPS approved training)

Certificate in Psychology (Birkbeck College, University of London)

Aaron Narrative

Aaron Murphy

MISSING

Five months ago Aaron, a former soldier and father of two, suffered head trauma in an accident. Since that day, he has been suffering from confusion and memory loss which have affected his life dramatically. Today Aaron has trouble recognising his children and he is often unaware of his whereabouts.



On October 18th 2019 Aaron went to Lewisham Shopping Centre, where he was last seen by CCTV wearing dark gym clothes and sunglasses.

Aaron is 1.79m with dark hair and piercing blue eyes.

That day Aaron never went back home.

Those who know him are worried he might be lost and scared, others fear he might have been taken advantage of.

Officers are concerned for his welfare and are asking anyone who may have seen Aaron, or anyone who has information on his whereabouts, to contact the incident room on 01473 782019



NATHALIE MAYERS

EVENT ORGANIZER

Follow me

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dribbble/nathaliemayers

Contacts

52-F Lincoln St.
Mankato City, Mankato

54-123-456789
nathaliemayers.com

Education

Master of Event Organization

University of California
2015-2020
Best in Fashion Design 2017

Bachelor of Event Organization

University of California
2011-2015
Best in Fashion Design 2014

Work Experience

Senior Event Organizer(2018-2022)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Junior Event Organizer(2014-2018)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Event Planner Organizer(2000-2002)

California Media Events

Organize events according to the clients will wishes and dreams. This is not limited to the actresses on the sets but all the event the company caters.

Skills

Event Logistics and Production
Print Collaterals Design and Creation
Public Relations and Marketing
Creative Event Theme
Fundraising Campaigns
Contract Registrations and Management
Assists people in reception
Public Relations and Marketing
Creative Event Theme

Block 16 Narrative



Dr James Arkell

Consultant Psychiatrist, General Psychiatry

[Home](#) > [Find a specialist](#) > [Dr James Arkell](#)

My professional qualifications, accreditations and memberships:

- > FRCPsych
 - > MA Hons (Cantab)
 - > Diploma in CBT
 - > Certificate for systemic practice with family and couples
-

Justin Narrative

JUSTIN JOHNSON
Missing



Justin moved to London with his brother from Cornwall two years ago. He now works as a store manager in Brixton. On 28 September 2019 Justin left the gym to go home where he lives with his brother. CCTV last saw him outside Clapham Leisure Centre wearing a black jacket and black jogging bottoms. No one has seen him since that day.

Justin's older brother has been looking for him day and night, he has now left his job to concentrate on finding Justin. With no other relatives, they only have each other.

Those who know Justin know that this is out of character and there are concerns someone may have tried to hurt Justin.

Officers are concerned for his welfare and are asking anyone who may have seen Justin, or anyone who has information on her whereabouts, to contact the incident room on 01473 782019

Block 17 Narrative



Richard Beavan

PARTNER

Telephone: +44 (0)20 7079 8181

Contact Richard

[Download vCard](#)

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Demographics Narrative

Before we continue, please answer some demographic questions

How old are you?

What is your gender

What is your education level?

Recognition Narrative

Among other formats, you also saw three posters with missing people in them. Can you recognise the missing people you just saw among the faces below?

Please indicate this by clicking on their numbers in the list below the pictures.



1



2



3



4



5



6



7



8



9



10



11



12

Which people did you see in the posters showing missing people?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

NES, WtS, Vivid Corrie Narrative

Please, focus on the posters below and answer the following questions.

Would you follow up
in the future on
whether the person
has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

NES, WtS, Vivid Aaron Narrative

Please, focus on the posters below and answer the following questions.

Would you follow up
in the future on
whether the person
has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

NES, WtS, Vivid Justin Narrative

Please, focus on the posters below and answer the following questions.

Would you follow up in the future on whether the person has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

Choose 1 Narrative

Did you find one of the three posters more memorable than the others?

- Corrie
- Justin
- Aaron
- None of them

Please tell us in a few words what made the alerts more/less memorable in your opinion (e.g. the story, interactivity, layout, empathy).

Layout formats 2 Interactive

These page timer metrics will not be displayed to the recipient.

#EditSection, TimingFirstClick#: 0 seconds

#EditSection, TimingLastClick#: 0 seconds

#EditSection, TimingPageSubmit#: 0 seconds

Please, [click on the link below](#) to see the different layout formats, it will open in a new tab.

It is very important for the purpose of this study that you [open the link and look at the materials](#), so I would like to [thank you](#) for doing it and helping me with my research.

After looking at the layout formats you can go back to the current window and continue with the survey.

Once you have looked at the materials, an arrow will appear on this page to allow you to continue with the survey.

[Click here to view the different layout formats](#)

Demographics Interactive

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Recognition Interactive

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NES, WtS, Vivid Corrie Interactive

Please, only focus on the information you read about the missing people (e.g. see below) and answer the following questions.

Would you follow up
in the future on
whether the person
has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

NES, WtS, Vivid Aaron Interactive

Please, only focus on the information you read about the missing people (e.g. see below) and answer the following questions.

Would you follow up
in the future on
whether the person
has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

NES, WtS, Vivid Justin Interactive

Please, only focus on the information you read about the missing people (e.g. see below) and answer the following questions.

Would you follow up in the future on whether the person has been found?

Continue to concentrate on the posters with missing people in them.

How would you describe the content of the text?

Abstract	<input type="radio"/>	Concrete						
Boring	<input type="radio"/>	Captivating						
Vivid	<input type="radio"/>	Vague						

Choose 1 Interactive

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Please tell us in a few words what made the alerts more/less memorable in your opinion (e.g. the story, interactivity, layout, empathy).